

A Selected Bibliography of Publications by, and about, Cornelius Lanczos

Nelson H. F. Beebe
University of Utah
Department of Mathematics, 110 LCB
155 S 1400 E RM 233
Salt Lake City, UT 84112-0090
USA

Tel: +1 801 581 5254
FAX: +1 801 581 4148

E-mail: beebe@math.utah.edu, beebe@acm.org,
beebe@computer.org (Internet)
WWW URL: <http://www.math.utah.edu/~beebe/>

12 March 2021
Version 1.82

Title word cross-reference

(2) [Mon95]. $(2 + 1)$ [Car94a]. (k) [YC99]. **\$11.50** [Jam70]. **\$12.50** [Bla76].
 $2 + 1$ [BV94a, LM94]. 2.5 [WCL⁺93]. **\$9.00** [Bel57]. $_2$ [SP99]. $_N$ [KBGE97].
 $Ax = \lambda Bx$ [Kal84, GUW72]. $C_n(x)$ [Ano52, Hig93, Hig96, Hig97]. D [Tor95].
 ℓ [SFvdV94]. γ [Pir94, WTVNF87]. $GF(2)$ [Cop93]. H [DT94, Edg94, HN94].
 $H_{\mu\lambda\kappa}$ [AD94]. k [CrFS09, SSS96]. K_- [FLL97]. L [CGR99, CHR02, MS01].
 $L_2(\mathbf{R}^d)$ [RS94]. \mathbf{F}_2 [PM08]. $\mathbf{R} \times T^2$ [LM94]. q [AD94]. $Q_{\mu\lambda}$ [AD94]. QR
[FG02]. $S = 1/2$ [MC92, Hon01]. $S_n(x)$ [Ano52, Hig93, Hig96, Hig97]. SR
[BF98]. τ [Col87, Den06, Wra66, Wri70]. $\tilde{X}^2A_1/\tilde{A}^2B_2$ [SP99]. $Y_0(z)$
[ZB95, Zha96]. $Y_1(z)$ [Zha95, Zha96].

-curve [CGR99, CHR02, MS01]. **-Dimensional** [Car94a]. **-eigenvalue**
[FLL97]. **-Lánczos** [FLL97]. **-method** [Col87, Den06]. **-methods** [Wra66].
-Ray [Pir94, WTVNF87]. **-Step** [SSS96]. **-Tensor** [Edg94, DT94, HN94].

0 [Wea01]. **0-929493-01-X** [Wea01]. '05 [Kau05].

1 [BRS92a]. **1893** [Mar93]. **1893/1993** [Mar93]. **1956** [Tei57]. **1964/1966** [CW67]. **1966** [GG71]. **1968** [Fil70, Moo71]. **1970** [Bir71]. **1972** [Mil73]. **1974** [GS74]. **1975** [BR76]. **1977** [Ric77]. **1981** [GL82]. **1989** [KvSR90]. **1993** [BCEP94, Mar93]. **1993-2002** [Ban02]. **1995** [ME96]. **1999** [F⁺00].

2007 [SM07]. **20th** [Cip00].

3-5 [ME96].

40 [GS87].

539pp [Bel57].

672 [Lan67c].

900 [HE98]. **92j** [BRS92a]. '96 [ACM96, BDLS96].

ABLE [BDY99]. **Ableitung** [Lan33a]. **Absorption** [SP99, WTVNF87, RA93]. **Academic** [Bir71, Bla76, Cou71, Jam70]. **Academy** [Mil73]. **accelerating** [ADRS92, ADRS95]. **Acceleration** [TMC94]. **acceptance** [Coo87, Coo90]. **Accuracy** [Pai80, Pai19, HL06]. **accurate** [GVBV06, TC08]. **ACM** [ACM97]. **ACM/IEEE** [ACM97, ACM98]. **Acoustic** [RA93]. **acoustics** [TLP08]. **action** [Lan25g, Lan69a, Lan72b]. **Adapted** [Wic94]. **Adaptive** [BDY99, Ber94a, FGP90, FGP91, TLP08, YBS⁺10, RR99, Sun99, Ye96]. **Addendum** [BRS92a]. **Adjoint** [Lan58b, Lan78a]. **Adjusting** [Ste02]. **Adler** [Bef94]. **advance** [Lan23b]. **Advanced** [Ort75b]. **advances** [FGN93a]. **advantages** [HW84]. **Aether** [Lan25e, Lan25d, Lan21]. **aether-equations** [Lan21]. **Aethergleichungen** [Lan21]. **Affine** [HN94, JZ08]. **age** [Mar96]. **Ages** [Jam70, Bir71, Lan70b, Lan73a, Cou71]. **Ahead** [Fre94b, GR00, BZS99, FGN93b, PT81, PTL84, PTL85]. **Akademie** [Tre66]. **Alapítvány** [Ban02]. **Albert** [Bri66, Bro66, Hou65, Mal65, See65, Tre66, Wre66, Lan55a, Lan59, Lan65a, Lan67b, Lan67a]. **Algebra** [HVB94, Hog07, Riv90, Gol73, Lan67c]. **Algebraic** [Kau05, Küc97, Sim03, WTV87, Wil65, BD97, Lan68a]. **Algorithm** [AHB94, BTGV07, BGV94, BG84, BLL92, CG61, Cla94, CSW02, Day97, FF94, GVK20, GUW72, GS87, GLS94, GP94b, JN10, KW94b, LG90, Mon95, MF86, MO01, Nes65, Ng94, Pai76, Pai80, PS79, PR81, PSS82, Par90, Par94, Sch96a, Sco79, Sim84a, SWMC95, SWCM96, SWC99b, WL96, XCK94, XK94, ZS07, Bai94, Bau86, BF98, BF06, Blo84, BG91a, BG91b, BRS92b, BQW09, BvB97, CDvdV91, CC03, ÇHM00, CSW01, Cop93, CLWE89, CW81, CWL83, DFS92, DB98, Den06, ER82, FG02, FLL97, FGN93b, FF87, GGV96, GV99,

Gol73, GM97, Grc81, GP95, GL88, HE05, Huc95, JZ08, JP93, Kal84, Khe91, KC88, KC90, KL99, KV93, MSW87, MS93, NR07, Nex89, Par80, PT81, Par82, PTL84, PTL85, Par87, PC90, Pay87, PPS18, RR91, RA93, Rut53]. **algorithm** [Saa80a, Saa82, Sch96b, Seh86, Sha70, Sim84b, SH83, Tei98, TLP08, WC04, WB99, Yam68, Ye96]. **Algorithmic** [BBGL92, HKS93]. **Algorithms** [Ber94b, Cip00, CW85c, CW85a, Cul94a, Cul94b, Cul94c, CZ02, ESB84, FSvdV98, Fre94a, GO89, Gre94, Gut92, Gut94a, KP74, KW92, PNOJ85, Saa94a, Saa94b, Vac91, BRS91, BRS92a, BS93, BRZ98, BZS99, CRZ94, CL94b, Cul96, CW02, EK97, ER87, FN96, GO87, GMG11, KC91, LW98, MS06, Meu06, Mdm95, SWC99a, Ye91, Ye94]. **Algorithmus** [Rut53]. **allgemeine** [Sch81]. **allgemeinen** [Lan25a, Lan23d, Lan25g, Lan27a, Lan27b, Lan30b, Rei23, Tre66]. **ALPS** [Sun99]. **általános** [Lán29d]. **Alternant** [KBGE97]. **Alternative** [YC94, PdH02]. **am** [Tre66]. **among** [AD94, PNOL88, Par92]. **Amsterdam** [KvSR90]. **analiza** [Lan61d]. **Analyse** [Sad89]. **Analyses** [Grc81]. **Analysis** [BF87, Cal94, CSW02, GG96, GS87, Hou64b, Hou64c, Hou06b, KP74, Lan56, Lan61b, Lan61d, Leh95b, Leh95a, Pai76, Pug04, Saa94a, Saa94b, Sim84a, Vac91, Bai94, BJSR93, CW84, Dan40, DL42a, DL42b, Fas00, GL88, IC99, KC88, KJKL03, LD39, Lan55c, LG75, Lan88, Mil73, NO93, NOC84, NOC85, NO87, NOR89, PV99, RR99, RLAS97, Sca74, Sim98, SH83, SSS93, SSS94, S+62, Ye91, Bel57, Tei57, Tod58]. **Analytical** [Lan38b, Lan52a, Lan29b, Lan05d]. **andern** [Lan32b]. **Anlaß** [Tre66]. **anniversary** [Ban02]. **anomalous** [Lan30c]. **ansätze** [Ill05]. **Antennas** [FP94]. **anti** [Hon01]. **anti-ferromagnet** [Hon01]. **antiferromagnetic** [MC92]. **Anwendung** [Lan25a]. **appearance** [Lan32c]. **Appl.** [Hig93, Hig96, Hig97]. **Application** [BJSR93, Boy95, CC03, CSW02, CS94b, GAVC07, GW98, LD39, LWA99, Sid94, SSS96, XCK94, CDvdV91, Dan40, DL42a, DL42b, Kom03, Lan25a, Bor04, Mee05]. **Applications** [BF01b, BKS08, But94, CL94a, Fre94b, HL00, Ng94, NO89, Now94, SZ00, Vac91, Wel94, BG91a, BS05, FJ05, ME96, Num85, OR97b, Rod76, Sor95a, HL83, Mdm95]. **Applied** [Bel57, F+00, GL84, Lan56, Lan61b, Lan61d, Lan88, Tei57, Tod58, GORR16, GL82, Han97, RR91, Seh86]. **appreciation** [Lan67h, Lan67i]. **Approach** [Bor00, Hal94a, Rim94, MGRB11, Lan62a]. **approchée** [Kry31a]. **approximants** [KW94a]. **approximate** [CrFS09]. **approximating** [Den06]. **Approximation** [God01, GT94, Lan64f, OR97b, Pug04, Riv90, SZ00, BY98, BEJ+18, Col87, Dru08, Grc81, Gut94b, ITS10, Lan35b, Lan36a, NO93, YR09, GMG11]. **Approximations** [Sid94, vdEH05, Fro09, GV99, Mor09, Ort75a, ZB95, Zha95, Zha96]. **APS** [Den06]. **Arbeit** [Rei23]. **arbitrarily** [VVBG07]. **Arbitrary** [BV94b, Gre58]. **Architectural** [SWC99b]. **Architectures** [GP94b, JP94, GP95, JP93, Mdm95]. **Argonne** [BR76]. **Arithmetic** [Cse99, Gre94, MS06]. **Arnoldi** [Rad96, Wan01, BG84, Cul96, CZ02, GT94, JK94, Leh95b, Leh95a, LS97,

LYS98, Leh99, Mee98, Sim98, Sor95b, Sor95a, Sor96a, Sor96b, VV06].
Arnoldi/Lanczos [GT94, Sor95b, Sor95a, Sor96a]. **ARPACK** [LYS98]. **art**
 [Lán73d, vdV94a]. **Askey** [Mas94]. **Aspects** [MO01, SW72, Lan37].
Associated [AD94, BEGG91, GLA92]. **Astrophysical** [Wil94].
Astrophysics [BS94, MSY94, Sto94]. **asymmetric** [AE98].
Ätherstrahlung [Lan25e, Lan25d]. **Atom** [WTVNF87]. **Atomic** [BCA08].
attacking [BF06]. **Aufbau** [Lan35a]. **Auftreten** [Lan32c]. **Augmented**
 [BR05, MT95, Pai10]. **August** [F⁺00, GS74, Mil73]. **Ausgestaltung**
 [Lan30e]. **Australia** [ME96]. **automatic** [LP99]. **Avoiding**
 [BRS91, BRS92a].

Bach [Ray78]. **Band** [BF01b, GZA86, RRB94]. **Banded** [ESB84]. **Baryon**
 [SBS94]. **Based** [BF01b, Ber94b, Ber94c, CR02, CG97, GR00, Nag94, RG98,
 YC99, BTGV07, CGL94, CW80, Fis00, FGN93a, GMG11, Han01, HRT08,
 IC99, Lyn74, Ng94, RH10, SSS93, SSS94, TLP08, ZT07]. **Bases** [RS94]. **basis**
 [HL83, WC04]. **be** [Kni10]. **Before** [Coo94b]. **Behandlung** [Lan25d].
Behavior [Gre89, GS92]. **Beijing** [Kau05]. **Beitrag** [Lan21]. **Beitrage**
 [Rut53]. **Bemerkung** [Lan22a, Lan23b, Rei23]. **Berlin** [Tre66]. **Berliner**
 [Tre66]. **Beschaffenheit** [Lan26a]. **Bessel** [Rap94, ZB95, Zha95, Zha96].
Best [Cip00]. **Between**
 [BP14, Lan33c, Mee98, PdH02, RN82, Wri70, vdV94a]. **Bewegungsprinzip**
 [Lan27a]. **Beziehungen** [Lan21, Lan29b, Lan25c]. **Bi**
 [vdVV95, GVBV06, VVBG07]. **Bi-Lanczos** [vdVV95]. **BI-RME**
 [GVBV06, VVBG07]. **BiCGSTAB** [YC99, SFvdV94]. **Biconjugate** [YC94].
Bidiagonalization [BR05, BGV94, JN03, JN10, SZ00, BR06, BQW09,
 CGR99, CHR02, HRT08, HPS06, KBG04, MS03, ZT07]. **Biennial** [ME96].
bifurcation [Pap90]. **Binary** [Fin94]. **biographical** [Gel93, Gel94].
Biorthogonalisierungs [Rut53]. **Biorthogonalisierungs-Algorithmus**
 [Rut53]. **biorthogonalization** [Rut53, Saa80a, Saa82]. **bisection** [CrFS09].
Black [And94, Bro94a, GGS94, Man94, Tei94, Wal94, PNO89]. **Block**
 [AHB94, ADRS92, BCR03, BDY99, Ber94a, Cul94a, Cul94b, GLO81, GLS94,
 GP94b, Mon95, NOC85, WL96, Bag00, BR06, BJSR93, BF06, CR99, Cop93,
 GP95, GJS04, GL88, GLA92, HE05, Jia98, KC88, KC90, KWPP89, Lam08,
 MSW87, Nex89, Saa80b, Ye96, ADRS92, ADRS95]. **Block-Lanczos**
 [BCR03, CR99]. **body** [WB99]. **Book**
 [Ano95, Bal75, Bar63, Bir71, Bla76, Bor04, Bro66, Cou71, Fil70, Gil62,
 Goo70, GG71, Hou65, Isa96, Jam70, Lan67c, Lew51, Mal65, Mee05, Moo71,
 See65, Smi63, Tei57, Tod58, Wea01, Wre66]. **books** [Ano94b]. **Bose**
 [CKLS05]. **Bosons** [Fra94]. **Boston** [CW67]. **Bound**
 [WTVNF87, CKLS05, JZ08]. **bound-constrained** [JZ08]. **Boundary**
 [Lan66a, Lan68a, Che81, Lan60a, Ode02, RA93]. **boundary-value** [Che81].
Bounds [CSW02, FW99b, FW99a, KW94b, Saa94a, Saa94b, SS94,
 vDHvdV01, CHR02, vDHvdV00]. **Box** [Bro94a, PNO89]. **Boyd**
 [Fil70, Goo70, GG71, Moo71]. **bracket** [Lan72c]. **Breakdown**

[Kar94, BRS91, BRS92a, BRS92b, LAW98, Ye94]. **breakdown-free** [BRS92b, Ye94]. **Breaking** [BM94a]. **Brown** [Ano95, Isa96]. **Bryan** [Hou64a, Hou75, Hou06a]. **BSOR** [CKLS05]. **Bur.** [Hig93, Hig96, Hig97]. **Bursts** [Pir94]. **butterfly** [BF98].

C

[Ano95, Bar63, Bel57, Fil70, Goo70, GG71, Hig93, Hig96, Hig97, Isa96, Smi63]. **calculate** [WC04]. **calculating** [BS56, Ret82]. **Calculation** [BS70, Fel74, MF86, MO01, SP99, Sor95b, Wil57, Wil58, ÇHM00, Dav75, Nex89, SBPH73]. **Calculations** [Car94b, WCSW99, Sor96a, TMC94, WZ94]. **Calculus** [Lan58e, Wic94, Lan62a, Lan73b]. **Calgary** [GS74]. **California** [ACM97]. **Cambridge** [Lan67c]. **Can** [Tre94, Kni10]. **Canonical** [Thi94, Bun97, Lan34a, Lan34b, Lan58d]. **Carolina** [BCEP94, Wea01]. **Cartan** [Ger03]. **Case** [Cul94a, Cul94b, BF06]. **Cauchy** [BK94, FG02, Ise94]. **Censorship** [BK94, Rud94, Gar94]. **Centenary** [Ano95, BCEP94, Isa96]. **centennial** [OR97b, OR97a]. **Center** [ACM98, Ric77]. **Century** [Cip00]. **CG** [vdV94a]. **CGS** [Son89]. **CH** [KBGE97]. **chain** [LWA99]. **chains** [MC92]. **Challenge** [Sto94]. **challenges** [F⁺00]. **Changing** [Mee01a]. **characteristic** [BS56]. **characters** [Ger03]. **Charged** [GGS94]. **Chaussées** [GGMP88]. **Chauvenet** [Abb78]. **Che** [Lan67d]. **Chebyshev** [Hig93, Hig96, Hig97, Ano52, Boy95, BP14, BSPL96, Che81, Lan53, Lan73c, Loh84, Mas94, OIO03, Ode03, Ort94a, Riv74, Riv90, ZS07]. **China** [Kau05]. **Chiral** [SBS94]. **choice** [NO93]. **Christoffel** [Lan38c, Lan62c]. **chromodynamics** [F⁺00]. **Chu** [Ano95, Isa96]. **Cimmino** [ADRS92, ADRS95]. **Circulant** [fCL94]. **class** [KC91]. **Classical** [FM94, Man94, WTVNF87]. **Cliffs** [Bel57, Tei57]. **close** [RLHK51]. **Closed** [Lan25e, WTV87]. **Clustered** [AHB94, SWC97, Wül05a]. **CMoC** [Cla94]. **Co** [Bar63, IC99, KJKL03, NOC84]. **co-ordinates** [IC99, KJKL03, NOC84]. **COCR** [JHZ⁺09]. **code** [MGRB11]. **Codiagonal** [Wil57]. **coefficients** [AE00, Lan35b, Lan36a]. **Collapse** [KCGR94, Pea94]. **collected** [D⁺98, Wea01]. **collection** [Abb78, OR97b, OR97a]. **Collimated** [vP94]. **Collisionless** [SW94]. **Collocation** [EDO94, Wri70]. **colloquium** [CW67]. **Combination** [Eck26, DFS92, KV93]. **Combining** [Sch96a, Sch96b]. **commemorate** [OR97b, OR97a]. **Commentaries** [CGO07, D⁺98, Wea01]. **Commentary** [Hig93, Hig96, Hig97]. **communication** [NOC85]. **Comparative** [Ton92]. **Comparison** [NOPR88, PNOR87, vdV94a, GP94a, Mee98, RN82]. **complete** [ELT79, MS03]. **Completed** [Gut92, Gut94a]. **Complex** [Col87, God01, Rap94, DFS92, JHZ⁺09, Lan26a, PPS18]. **component** [CKLS05]. **Composite** [BM94a]. **Computation** [Ano56, BKS08, CGO07, DGK98, God01, Jen77, MT94, MT95, MCSW96, MCSW97, Rap94, CH90, Fie01, GVBV06, VVBG07, Kau05, Küc97, SM07]. **Computational** [BS94, HW84, HKS93, KC90, Lyn74, MSY94, Pai72, SM07, Sto94, ME96].

computationally [KL99]. **Computations** [BR76, CL94a, CW85c, CW85a, GV83, GV89, GV13, GS92, CL94b, CW02, KO94, KV93, Meu06]. **Computer** [BF87, Cse99, F⁺00]. **Computers** [PNOJ85, Rod76, SGN94, Yan97, KC91, RLAS97]. **Computing** [ACM97, ACM98, BH95, BH96, Cse99, CW81, FJS84, F⁺00, GL82, GL84, GLO81, JN03, JN10, KBG04, Lan73a, MOR04, Nas90, SWMC95, SWC99b, vDHvdV00, vDHvdV01, CWL83, MS86, NN93, TC08, GL82]. **Concentration** [GVK20]. **concept** [Lán76]. **concepts** [Lán76]. **concerning** [DGN75, Lan58d]. **condensate** [CKLS05]. **Condition** [KW94b, MS03, FGP91]. **conditions** [Lan26d, VV06]. **Condon** [SP99]. **conducted** [Ric77]. **conduction** [CLWE89, NO87]. **Conference** [ACM96, ACM97, ACM98, BCEP94, FJS84, ME96, Mil73, SM07, BDLS96, Ano95, Isa96]. **Conformal** [FM94]. **Conjugate** [Bas97, BM94b, BES98, CRZ94, Eij92, ESB84, FF94, GO89, Gre89, GS92, Gre94, Ng94, NOPR88, Wül05b, CW80, GO87, MS06, Meu06, PNOR87, PdH02]. **Conjugate-Gradient** [Gre89]. **Connecting** [WTV87]. **connection** [Lan33c, PdH02]. **Connections** [AMM94, Lew94, Sid94, AE98]. **conservation** [Lán29d, Lan30b, Lan05a, Lan29a]. **Conserved** [Hus94]. **Constituent** [Szc94]. **Constrained** [GGvM94, JZ08]. **constraints** [Edg03, GZZ99, GZZ00]. **Construction** [YR09, CrFS09]. **contemporary** [Lan59]. **Continuation** [BH95, BH96, CWS97, CR99, CKLS05, CC03]. **Continued** [WTVNF87]. **contracted** [WC04]. **contribution** [Lan21]. **Contributions** [Sta94, Rut53]. **Control** [AHB94, Bol94b, Bol94a, CS94b]. **controllability** [BG84, BG91b]. **convection** [Ode03]. **Convention** [ACM98]. **Converge** [Sco79]. **Convergence** [Jia95, Leh99, SS94, SWMC95, Wül05a, Fro09, Han97, Li10, Saa80b, Ye91]. **Convergent** [God01]. **coordinate** [Lan22b]. **core** [HS07]. **coreproblem** [HPS06]. **Corfu** [SM07]. **Cornelius** [Ano95, Bal75, Bir71, Bla76, Bri66, Bro66, BCEP94, Cou71, Gil62, Hou65, Isa96, Jam70, Mal65, Moo71, See65, Tei57, Wea01, Wre66, Ano94a, Ano94b, D⁺98, Dic67, Gel93, Gel94, Gel10, Hor77, Lax94, Lew51, Mar94, McC75, OR97b, OR97a, RBE⁺75, Rod76, Sca74, Tod58, Tod94, You75]. **Correspondence** [Wri66]. **Corresponding** [GLO81, Dav75, SBPH73]. **cosa** [Lan67d]. **Cosmic** [Bri66, Bro66, Gar94, Rud94, Wre66, Hou65, Lan65a, Lan67a, Mal65, See65]. **Cosmological** [BGG⁺94]. **Cosmology** [Lan97b, Rin11, Lan24b, Rin09]. **County** [ACM98]. **Coupled** [AD94, BF01b, MO01]. **covariant** [Lan29c, Lan05c]. **CP** [Kep94]. **CR** [GT94]. **CRAY** [Sch96a, Sch96b, AHP97, GZA86, HE98]. **CRAY-T3D** [Sch96a, Sch96b]. **critical** [KL07]. **Cross** [GAVC07]. **Cross-Sections** [GAVC07]. **Crushing** [Gru94]. **cryptosystems** [BF06]. **crystal** [BS05]. **CTAC** [ME96]. **Currents** [Hus94]. **Curvature** [AE98, Rud94, CHR02, DGN75, Lan62c]. **Curvature-free** [AE98]. **curve** [CGR99, CHR02, Lan52a, MS01]. **curves** [Kiz66, Lan38a, Wri66]. **Cyclic** [KBGE97, BJSR93].

D [Ano95, Bar63, WCL⁺93]. **D.** [SSS94]. **damped** [NOR89]. **damping** [KL99]. **Danilevskii** [Hou64a, Hou75, Hou06a]. **DAP** [ESB84]. **Darstellung** [Lan26b, Lan29a]. **Data** [GG96, Lan64a, CrFS09, Kni10, Lan52a, Lan52c]. **David** [Isa96]. **Davidson** [FSvdV98, MS86, Sad89, ZS07]. **Dawson** [Col87]. **Dealing** [Bag00]. **Decade** [Bal75, Lan74b, Lan74c, Lán78b, Bla76]. **Decay** [PQ94, LWA99]. **decay-chain** [LWA99]. **Decays** [Car94b]. **December** [BCEP94, GL82, GL84]. **Decoherence** [Hal94b]. **Decomposition** [GGMP88, JN03, Sch60, Ste93, WCL⁺93, Fis00, KDLK94]. **découverte** [Lan71]. **Decuplet** [SBS94]. **Definite** [FF94, Ng00, Lan64g, Lan66e, Mee01b]. **Deflated** [ARMNW10]. **deflation** [Fie01]. **delivered** [Lan65a, Lan67a]. **Dense** [WL96]. **Densities** [MF86]. **Density** [BKS08, KBGE97, MGRB11]. **density-functional** [MGRB11]. **dependence** [Bag00, NO93]. **Dependencies** [Mon95]. **Dependent** [WTV87, MGRB11]. **depending** [Cri86]. **derivation** [Lan33a, Ray78]. **Derivative** [Gro98, She99, HL00]. **Described** [WTVNF87]. **dése** [Lán76]. **Detection** [Wil94]. **Determination** [CG97, Min56]. **determined** [Kry31b]. **detto** [Lan67d]. **Development** [Coo94a, GL88, Now94, GLA92, Lán76]. **Developments** [Ano62, Cse99]. **Diallogization** [CG97, LGGT93, Nes65, YS98, Yam68]. **did** [Lan67d]. **Differential** [Bar63, But94, Gil62, GGMP88, Lan64d, Lew94, Ort94c, Smi63, Wel94, Ano55, Cri86, DG03a, Lan35b, Lan36a, Lan50, Lan51a, Lan51b, Lan55b, Lan60b, Lan61c, Lan96, Lan97a, LP99]. **Dikii** [Bef94]. **Dilation** [Opf94]. **Dimension** [Edg94, YBS⁺10, CS09]. **Dimensional** [BV94a, Car94a, CrFS09, DG04, Ger03]. **dimensions** [DG03a, DG03b, Lan38c, Lan62b]. **Dirac** [GH94, Lan29a, Lan29c, Lan29b, Lan30e, Lan33a, Lan05c, Lan05a, Lan05b, Lan05d]. **Diracschen** [Lan29a, Lan29c, Lan29b, Lan33a]. **Direct** [KBGE97, Sch60]. **Discourse** [Dic67, GG71, Lan66c, Lan66d]. **Discovery** [Coo94b, Lan71]. **Discrete** [CR02, GORR16, Han01, RH10]. **discretized** [LS97]. **discussion** [Lan62b, SSS94]. **Diskussionen** [Tre66]. **Distributed** [Bas97, GP94b, IEE95, JP94, MCSW96, Yan97, BCA08, CSW01, GP95]. **Distribution** [Lan24a]. **Distributions** [GG96]. **Do** [Par94]. **Domain** [Ber94c, GGMP88]. **Domains** [Har94]. **Dominance** [Gru94]. **dominant** [Fie01, MSW87]. **dominated** [Ode03]. **Donald** [Isa96]. **Driven** [GW98]. **Dual** [Thi94, WTVNF87, WTV87]. **Duality** [RS94]. **Dublin** [Mil73, McC75]. **durch** [Tre66]. **during** [Bag00]. **Dynamic** [GS87, GZA86, KJKL03, NOC84, RR99, CGL94, GLA92, NOC85, NOR89, SH83, Lan42a]. **Dynamical** [BM94a]. **Dynamics** [GW98, HKS93, Lan27b, MF86, WTVNF87, BCA08, HKP08, KC88, KL07, Lan33c, Lan33b, Lan33a, Lan41a, TMC94]. **Dynamik** [Lan27b, Lan33b, Lan33a].

Early [Ort75b, Sta94, Ste93]. **Ecole** [GGMP88]. **Economization** [Boy95]. **Edinburgh** [Fil70, GG71, Moo71, Goo70]. **edited** [Lan67c]. **Editors** [Cip00]. **Eds** [Ano95]. **effect** [Lan30c, Lan30d]. **effective** [CS09, Edg03]. **Effectiveness** [Pai80]. **Effects** [Cla94, YS98]. **Efficient** [BSPL96, Day97,

Gal94, GVBV06, HE98, SHS08, SFvdV94, Yan97, HRT08, KL99, KV93].
egyik [Lán73d]. **eigenanalysis** [Wan01]. **Eigenfunctions** [Lan25b].
Eigenfunktionen [Lan25b]. **eigenpairs** [HL06]. **Eigenproblem**
 [JP94, Pai80, Pai19, Bau86, GLA92, JP93, Pai72, RA93]. **Eigenproblems**
 [BCR03, GLS94, Jia95, Leu90, LO96, PR81, ZS07, GP94a, GMG11, Jia98,
 KL99, PTL84]. **Eigenschaft** [Lan32a]. **Eigensolutions**
 [BSPL96, MCSW96, MCSW97, Ret82]. **eigensolver** [TC08]. **eigensolvers**
 [Ney09]. **Eigenspace** [XK94]. **eigenspan** [MSW87]. **Eigenstates** [CG97].
Eigen systems [WL96, AA94]. **eigen triplets** [TC08]. **Eigenvalue**
 [BDY99, BS70, BF97, BF00, BTGV07, Boy95, CL94a, CL94b, CW85c, CW85a,
 Cul94a, Cul94b, Cul94c, Fre94a, Gal94, HE98, KW92, LWA98, Ng00, PSS82,
 Saa11b, Sid94, Sor95b, TC94, Wil65, WS98, WS00, Arn51, Bai94, BF98, BD97,
 CRS94, CW85b, Cul96, CW02, Fas00, FLL97, Fis00, GZZ99, GZZ00, HKP08,
 Kal84, Khe91, Lan50, Lan51a, Lan51b, Lan55b, Lan55c, LYS98, Mee01a, MS93,
 NR07, NOPT83a, Oja85, Rad96, RR91, Saa92, Sch81, Sch82, Sim03, Sor96a].
Eigenvalues [ARMNW10, Dav93, Gre58, KW94b, Kui00, SSS96, SWC97,
 vDHvdV01, CW81, Dav75, ELT79, LS97, MS86, Par84, RLHK51, Sha70,
 SBPH73, vDHvdV00]. **Eigenvector** [BS70, KV93, LW98]. **Eigenvectors**
 [Dav93, Fel74, Wil57, Wil58, Dav75, Sha70, SBPH73]. **Eigenwertprobleme**
 [Sch81]. **Einshtein** [Lan67a]. **Einstein** [Bal75, Bla76, Bri66, Bro66, Hou65,
 Jam70, Mal65, See65, Tre66, Wre66, CKLS05, FM94, Lan23a, Lan22b,
 Lan24a, Lan24b, Lan25f, Lan31a, Lan32d, Lan55a, Lan59, Lan65a, Lan67b,
 Lan67a, Lan67d, Lan67e, Lan70b, Lan72a, Lan74b, Lan74c, Lán74e, Lán74f,
 Lán76, Lán78b, Lan97b, Rin09, Rin11, Sei94, Sta94, Tre66, Bir71].
Einstein-Symposium [Tre66]. **Einsteinig** [Lán76]. **Einsteinischen**
 [Lan24b]. **Einsteins** [Lan31a]. **Einsteinschen**
 [Lan23a, Lan22b, Lan24a, Lan25f, Lan32d, Tre66]. **electrical**
 [Lan30a, Lan31b]. **Electricité** [Lan58c]. **Electricity**
 [Lan32e, Lan32f, Lan57, Lan42c, Lan66b, Lan58c]. **Electrodynamics**
 [PT94, BS05]. **Electromagnetic** [BTGV07, Lan31c]. **electromagnetism**
 [Lan67e, Lan32a]. **Electron** [Dun94, Lan25b, Lan30e, Lan05b]. **Electronic**
 [WCS98, WCSW99, TMC94, WZ94]. **electronic-structure** [TMC94].
electrons [Lan21]. **elektrischen** [Lan30a, Lan31b]. **Elektromagnetismus**
 [Lan32a]. **Elektronenbahnen** [Lan25b]. **Elektronentheorie** [Lan21].
Elektrons [Lan30e]. **Element**
 [NOPR88, GLA92, Lan32e, NOPT83b, PNOR87, RA93, RLAS97]. **elements**
 [ÇHM00]. **élete** [Ban02]. **Elimination** [YS98]. **elliptic** [Han97]. **Ellison**
 [Ano95, Isa96]. **elméletben** [Lán29d]. **Elucidation** [DGN75]. **elvek**
 [Lán29d]. **Emmy** [Lan73b]. **Empirical** [Lan38b]. **employing** [WCL⁺93].
Encyclopedia [BER02]. **end** [Lan68b, Lán72d, Fil70, Goo70, Moo71].
Energy [Flo94, PT94]. **Energy-Momentum** [PT94]. **Engineering**
 [GL84, SM07, GL82]. **Engineers** [Jen77]. **Englewood** [Bel57, Tei57].
Enhancement [Lam08, KC90]. **enhancing** [KWPP89]. **Entdeckung**
 [Tre66]. **Entropy** [GGS94, Tei94, Wal94]. **Entstehung** [Tre66].

Entwicklung [Tre66]. **Environment** [HVB94, SWC99a]. **Environments** [SWMC95, SWC99b, CSW01]. **epsilon** [CHM00]. **Equation** [Boy95, BSPL96, DK94, GB94, GH94, Lan29c, Lan29b, MT94, DG03b, DG04, FF87, Kry31b, Lan05c, Lan05d, Sun99, Lan33a]. **Equations** [ARMNW10, But94, Coo48, FM94, GGMP88, Jou92, Lan23a, Ort94c, Pai19, Sei94, SFvdV94, WTV87, Wel94, BS93, Bre97, Cop93, DG03b, DG08, Edg03, GM97, Lan21, Lan22b, Lan26c, Lan32d, Lan34a, Lan34b, Lan35b, Lan36a, Lan36b, Lan52d, Lan58d, Lan60b, Lan67e, Lan04, LS97, LP99, NOPT83b, Par80, Pea94]. **equidistant** [Lan52a]. **Erhaltungssätze** [Lan29a, Lan30b]. **Ernst** [DM98]. **Error** [Bai94, BY98, CSW02, Fas00, FW99b, FW99a, Kiz66, NO93, Pai76, Saa94a, Saa94b, Wri66, OIO03]. **essay** [Ano94a, Gel93, Gel94]. **essays** [S⁺62]. **Essentially** [Dra94]. **Estimating** [KL07, KW92, LW98, PSS82, ZT07]. **Estimation** [CGR99, FP94, XK94, BY98, FGP90, FGP91]. **estimator** [OIO03]. **etc** [Hou64a, Hou75, Hou06a]. **Ether** [Lan32g]. **Euclid** [Tei98]. **Euromicro** [IEE95]. **European** [BDLS96]. **EuroPVM** [BDLS96]. **Evaluation** [Lan64a, Sha70]. **Evaporation** [And94]. **éve** [Ban02]. **Eventual** [Kar94]. **Evolution** [Bor04, Jam70, Bir71, Kom03, Lan70b, Mee05]. **évtizede** [Lán78b]. **Exact** [Dra94, LGGT93, WTVNF87, SSS93, SSS94]. **Exceptions** [BP14]. **Excursion** [Rin11, Rin09]. **Executing** [WTVNF87]. **exile** [Wea01]. **Expansions** [Lan66a, WTV87, Pay87]. **Explicit** [Mas94, Cyb87, KL07]. **Explicitly** [BM94b, CSW02, SWCM96, SWC99a]. **Exploiting** [PdH02, Vos00]. **Exponential** [CR02, vdEH05, Dru08, PS11]. **Expositions** [Lew51]. **expository** [Abb78]. **Expression** [WTVNF87]. **Extended** [Lan60a, BEJ⁺18]. **extensions** [Bun97]. **extensive** [WB99]. **Exterior** [DG03a]. **External** [CSW01]. **Extract** [SSS96]. **extraction** [Par84]. **Extrapolation** [SS94]. **Extremal** [KW94b]. **Extreme** [vdHvdV01, Ret82, vdHvdV00].

F. [SSS94]. **face** [Kar78a]. **Factor** [Szc94]. **Factorization** [BLL92, FG02]. **far** [KP76]. **Fast** [CrFS09, Ng94, XK94, Fie01, Son89]. **Fault** [BBGL92]. **FCRC** [ACM96]. **Fejer** [ISO86, CB87]. **fejl** [Lán76]. **Fejlodése** [Lán76]. **Felder** [Lan25f]. **Feldern** [Lan30c, Lan30d, Lan30a, Lan31b]. **feldmäßige** [Lan26b]. **feldmäßigen** [Lan29a]. **feldtheoretische** [Lan30e]. **Feldtheorie** [Lan31a]. **Fermions** [Gut00, BBG⁺87]. **ferromagnet** [Hon01]. **Few** [GVK20, Saa94a, Saa94b, Dav75]. **FFT** [Coo87, Coo90, Coo94a, Coo94b, Nag94, Ng94, Now94, Ple94]. **FFT-Based** [Nag94, Ng94]. **Fibre** [GB94]. **Field** [BM94a, BH95, BH96, Lan26b, MO01, ER87, Hon01, Lan29a, Lan30e, Lan31c, Lan31a, Lan58d, Lan05a, Lan05b]. **Field-Theoretical** [Lan26b, Lan29a, Lan30e]. **Fields** [AD94, HE05, Lan25f, Lan30c, Lan30d, Lan30a, Lan31b, Tei98]. **Fifth** [GL82, SM07]. **Filamentation** [Kli94]. **Filter** [CG97, YS98]. **Filter-Diagonalization** [CG97]. **Filtered** [BKS08, GV99]. **Filtering** [CR02, FP94, Loh84]. **filters** [YR09]. **Finding**

[Gre58, Mon95, BEGG91, ELT79]. **Finite**
 [GS92, Gre94, MO01, GLA92, HE05, MS06, Meu06, NOPT83b, RLAS97, Tei98].
First [GGMP88]. **fitting** [Lan52a]. **Flächenhafte** [Lan24a]. **Flares**
 [MSY94]. **Flexible** [CS94b]. **Florida** [ACM98]. **flow** [KDLK94]. **flows**
 [Ode03]. **Fluid** [HKS93, KDLK94, LP10]. **fluid-structure** [LP10]. **Fluids**
 [Bro94b]. **fogalmak** [Lán76]. **fogalmazása** [Lán29d]. **force** [IC99].
Foreshock [Dun94]. **Form** [Lan58b, Szc94, Tau94, BF98, Lan78a]. **formája**
 [Lán73d]. **Formal** [BV94b]. **formalism** [Lan66e]. **Formalismus** [Lan66e].
Formation [vP94]. **formula** [Cyb87]. **Formulae** [Flo94]. **formulas**
 [KW94a]. **formulation** [Lan29c, Lán29d, Lan30b, Lan35a, Lan58d, Lan05c].
formulations [CdvV98, Sim03]. **Formulierung** [Lan29c, Lan30b].
Forward [CG97]. **Found** [Kui00]. **Foundation** [Ban02]. **Foundations**
 [BPP⁺11, Hal94b]. **four** [DG03a, DG03b, DG04, Lan38c]. **four-dimensional**
 [DG04]. **Fourier**
 [Dic67, GG71, Dan40, DL42a, DL42b, Lan66c, Lan66d, LG75, YR09].
Fraction [WTVNF87]. **Frage** [Lan32d]. **Frames** [RS94]. **Framework**
 [Eij92]. **France** [GL82, GL84, GGMP88]. **Franck** [SP99]. **Franck-Condon**
 [SP99]. **Free** [FF94, Pin94, AE98, BRS92b, BRZ98, CDvdV91, CdvV98,
 GL88, Sim03, Ye94]. **French** [Lan58c, Lan62e, Lan68c, Lan71]. **Frequencies**
 [Min56, Kry31b]. **Frequency** [Coo48, TLP08]. **frustrated** [Hon01]. **Fully**
 [Par94]. **Function** [Lan64f, BEJ⁺18, Lan21, Lan33b, Lan33a, ZB95, Zha95].
function-theoretical [Lan21]. **Functional** [BKS08, Wic94, MGRB11].
Functions [DGK98, Lan38b, OLBC10, Rap94, BY98, Blo84, Den06, Fro09,
 GV99, ITS10, Lan04, Mor09, WC04, Zha96]. **fundamental** [Lan33c].
funktionenraumes [Lan33a, Lan33b]. **funktionentheoretischen** [Lan21].
Future [Lán74e, Lán74f].

G [Lan67a]. **gained** [Coo87, Coo90]. **Galerkin** [CKLS05]. **Gamma**
 [God01, Lan64f, Pug04]. **Gamow** [Blo84, Rin09, Rin11]. **Gauge**
 [AMM94, BM94a, Fra94, Lew94, PT94, Tau94]. **Gauss** [PPS18]. **Gaussian**
 [Kni10]. **GCV** [CNO08]. **Gel'fand** [Bef94]. **Gene** [CGO07]. **General**
 [AHP97, Ano62, KW94a, Lan23d, Lan25g, Lan27a, Lan27b, Lán29d, Lan30b,
 Rei23, Saa94a, Saa94b, SO72, DG08, Ill05, Flo94, Ise94, Lan25a, Lan41a,
 Lan41b, Lan57, Lan58c, Lan72a]. **générale** [Lan58c]. **Generalizations**
 [MS86]. **Generalized**
 [CB87, CKW89, GLS94, Gro98, HN94, Jia95, Jia98, JP94, Leu90, RRB94,
 She99, FLL97, HL00, ISO86, JP93, Kal84, NR07, RR91, Sch82, vdV82].
Generated [KVOM94]. **generators** [DG04]. **Generic** [BP14, Rud94].
Geographical [FP94]. **Geometriai** [Lán76]. **geometric** [Lán76].
Geometrical [Jam70, Bir71, Lan70b]. **Geometrie** [Lan32a, Lan32c].
Geometry [AD94, BV94a, Bef94, HN94, Lew94, Ber97, Lan31c, Lan32c,
 Lan32a, Lan32e, Lan32f, Lan35a, Lan74d]. **Geophysics** [Now94]. **George**
 [S⁺62]. **German**
 [Kar78b, Lan23a, Lan25a, Lan21, Lan22a, Lan22b, Lan23b, Lan23d, Lan23c,

Lan24a, Lan24b, Lan25e, Lan25f, Lan25c, Lan25b, Lan25g, Lan25d, Lan26b, Lan26a, Lan26c, Lan26d, Lan27a, Lan27b, Lan29a, Lan29c, Lan29b, Lan30e, Lan30b, Lan30c, Lan30d, Lan30a, Lan31b, Lan31a, Lan32c, Lan32a, Lan32d, Lan32b, Lan33b, Lan33a, Lan34a, Lan35a, Lan66e, Rei23, Rut53, Sch81].

Germany [BDLS96]. **Gesamtsitzung** [Tre66]. **geschossenen** [Lan25e]. **GF}** [Mon95]. **Ghosting** [YS98]. **Givens** [Wil57]. **Gleichung** [Lan29c, Lan29b, Lan33a]. **Gleichungen** [Lan34a]. **Global** [Gan94, LM94, BEJ⁺18, Lan62e]. **globale** [Lan62e]. **globales** [Lan61a]. **GMRES** [GT94, Vui94]. **GMRES-like** [Vui94]. **GMRES/CR** [GT94]. **go** [KP76]. **Gödel** [ACLB07, BPP⁺11, Rin09, Rin11]. **golden** [Mar96]. **Golub** [CGO07, GORR16, HPS06]. **Gradient** [Bas97, BM94b, BES98, Eij92, ESB84, FF94, GO89, Gre89, GS92, Gre94, Ng94, NOPR88, Wül05b, YC94, CRZ94, CW80, GO87, MS06, Meu06, PNOR87]. **Gradient-Like** [FF94]. **gradients** [PdH02]. **graph** [CrFS09]. **gratings** [BS05]. **Gravitation** [Kar94, Lan75, Lan24b, Lan25f, Lan97b]. **Gravitational** [FP94, Lan23a, Wil94]. **Gravitationsgleichungen** [Tre66, Lan23a, Lan22b, Lan32d]. **Gravitationstheorie** [Tre66, Lan24a, Lan24b, Lan25f]. **Gravitons** [Hus94]. **Gravity** [Car94a, Kep94, Kie94, Kuc94, LM94, Thi94, Lan22b, Lan32d, Lan24a]. **Greece** [SM07]. **Grid** [BSPL96]. **große** [Sch81]. **group** [GS74]. **Guess** [Lan64b]. **guide** [LYS98]. **gyroscopic** [Bau86]. **Gyula** [Ban02, Ban02].

H [CGO07, Lan67c]. **Halberstam** [Lan67c]. **Hall** [Bel57, Tei57]. **Hamilton** [Lan67c, Lan67h, Lan67i]. **Hamiltonian** [BF97, Lan33c, Lan33b, Lan33a, Wat04]. **Hamiltonsche** [Lan33a]. **Hamiltonschen** [Lan33b]. **Hand** [ARMNW10, MB10, Saa87, GJS04]. **Handbook** [Hog07, OLBC10]. **Hankel** [BLL92, BQW09]. **Hanson** [CW67]. **Harmonic** [JN10]. **Harmonically** [WTVNF87]. **Hawaii** [Küc97]. **heat** [CLWE89, IC99, NO87]. **Heavy** [Car94b, Szc94]. **Heisenberg** [MC92, RS94]. **held** [GS74]. **Heliospheric** [KS94]. **Helium** [Dra94]. **Helmholtz** [WCL⁺93]. **Hermitian** [BCR03, BDY99, FF94, FGN93b, Fre94a, Fro09, Huh02, LG90, Mee01a, Pai10, WL96]. **Hessenberg** [Hou64a, Hou75, Hou06a]. **High** [ACM97, ACM98, CrFS09, KO94, Lan30d]. **highest** [SBPH73]. **Highly** [SWCM96]. **Hilbert** [Bir71, Jam70, Lan70b, Lán76]. **Hilbertig** [Lán76]. **Histories** [Hal94a]. **History** [GO89, Lan42b, Lan64b, Nas90, Ste93, GO87]. **hohen** [Lan30d, Lan30a, Lan31b]. **Hole** [And94, Bro94a, Tei94, Wal94]. **Holes** [GGS94, Man94]. **homogeneous** [GZZ99, GZZ00, Lan04]. **honor** [S⁺62]. **honour** [Sca74, SO72]. **Horizons** [BPP⁺11, BK94]. **Householder** [Fie01]. **Hungarian** [Ban02, Lán29d, Lán72d, Lán73d, Lán74f, Lán78b, Lax94, Mar96]. **Hungary** [Cse99]. **Hybrid** [LL94, CNO08]. **hydrogen** [Lan30a]. **Hyperpolarizabilities** [MO01].

ICCMSE [SM07]. **ICL** [ESB84]. **Ideal** [DW94]. **Ideas**

[Jam70, Bir71, Lan70b]. **Identification** [XCK94]. **Identities** [Edg94]. **identity** [Ray78]. **IEEE** [ACM97, ACM98]. **ihre** [Lan30e]. **ihrer** [Tre66]. **II** [Cul94b, Gut94a, Vac91]. **III** [Lan67c, MdM95, Ric77]. **III** [BGV94, CR02, GORR16, Han01, RH10]. **III-Posed** [BGV94, CR02, GORR16, Han01, RH10]. **illus** [Jam70]. **im** [Kar78b, Lan24b]. **Image** [Nag94]. **Imaginary** [LG90]. **Imaging** [GAVC07]. **Implementation** [AHP97, BTGV07, BF87, Day97, ESB84, GG96, GMG11, HE98, Leh95a, LO96, PNOJ85, SWC99b, Yan97, CW81, FGN93b, Leh95b, PS90, Rad96, SHS08]. **implementations** [Bah95]. **implemented** [KC91]. **Implicit** [Wri70, AA94, Fie01]. **Implicitly** [BCR03, BR05, BF97, BF00, BGV94, DB98, JN03, JN10, Leh95a, LS97, Leh99, Sor95b, Sor95a, Sor96a, Sor96b, CRS94, GSV96, KBG04, Leh95b, LYS98, Rad96, Wan01]. **Important** [BP14]. **Improved** [Yan97]. **Improvement** [Dan40]. **improvements** [DL42a, DL42b]. **inconsistent** [CRZ94]. **indefinite** [BEGG91, PC90]. **inertia** [AS01]. **inexact** [Sim03]. **infinitely** [Lan25f]. **Inflationary** [HKP08]. **Influences** [SWC99b]. **Information** [Hal94a, FJ05]. **Information-Theoretic** [Hal94a]. **Ingram** [Lan67c]. **Initial** [SS94, BS05]. **initial-value** [BS05]. **initialization** [BCA08]. **initio** [BCA08, TMC94]. **Inner** [FF94, GZZ99, GZZ00, Mee98, Mee01b, PC90]. **inner-outer** [GZZ99, GZZ00]. **Insights** [HL00]. **Inspiral** [Fin94]. **Inspired** [Lan64b]. **Institute** [F⁺00, Ort75b]. **Integer** [Opf94]. **integrability** [DG08]. **Integral** [fCL94, Col87, Lan26c, Lan50, Lan51a, Lan51b, Lan55b, Lan62a, Sun99]. **Integralgleichungen** [Lan26c]. **Integration** [AMM94, Lan62e, RR99, Lan61a]. **Intensitätsanomalie** [Lan30c]. **Intensitätsschwächung** [Lan31b]. **intensity** [Lan30c, Lan31b]. **interaction** [LP10, RR99]. **Interactive** [HVB94]. **Interdependence** [Gan94]. **interdisciplinary** [F⁺00]. **Interior** [SSS96, JZ08]. **International** [ACM96, Ano95, BCEP94, Cse99, FJS84, GL82, GL84, GGMP88, KvSR90, Kau05, Küc97, SM07, Isa96]. **Interpolation** [Lan38b, Lan38a, LD39, Lan60b]. **interpretation** [CW80, Lan30e, Lan05b]. **Interscience** [Hou65, Mal65, See65]. **Interstellar** [KS94]. **Interval** [Boy95]. **Interval-Searching** [Boy95]. **intrinsic** [Gel10]. **Introduction** [Hig93, Hig96, Hig97, Lan52b, Lan64c, Lan68c]. **Introductory** [Lan68c]. **invariáns** [Lán29d]. **Invariant** [BKS08, Lán29d, PT94, Lan30b]. **invariante** [Lan30b]. **Inverse** [Bor00]. **Inverses** [Ber94d, RRB94]. **invert** [HL06, Mee98, PS11, Ney09, Sim03]. **inverted** [Vos01]. **Investigation** [BGG⁺94]. **involution** [DG03b]. **ionic** [BS05]. **Ions** [KS94]. **IRA** [Wan01]. **IRBL** [BCR03]. **Ireland** [MW03]. **Irish** [Mil73]. **ISBN** [Wea01]. **Isotypic** [MOR04]. **ISSAC** [Kau05, Küc97]. **Italian** [Lan67d]. **Italy** [IEE95]. **Iteration** [Leh95a, MOR04, Pai94, Arn51, Lam08, Lan50, Lan51a, Lan51b, Lan55b, Leh95b, Loh84, NOPT83a, Sch81, Sch82]. **Iterations** [BKS08, GVK20, SS94, Bag00, GZZ99, GZZ00, Lan52d]. **Iterationsverfahren** [Sch81]. **Iterative** [BS70, Ber94d, Lan58a, Nag94, vdV94b, BD97, Dav75, FGN93a, MSW87, Ret82, Sha70, SBPH73].

J [Ano95, Isa96]. **J.** [Isa96, SO72]. **Jacobi** [BP14, FSvdV98]. **Jahrestages** [Tre66]. **Janet** [DG03a]. **January** [GGMP88, IEE95]. **Jets** [MSY94, vP94]. **John** [F⁺00]. **joint** [F⁺00]. **Jose** [ACM97]. **Jövó** [Lán74f, Lán74e]. **jubilee** [Ban02]. **jubileumi** [Ban02]. **Judaism** [Lan70a]. **Jülich** [F⁺00]. **July** [Kau05, Küc97, ME96]. **June** [KvSR90]. **just** [Pea94].

Kahan [GORR16, HPS06]. **Kaluza** [Mad85]. **kanonischer** [Lan34a]. **Kennedy** [SSS94]. **Kentniss** [Rut53]. **kernels** [CB87]. **Kerr** [AE98, Ber97]. **kiadvány** [Ban02]. **kind** [Lán73d]. **Kinematics** [Lan25c]. **kinematischer** [Lan25c]. **Klein** [Mad85]. **komplexe** [Lan26a]. **Komzsik** [Bor04]. **Koordinatensystem** [Lan22b]. **Kornel** [Ban02, Rei23, Ban02, Mar93, Ban02, Rei23, Per06, Kar74, Tör74]. **Kosmologie** [Lan24b]. **kosmosa** [Lan67a]. **kovarianten** [Lan29c]. **Kron** [Seh86]. **Krylov** [Bol94b, CS94b, Cra01, Hou64a, Hou75, Hou06a, Lam08, Pai94, Saa11a, Sid94]. **Krylov/Lanczos** [CS94b]. **Kurt** [BPP⁺11]. **Kutta** [Wri70].

L [SO72]. **Laboratory** [BR76]. **Lagrange** [AD94]. **Lagrangian** [Lan49a, Mad85]. **Laguerre** [But94]. **Lanczos** [Ano95, Bar63, Bel57, Bir71, Bla76, Bor04, BRS92a, Bro66, BCEP94, CKLS05, Cou71, Fil70, Goo70, GG71, Hig93, Hig96, Hig97, Hou64a, Hou75, Hou06a, Hou65, Isa96, Jam70, Lew51, LAW98, Mal65, Mee05, Moo71, Rei23, See65, SSS94, Smi63, Tei57, Tod58, VV06, Wea01, WCL⁺93, Wre66, Wri66, You75, Ban02, AA94, ARMNW10, ACLB07, AHB94, AHP97, ABFH00, AE98, AE00, Ano56, Ano94a, Ano94b, AS01, ACL89, ADRS92, ADRS95, AD94, Bag00, BCR03, BR05, BR06, Bah95, Bai94, BY98, BDY99, BF01a, BF01b, BJSR93, Bal75, BBG⁺87, MGRB11, Bas97, Bau86, BCA08, BKS08, BF97, BF98, BF00, BEJ⁺18, Ber97, BTGV07, Ber94a, Ber94b, Ber94c, BF06, BES98, Blo84, BG84, BG91a, BG91b, BEGG91, BBGL92, BLL92, Bol94a, Bor00, BS05].

Lanczos [BF87, Boy95, BH95, BH96, BSPL96, BRS91, BRS92b, BS93, Bre96, BRZ98, BZS99, Bre07, Bri66, BS56, BQW09, BV94b, BvB97, Bun97, But75, CRS94, CR99, CGR99, CHR02, CR02, CGL94, CG61, CDvdV91, CdvdV98, Che81, CG97, CrFS09, CS09, CWS97, CC03, CNO08, ÇHM00, CB87, Col76, Col87, Coo94b, CSW01, CSW02, Cop93, CLWE89, CS94b, Cra01, CW80, CW81, CWL83, CW84, CW85c, CW85a, CW85b, CKW89, Cul94a, Cul94b, Cul94c, Cul96, CW02, CZ02, Cyb87, DFS92, DGN75, D⁺98, Day97, DB98, Den06, Dic67, DK94, DT94, DM98, DG03a, DG03b, DG04, DG08, DGK98, DBK05, Dru08, EK97, Eck26, Edg94, Edg03, ELT79, Eij92, ER82, ESB84, FG02, Fas00, FGP90, FGP91, Fie01, FJ05, Fis00, FGN93b, FGN93a, Fre94b, Fre94a, FN96].

Lanczos [FF87, FW99b, FW99a, Fro09, GGV96, GV99, GP94a, GVBV06, GVK20, GG96, GORR16, Gel93, Gel94, Gel10, Ger03, God01, GAVC07, GUW72, Gol73, GLO81, GO87, GO89, GZZ99, GZZ00, GLRT99, GM97, Grc81, Gre89,

GS92, GT94, Gre94, Gre58, GS87, GLS94, GSV96, Gro98, GMG11, GH94, GP94b, GP95, GJS04, GW98, GZA86, GL88, GLA92, Gut92, Gut94a, Gut94b, GR00, Gut00, HN94, Han97, Han01, HW84, HL83, HRT08, HL06, HL00, HPS06, HS07, Hon01, HE98, Hor77, HE05, Huc95, Huh02, ITS10, Ill05, IC99, ISO86, JY93, Jia95, Jia98, JN03, JZ08, JN10, JHZ⁺09, JP93, Jou92, KP74, KP76, Kal84, KBGE97, Khe91, KC88, KC90, KC91, KL99, KJKL03, Kiz66, KDLK94, Kni10, KBG04, Kom03, KV93, KL07, KWPP89]. **Lanczos** [KW92, KW94b, Kui00, Lam08, LY93, LG90, Lax94, Leu90, LO96, LW98, LWA98, LWA99, Li10, LP10, Loh84, Lyn74, Mad85, Mai93, MS03, MT94, MT95, Mar94, MOR04, McC75, MC92, Mee98, Mee01a, Mee01b, MB10, MS06, Meu06, MSW87, Mon95, Mor09, MS93, MS01, MF86, MO01, MCSW96, MCSW97, NR07, Nas84, Nex89, Ney09, Ng00, NOPT83a, NOPT83b, NOC84, NOC85, NO87, NOPR88, NO89, NOR89, Ode02, OIO03, Ode03, Oja85, Ort75b, OR97b, OR97a, Pai70, Pai72, Pai76, Pai80, PV99, Pai10, Pai19, PS11, PS90, Pap90, PS79, Par80, PT81, PR81, PSS82, Par82, PTL84, PNOJ85, PTL85, PNOR87, Par87, PNOL88, PNO89, PC90, Par90, Par92, Par94, Pay87, PM08, PdH02, Pin94, PPS18, Pug04, RN82, RR91, RA93, RR99, Ray78]. **Lanczos** [Rei23, RG98, RH10, Rin09, Rin11, Rod76, RG02, RLAS97, Ruf53, Saa80a, Saa80b, Saa82, Saa87, Saa94a, Saa94b, SP99, Sca74, SHS08, Sch96a, Sch96b, Sch60, Sco79, Seh86, She99, Sim84a, Sim84b, SZ00, Sim98, Sim03, SSS96, SH83, SSS93, Son89, Sor95b, Sor95a, Sor96a, Sta94, Ste91, Ste94, Ste02, Sun99, SWMC95, SWCM96, SWC97, SWC99a, SWC99b, Tau75, Tau94, Tei98, Tem10, Tod94, Ton92, Tor95, TC08, TLP08, TCI⁺00, Van02, VVBG07, Vos00, Vos01, WZ94, WC04, WTVNF87, WTV87, Wat04, WL96, Wil57, Wil58, WB99, Wra66, Wri70, WCS98, WS98, WCSW99, WS00, Wül05a, Wül05b, XCK94, XK94, Yam68, YBS⁺10, Yan97, Ye91, Ye94, Ye96, YC99, YS98, YR09, ZT07, vDHvdV00, vDHvdV01, vdEH05, vdVV95, vdV82, Ban02, Mar93, Per06, RBE⁺75, ER87]. **Lánczos** [FLL97, Kar74, Tör74]. **Lanczos-based** [SSS94, Ber94b, Ber94c, CR02, CG97, BTGV07, CGL94, FGN93a, GMG11, SSS93]. **Lanczos-hybrid** [CNO08]. **Lanczos-like** [KC91]. **Lanczos-Subspace** [Leu90]. **Lanczos-Type** [Gut00, BRZ98, JHZ⁺09, Fre94a, GR00, Pin94, RG98, Saa94a, Saa94b, Van02, ABFH00, BS93, BZS99, Bre07, CdvdV98, CWS97, FG02, JY93, Kal84, RG02, Son89]. **Lanczosc** [Gil62]. **LANGMRES** [YC94]. **Large** [BCR03, BKS08, Bor00, CW85c, CW85a, Cul94a, Cul94b, Cul94c, ESB84, Fel74, Gal94, GGvM94, GZZ99, GZZ00, GZA86, Jia95, JN10, Lan58a, Nes65, PR81, Saa11b, Sor95b, TC94, WZ94, WS00, YC94, ZS07, CRS94, CR99, CW81, CWL83, CW84, CW85b, CW02, Dav75, ELT79, JK94, Jia98, KL99, Lan53, LYS98, Mai93, Oja85, PTL84, Rad96, Ret82, Saa80a, Saa82, Saa92, Sch81, Sch82, Sha70, SBPH73, Sor95a, Sor96a, Wan01, ZT07]. **Large-Scale** [BCR03, Lan58a, GZA86, Lan53, LYS98, Rad96]. **Largest** [KW92, PSS82, LW98]. **Laser** [GW98]. **Laser-Driven** [GW98]. **lattice** [F⁺00, Hon01, Lan66b]. **laws** [Lan29a, Lán29d, Lan30b, Lan05a]. **Leading** [AD94]. **Learn** [Tre94]. **Least** [Bjö94, BES98]. **lectures** [Lan65a, Lan67a].

Legend [But75]. **Legendre** [BP14, Lan73c, Ode02]. **lektsii** [Lan67a].
Leverrier [Hou64a, Hou75, Hou06a]. **life** [Ano94a, Ban02, Gel10, Wea01].
Lightcone [Ji94]. **LIGO** [Fin94]. **Like** [FF94, Vui94, KC91]. **limit**
 [Pap90, WB99]. **Linear**
 [ARMNW10, AHB94, BES98, Bol94b, FW99b, FW99a, Gil62, HVB94, Hog07,
 Hus94, Jou92, KV93, Lan58a, Lan58b, Lan61c, Lan64d, Lan78a, Lan96,
 Lan97a, MB10, SS94, SFvdV94, Smi63, Ton92, YC94, vdV94b, AA94, Bag00,
 BRS92b, BS93, BRZ98, BZS99, CRZ94, CDvdV91, CdvvdV98, CC03, Cop93,
 FGN93a, GZZ99, GZZ00, GM97, GJS04, IC99, JY93, JHZ⁺09, Lan34a,
 Lan34b, Lan35b, Lan36a, Lan36b, Lan50, Lan51a, Lan51b, Lan52d, Lan53,
 Lan55b, Mai93, MS01, PS90, Par80, Son89, Ste91, Ste94, Bar63]. **linearer**
 [Lan34a]. **Linearization** [FM94]. **lines** [Lan30c, Lan31b]. **Linien** [Lan30c].
Liouville [MGRB11, Man94]. **liquids** [Dan40, DL42a, DL42b]. **Local**
 [FP94, Gan94, Wal94, DGN75]. **locales** [Lan61a]. **Localization** [Rim94].
Location [GVK20]. **London**
 [Bar63, Bir71, Bla76, Cou71, GG71, Lan67c, Smi63]. **Look**
 [Fre94b, GR00, BZS99, FGN93b, GM97, Par80, PT81, PTL84, PTL85].
Look-Ahead [Fre94b, GR00, BZS99, FGN93b, PT81, PTL85]. **look-around**
 [GM97]. **Loop** [Smo94]. **Loops** [MSY94]. **Lösungen** [Lan32d]. **Louis**
 [Bor04]. **Low** [Huc95, SZ00]. **Low-Rank** [SZ00, Huc95]. **Löwdin** [HL83].
Lowest [BS70, Dav75, SBPH73]. **L'univers** [Lan71]. **lxv** [Ano95].
Lyapunov [AS01].

M [Ano95]. **Mach** [Rin09, Rin11]. **Machine** [MCSW96, BDLS96]. **Madison**
 [Ric77]. **magnetic** [Hon01, SHS08]. **Magnetically** [vP94].
Magnetohydrodynamics [BS94, DW94, MSY94]. **Magnetopause** [LL94].
Magnetosheath [KVOM94]. **Magnetotail** [Gan94]. **maintain** [PNOL88].
maintaining [Par92]. **Make** [Sco79]. **malignant** [Kni10]. **Manifolds**
 [Bef94]. **many** [WB99]. **many-body** [WB99]. **March** [Ric77]. **Martians**
 [Mar96]. **Mass** [Flo94, Lan41b]. **Mass-Energy** [Flo94]. **Massively** [Yan97].
master [FF87]. **material** [Kry31b]. **Materie** [Lan24a]. **Math.**
 [Hig93, Hig96, Hig97]. **Mathematical**
 [CD69, Lan67c, Lew51, OLBC10, Tor94, Den06, S⁺62, Ric77]. **Mathematics**
 [BPP⁺11, Lan42b, Lan67g, Ric77, Abb78, Lan71, Lax94, Rod76].
mathématique [Kry31a]. **mathématiques** [Lan71]. **Matlab** [Rad96].
MatMan [HVB94]. **Matrices** [Bas97, CG61, Dav93, ESB84, Fel74, Fre94b,
 GG96, Gre58, Hou64b, Hou64c, Hou06b, Huh02, JN10, KP74, Nes65, Opf94,
 RRB94, Wil57, vDHvdV01, BQW09, CW81, CWL83, CW84, Dav75, ELT79,
 FG02, FGN93b, Fro09, Lan26a, MS86, PT81, Par84, PTL85, Ret82, Sha70,
 SBPH73, Vos00, vDHvdV00]. **Matrix** [BS70, BLL92, Bor00, BV94b, BR76,
 CGO07, Cul94a, Cul94b, Cul94c, DGK98, Eij92, FSvdV98, GLO81, GV83,
 GV89, GV13, GT94, Jen77, LY93, LG90, LP10, MT95, Ng00, Pai76, Pai10,
 Sid94, SZ00, Tem10, vdEH05, Arn51, BEJ⁺18, BF06, BS56, ÇHM00, Cul96,
 Dru08, ER87, Fro09, HKP08, Hou64a, Hou75, Hou06a, ITS10, KV93, Mor09,

Nex89, PS11, RLHK51, Sim98, TC08, TLP08, ZT07]. **Matrix-Padé** [LP10]. **Matrizen** [Lan26a]. **Matter** [Lan24a, Lan42c]. **matters** [Kry31b]. **Maui** [Küc97]. **maximal** [Khe91]. **Maxwell** [Lan04]. **Maxwellian** [Lan21]. **Maxwellsche** [Lan21]. **May** [ACM96]. **means** [Fis00]. **Measurement** [Rim94]. **Mechanical** [Hal94a, Lan25c, Lan30e, Lan05b]. **Mechanics** [Hal94b, Lan26b, Lan49b, GS74, Lan26a, Lan26d, Lan33c, Lan33a, Lan62f, Lan64h, Lan65b, Lan66f, Lan70d, Lan77, Lan86, Lew51]. **mechaniki** [Lan65b]. **meckanischer** [Lan25c]. **media** [KDLK94, LWA99]. **megmaradási** [Lán29d]. **Melbourne** [ME96]. **memoriam** [Hor77]. **Memory** [Bas97, GP94b, JP94, MCSW96, Yan97, CW67, CSW01, GP95, JP93, RBE⁺75, Rod76]. **Mercury** [Lan23b]. **Mergers** [Pir94]. **Merkurperihelverschiebung** [Lan23b]. **Meson** [Car94b, Szc94]. **Method** [AHP97, BCR03, BDY99, BF97, BF00, BM94b, Ber94a, BBGL92, Bor04, BF87, Boy95, BH95, BH96, BSPL96, GG96, GLO81, GLRT99, Gre58, GZA86, Huh02, JN03, JN10, KBGE97, Kui00, Lan25b, Leh99, Leu90, LO96, MT94, MT95, MB10, MO01, MCSW96, MCSW97, Ort69, Saa87, SSS96, WCL⁺93, Wil58, WCS98, WS98, WCSW99, WS00, Wül05a, Wül05b, YBS⁺10, YC94, vDHvdV01, ABFH00, Ano56, ADRS92, ADRS95, Bah95, BF01a, BJSR93, BBG⁺87, BF98, BEJ⁺18, BD97, BS05, BS56, CRS94, CR99, CGL94, CKLS05, Che81, CNO08, Col76, Col87, Cri86, Den06, ELT79, Fas00, Grc81, GSV96, GJS04, Han97, Haz02, HL06, IC99, ISO86, JHZ⁺09, KL99, Kiz66, KDLK94, Kom03, KL07, KWPP89, Lan35b, Lan36a, Lan36b, Lan38a, Lan50, Lan51a, Lan51b, Lan55b, Lan68a, LWA98, LAW98]. **method** [LWA99, Li10, LP99, Loh84, Mai93, MC92, Mee98, Mee01a, Mee01b, Mee05, MS86, MS01, NR07, Nas84, NOPT83b, NOC85, NO87, NO89, NOR89, Ode02, OIO03, Ode03, Ort75a, Pai72, PS11, PS90, Pap90, Ret82, RG02, RLAS97, SHS08, Seh86, Sim03, Tei98, Vos00, Vos01, WZ94, Wan01, Wri66, ZB95, Zha95, Zha96, vDHvdV00, Bun97, EDO94, NO93, Ort94b, Ort94c, Rad96, Rap94]. **Methode** [Lan25b, Sad89]. **méthodes** [Kry31a, Lan61a]. **Methods** [ARMNW10, BR05, Bas97, BES98, Bol94b, Bol94a, Bre96, BV94b, CWS97, Coo48, CS94b, Cra01, Eij92, GL84, GGMP88, GO94, GR00, Gut00, Jia95, Jou92, LY93, Lan61d, LAW98, LGGT93, Ng00, Pai94, RG98, Saa11a, Saa11b, Sid94, SS94, Sim84a, SM07, Sor95b, Ste02, SWC97, Ton92, Van02, Vui94, Wri70, vdV94b, Bag00, BR06, Bre97, Bre07, CdvvdV98, CD69, FGP90, FGP91, FGN93a, GP94a, GVBV06, GORR16, Ger03, GS74, GL82, Han01, HW84, Hou64a, Hou75, Hou06a, JY93, Jia98, Lam08, LS97, LYS98, PdH02, RN82, Saa80a, Saa80b, Saa82, Saa92, Sch81, Sch82, Sim98, Sor95a, Sor96a, TCI⁺00, VVBG07, Wra66]. **metody** [Lan61d]. **metric** [AE98]. **Metrical** [Lan66b]. **MHD** [Cla94, SGN94, Sto94]. **Michigan** [Lan65a, Lan67a]. **Michiganskom** [Lan67a]. **Microelectronic** [Gal94]. **Milestones** [CGO07]. **MIMO** [AHB94]. **mindenütt** [Lán72d]. **minimization** [Nas84]. **minimized** [Arn51, Lan52d]. **minimized-iterations** [Lan52d]. **Minimum** [Ng00]. **Minisuperspace** [Thi94]. **MINRES** [YS98]. **mint** [Lán73d]. **Misconvergence** [Par87, Par90]. **mixed** [Sun99]. **mixed-potential** [Sun99].

ML [YC99]. **Modal** [CLWE89, CW84]. **mode** [GVBV06]. **Model** [Bol94b, CS94b, GSV96, JK94, Thi94, GGV96, ZT07]. **modeling** [BF01a]. **modelling** [KvSR90]. **Models** [BM94a]. **Modern** [Lan63b, Lan64e, SM07]. **Modes** [Min56, VVBG07]. **Modification** [Sha70, Huc95]. **Modified** [Mai93, MCSW96, MCSW97, BG91a, GP95, KJKL03]. **Modulo** [AMM94, Lew94]. **Molecular** [GAVC07, GW98, MF86, MGRB11, BCA08, TMC94]. **molecular-dynamics** [TMC94]. **Møller** [Flo94]. **Moment** [BV94b, WTV87, RN82]. **Moments** [Cal94, WTV87]. **Momentum** [PT94]. **Mondriaan** [BF06]. **Monitoring** [SWMC95, Par82]. **Monotone** [Fro09]. **monotonicity** [Dru08]. **Monster** [Dav93]. **Moody** [Isa96]. **Motion** [Lan27a, WTVNF87]. **MP** [GZA86]. **MPP** [SWC99a]. **MR** [BRS92a]. **MTNS** [KvSR90]. **MTNS-89** [KvSR90]. **Multi** [Fra94, CKLS05]. **multi-component** [CKLS05]. **Multi-TEV** [Fra94]. **Multidimensional** [Cla94]. **multifrequency** [TLP08]. **Multilevel** [TC94]. **Multiple** [ARMNW10, MB10, YC99, ABFH00, GJS04]. **multiplier** [Lan49a]. **Multipliers** [AD94]. **Multiprocessors** [Bas97]. **Multiscale** [Wei94]. **Munich** [BDLS96]. **munkássága** [Ban02]. **művészet** [Lán73d]. **myth** [Mar96].

Name [Cip00]. **NASTRAN** [GZA86]. **Nat.** [Hig93, Hig96, Hig97]. **National** [BR76]. **Nationale** [GGMP88]. **Natural** [Coo48, Lan31c, Lan32a, Lan32e, Lan32f]. **Naturalness** [Kep94]. **Nature** [KCGR94, Gel10, Lan26a]. **natürliche** [Lan32a]. **Navier** [LS97]. **near** [BRS91, BRS92a, Gru94]. **near-breakdown** [BRS91, BRS92a]. **Necessary** [VV06]. **Nesbet** [Sha70]. **Nested** [DB98]. **Netherlands** [KvSR90]. **Network** [Pin94]. **Networking** [ACM97, ACM98]. **Networks** [FP94]. **neue** [Lan25d, Lan31a, Lan33a, Lan34a]. **neuen** [Lan26b, Lan26d]. **neuer** [Lan35a]. **Neumann** [F⁺00]. **Neutron** [Pir94]. **Newton** [Nas84, NOPT83b, Pap90]. **Newton-type** [Nas84]. **NIST** [OLBC10]. **NJ** [Bel57, Tei57]. **NN** [CrFS09]. **no** [BRS92a, CW81, Lew51, SP99]. **Noether** [Lan73b]. **Noisy** [Lan64a, Lan52c]. **nombres** [Lan71]. **Non** [BDY99, BS70, Fre94a, Hus94, IC99, AA94, BG91a, DGN75, FGN93b, KL99, Lan35b, Ret82]. **Non-Hermitian** [BDY99, Fre94a, FGN93b]. **Non-Linear** [Hus94, IC99, AA94]. **non-local** [DGN75]. **non-oscillating** [Lan35b]. **non-proportional** [KL99]. **Non-Symmetric** [BS70, BG91a, Ret82]. **Nonadiabatic** [SP99]. **Nonlinear** [Boy95, RLAS97, JZ08, NOPT83b]. **Nonorthogonal** [DGK98]. **Nonsymmetric** [AHB94, BEGG91, CKW89, Cul94b, Cul94c, CZ02, Day97, Fre94b, Jou92, SFvdV94, Ton92, YC94, Bai94, BG91b, BRZ98, CDvdV91, CdvdV98, CW84, Cul96, FLL97, FGN93a, JY93, JHZ⁺09, Son89, Ye91, Ye94]. **Normal** [Huh02, MT94, Min56]. **normalization** [Hou64a, Hou75, Hou06a]. **North** [BCEP94, Wea01]. **Norwood** [CW67]. **Nostrand** [Bar63, Smi63]. **Note** [Dav75, Fer94, God01, Zha96]. **Notes** [She99]. **novel** [FLL97]. **November** [ACM97, ACM98, Tre66]. **nullspace** [Sim03]. **nullspace-free** [Sim03].

Number [KW94b, Opf94, Riv90]. **Numbers** [Fil70, Goo70, Lan68b, Moo71, Lan71, MS03, Lán72d]. **Numer** [BRS92a]. **Numerical** [BGG⁺94, But94, Cal94, DW94, Fis00, GB94, Hou64b, Hou64c, Hou06b, MC92, MO01, Ort94c, Saa92, Saa11b, SW94, Tre94, TCI⁺00, CH90, Gol73, Kry31b, Mil73, Sca74, Wra66, F⁺00]. **Numerics** [Cse99]. **numérique** [Sad89].

oändlighet [Lan70c]. **oblique** [Saa80a, Saa82]. **Observables** [Tor94]. **Observing** [Fin94]. **obtain** [VV06]. **Obtaining** [BSPL96]. **occur** [CC03]. **October** [BDLS96]. **off** [ÇHM00]. **off-shell** [ÇHM00]. **Oliver** [Fil70, Goo70, GG71, Moo71]. **Open** [CS94a]. **operator** [Cri86]. **Operators** [fCL94, Lan64d, Han97, Lan50, Lan51a, Lan51b, Lan55b, Lan61c, Lan96, Lan97a, Gil62, Smi63, Bar63]. **Optical** [GB94]. **optimal** [Den06]. **optimization** [CW80, GP94a]. **Orange** [ACM98]. **Order** [Rap94, BF01a, Lan65a, Lan67a, Bri66, Bro66, Wre66, Hou65, Mal65, See65]. **Ordinary** [But94, Lan60b, LP99, Sch81]. **ordinates** [IC99, KJKL03, NOC84]. **Orlando** [ACM98]. **Orthogonal** [BV94b, Lan66a, BEGG91, VV06]. **Orthogonality** [LG94, Van02, PNOL88, Par92]. **Orthogonalization** [Pai70, PS79, CSW01, vdVV95]. **Ortiz** [Bun97]. **oscillating** [Lan35b]. **oscillations** [Kry31b]. **Oscillator** [Eck26]. **Ösztöndíj** [Ban02]. **other** [Saa80a, Saa82]. **outer** [GZZ99, GZZ00]. **Output** [GVK20]. **overcoming** [LAW98, Pap90].

p [Goo70]. **PA** [Ano95]. **package** [ER82]. **Padé** [BY98, BF01a, Gut94b, KW94a, LP10, Sun99, TLP08]. **Padé-via-Lanczos** [BF01a, TLP08]. **pages** [Bir71, GG71, Moo71]. **Pair** [GGS94]. **Papers** [Cse99, Lan67c, Abb78, Ano94b, D⁺98, OR97b, OR97a, Sca74, SO72, Wea01]. **Parallel** [AHP97, BTGV07, BDLS96, BF87, FJS84, GG96, GP94b, IEE95, MCSW97, Sch96a, Sch96b, SGN94, SWMC95, SWCM96, SWC97, SWC99b, VVBG07, BF06, GP95, HRT08, KC91, RLAS97, NN93]. **Parameter** [FP94]. **Parameterized** [MB10]. **Parameters** [WTV87]. **Paris** [GGMP88]. **Part** [Lan42b, Cul94a, Cul94b, Gut92, Gut94a, Ort75a]. **Partial** [GGMP88, JN03, MCSW96, MCSW97, Wel94, BF01a, GP94a, Sim84b, ZT07, vdVV95]. **Particle** [CS94a, Lan41a, Lan41b]. **partitioning** [BF06, HL83]. **parts** [DGN75]. **passion** [MW03]. **Past** [Ort94c]. **path** [JZ08, Lan72a]. **Pauli** [FF87]. **Pencils** [FSvdV98, LY93, ER87]. **Pennsylvania** [ACM96]. **Performance** [ACM97, ACM98, KWPP89]. **perihelion** [Lan23b]. **Periodic** [Lan25d]. **periodische** [Lan25d]. **Perspective** [Lan64e, Lan63b]. **Perspektiven** [Tre66]. **Perturbation** [SBS94, MGRB11, Cri86, NO93]. **Perturbative** [Car94b]. **Perturbed** [Gre89]. **phase** [KDLK94, GMG11]. **phenomenon** [CW80, Lax94]. **Philadelphia** [ACM96, Ano95]. **philosophical** [Lan37]. **philosophy** [CW67]. **photographic** [Ano94a]. **Photoionization** [GAVC07]. **physical** [Lan32b, Lan67f]. **Physicists** [MW03]. **Physics** [FKS94, Gan94, GO94, Lan64b, Lan64e, Lan59, Lan63b].

physikalischen [Lan32b]. **physique** [Kry31a]. **Pick** [KS94]. **Pick-up** [KS94]. **Piecewise** [Ort75a]. **Plasma** [Dun94]. **Plasmas** [SW94]. **Plemmons** [Ano95, Isa96]. **PLS** [PdH02]. **point** [Kiz66, Wri66]. **points** [Pap90]. **Poisson** [Bef94, Fer94, Lan72c]. **poles** [Mee01a]. **Pólya** [S⁺62]. **Polyenes** [KBGE97]. **Polynomial** [BKS08, Boy95, Col87, LW98, Ort75a]. **Polynomials** [BP14, BV94b, But94, Hig93, Hig96, Hig97, Ort94a, Pai94, Riv74, Riv90, Ano52, BEGG91, Bun97, Cyb87, Lan53, Lan73c]. **Ponts** [GGMP88]. **porous** [KDLK94, LWA99]. **Portrait** [MT94, MT95]. **porzadek** [Lan67b]. **Posed** [BGV94, CR02, GORR16, Han01, RH10]. **position** [Lan32b]. **Positive** [FF94, Ng00, CKLS05, Lan64g, PS11]. **posteriori** [OIO03]. **Potential** [DK94, ACLB07, ACL89, Ber97, DM98, Ill05, Lan32c, Lan72b, Lan74a, Sun99, Tor95]. **potentials** [AE98]. **pour** [Lan61a]. **Power** [KW92, Wan01]. **pp** [Bro66, Cou71, Fil70, Fra94, Jam70, Lan67c, Smi63, Tei57, Wre66, Ano95, Bar63, Hou65, Lew51, Mal65, See65]. **Practical** [Pai70, Dan40, DL42a, DL42b, Lan52a, Lan61d]. **Practice** [LG94]. **Prakticeskije** [Lan61d]. **pre** [GV99]. **pre-filtered** [GV99]. **Precision** [GS92, Gre94, Lan64f, KO94, MW03, MS06, Meu06]. **Preconditioned** [Ng00, Ton92, Ney09, RLAS97]. **Preconditioner** [BM94b, RH10]. **Preconditioners** [fCL94, Nag94, Vui94]. **Preconditioning** [MS93, NOPR88, vdEH05, PNOR87]. **Predicting** [GS92]. **Preface** [OR97a, OR97b]. **Prentice** [Bel57, Tei57]. **Prentice-Hall** [Bel57, Tei57]. **Presentations** [Bri66]. **presented** [Cse99]. **Preserving** [LG94]. **Press** [Bir71, Bla76, Cou71, Jam70, Lan67c, Lew51]. **prikladnogo** [Lan61d]. **Princeton** [Bar63]. **Principal** [XK94]. **Principle** [Kar94, Lan27a, RS94, Arn51, Lan25a, Lan25g, Lan26d, Lan69a, Hal94a]. **Principles** [Lan49b, Wal94, Lan62f, Lan64h, Lan65b, Lan66f, Lan69b, Lan70d, Lan74d, Lan77, Lan86, Lew51]. **principy** [Lan65b]. **prize** [Abb78]. **prize-winning** [Abb78]. **Probabilistic** [KW94b, vDHvdV01, vDHvdV00]. **Problem** [BF97, BF00, BTGV07, Boy95, Dra94, Eck26, GUW72, Ise94, Kep94, Kie94, Kuc94, Lan25e, Lan25f, Lan25d, Rei23, Sid94, Wil65, Arn51, Bai94, BF98, BD97, Fas00, Ger03, Grc81, Kal84, Lan23d, Lan32d, Lan50, Lan51a, Lan51b, Lan55b, Lan66b, Mee01a, NR07, RR91, Sim03, Wra66]. **problèmes** [Kry31a, Lan61a]. **Problems** [AHB94, BDY99, BES98, CR02, CWS97, Cul94a, Cul94b, Cul94c, Fre94a, Gal94, GGvM94, GT94, Lan25d, Lan66a, Saa11b, TC94, Tor94, WS98, WS00, BS05, CRS94, CR99, CGL94, Che81, CC03, CW85b, Cul96, DG03a, FLL97, Fis00, GORR16, GZZ99, GZZ00, Han01, HKP08, HS07, Khe91, Lan60a, Lan68a, LYS98, LAW98, MS93, NOPT83a, Ode02, Oja85, PS90, Rad96, RH10, Saa92, Sch81, Sch82, ZT07, Ano55]. **Procedure** [BS70, CKW89, CW84, GLA92]. **Procedures** [GR00, CW85b]. **Proceedings** [ACM97, ACM98, Ano95, BR76, CW67, FJS84, GS74, GL84, GGMP88, IEE95, Isa96, Kau05, Mil73, Ric77, SM07, ACM96, BDLS96, GL82, Küc97, ME96, Ano55, BCEP94, KvSR90]. **Process** [BF01b, Fre94b, FW99b, FW99a, Gut92, Gut94a, Pai70, Pai10, Pai19, SZ00,

Yan97, BY98, GZZ99, GZZ00, Gut94b, JK94, KP76, LWA98, Loh84].
Processes [Pai94, Wil57, Ney09, Wat04]. **Processing**
 [Bol94a, IEE95, Ng94, Ple94, Vac91, XCK94, MdM95, NN93].
Prochitannykh [Lan67a]. **Produced** [Wil57]. **Product**
 [FF94, GR00, RG98, Mee01b, PC90, RG02]. **Product-Free** [FF94].
Production [GGS94]. **products** [Mee98]. **program** [PNO89]. **Programs**
 [CW85a]. **Progress** [PR81]. **Projection** [Bre97, YBS⁺10, Saa80a, Saa82].
Projections [MOR04]. **Projective** [WL96]. **Prologue** [Lan42b].
Prolongation [Ger03]. **Proof** [Sch60]. **proofs** [PdH02]. **Propagation**
 [GW98, Lan64g]. **Proper** [Hou64a, Hou75, Hou06a, Oja85]. **Properties**
 [Eij92, Man94, PQ94, Wri70, Lan62c, PdH02]. **property**
 [Lan31c, Lan32a, Lan32f, Lan38c]. **proportional** [KL99]. **pseudo** [IC99].
pseudo-force [IC99]. **Pseudospectra** [BH95, BH96, GAVC07].
pseudospectral [BS05]. **Public** [Ber94c]. **Public-Domain** [Ber94c].
publication [Ban02]. **Publications** [Bel57, Bri66]. **Published**
 [Ano94b, D⁺98, Wea01]. **Publishers** [Hou65, Mal65, See65]. **Pure** [LG90].
Püthagorasztól [Lán76]. **Putting** [Pea94]. **PVM**
 [BDLS96, Sch96a, Sch96b]. **Pythagoras** [Bir71, Jam70, Lan70b, Lán76].

QCD [Car94b]. **QMR** [FN96, RG98]. **QR** [FSvdV98]. **Quadratic**
 [GGvM94, Lan69a, Lan72b]. **quadrature** [KW94a, Kni10, PPS18].
Qualitative [Eij92]. **Quantenbedingung** [Lan26d]. **Quantenmechanik**
 [Lan26b, Lan26d]. **quantenmechanischen** [Lan26a]. **quantentheoretische**
 [Lan25c]. **Quantities** [WTV87]. **Quantization** [Smo94, Thi94]. **Quantum**
 [Car94a, GW98, Hal94b, Hal94a, Har94, Kuc94, Lan26b, LGGT93, Man94,
 Rim94, F⁺00, Lan26a, Lan26d, SW72, Lan25c]. **Quantum-Mechanical**
 [Hal94a]. **Quantum-theoretical** [Lan25c]. **Quantummechanical** [Kar94].
Quark [Szc94]. **Quasiclassical** [Har94]. **Quasispherical** [KCGR94]. **quatre**
 [Lan62b]. **Quelques** [Lan68c]. **Questions** [CS94a]. **Quotient** [Ste02, Sch82].
QZ [FSvdV98].

R [Ano95, Lan67c]. **Radiation** [Lan25e, Lan25d, Wil94]. **radionuclide**
 [LWA99]. **Raleigh** [BCEP94]. **Random** [KW92, LG75, LW98, GMG11].
Random-Phase [GMG11]. **randomized** [EK97]. **Rank** [SZ00, Huc95].
Rates [SS94, Han97, Li10, Saa80b]. **Rational**
 [GV99, Mor09, Sid94, GGV96, Lan36a, Mee01a]. **Rationalism** [Lan67f].
Raum [Lan66e]. **räumlich** [Lan25e]. **Ray**
 [Pir94, Dan40, LD39, WTVNF87, DL42a, DL42b]. **Rayleigh**
 [LY93, Sch82, Ste02]. **Rayleigh-quotient** [Sch82]. **Re** [Pai70].
Re-Orthogonalization [Pai70]. **Real**
 [BS70, Cul94a, BS56, CW85b, Dav75, Ret82, RLHK51, TC08].
real-symmetric [Dav75]. **Realization** [KvSR90]. **really** [Lan67d].
reanalysis [CGL94]. **recurrence** [Kni10]. **Recurrences**
 [BF01b, Gre89, GR00, RG98]. **recursion** [HW84, Lan36b]. **recursions**

[DBK05]. **recursive** [CrFS09, FGP90, FGP91]. **red** [Lan23c]. **reduced** [BF01a]. **reduced-order** [BF01a]. **Reduction** [Bol94b, CS94b, FM94, FSvdV98, Che81, CS09, GGV96, GORR16, GSV96, Hou64a, Hou75, Hou06a, JK94, LWA98, Ode02, OIO03, Ode03, PV99, LAW98]. **Reference** [Bro94b]. **Refined** [JN03, JN10, TC08]. **Region** [GLRT99]. **regular** [FG02, Lan32d]. **regulären** [Lan32d]. **regularization** [CNO08, Han01]. **regularizing** [MS01]. **Reinterpretation** [Lan25c]. **Related** [Gut92, Gut94a, Mor09, S⁺62]. **Relations** [Lan25c, AE00, DG04, Lan04]. **Relationship** [AD94, Sta94]. **Relationships** [BP14, Wri70, Lan21, Lan29b, Lan05d]. **Relativistic** [vP94]. **relativistischen** [Tre66]. **relativitási** [Lán29d]. **Relativitäts** [Lan21]. **Relativitätstheorie** [Lan23d, Lan32b, Lan25a, Lan25g, Lan27a, Lan27b, Lan30b, Rei23]. **relativité** [Lan58c]. **Relativity** [Ano62, DG08, Lan21, Lan69a, Per06, SO72, Flo94, Ise94, Lan25a, Lan23d, Lan25g, Lan27a, Lan27b, Lán29d, Lan30b, Lan32b, Lan37, Lan41a, Lan41b, Lan42a, Lan55a, Lan57, Lan58c, Lan72a, Sta94, Rei23]. **Relaxation** [Coo48]. **Reliable** [CH90, Cse99, Fie01, HE05]. **Remark** [Lan22a, Lan23b, Rei23]. **Remarkable** [Rin11, Lan38c, Rin09]. **Remarks** [Lan58d, Lan68c]. **remarques** [Lan68c]. **Reminiscences** [Tod94]. **Remo** [IEE95]. **Removed** [Kli94]. **Reorthogonalization** [Ber94a, Sim84a, CW81, MS03, Sim84b, ZT07]. **Replace** [GH94]. **Representation** [Lan26b, Lan29a, Lan38a, Lan05a, Lyn74]. **Research** [Ort94c, Ric77]. **Resolution** [Ber94d, ZT07]. **resolvents** [Nex89]. **Resonant** [FP94, WTVNF87]. **Restart** [WS98, WCSW99, WS00, YBS⁺10]. **Restarted** [ARMNW10, BCR03, BR05, BR06, BF97, BF00, BGV94, CSW02, JN03, JN10, Leh95a, Leh99, Rad96, Sor95b, Sor96b, SWCM96, Wan01, AA94, Bag00, CRS94, GSV96, HRT08, ITS10, KBG04, Leh95b, LS97, LYS98, Sor95a, Sor96a, SWC99a]. **Restarting** [SWC99b, DB98, NR07]. **Restoration** [Nag94]. **Result** [Pai10]. **Results** [Gre58, Tor94]. **retrieval** [FJ05]. **Review** [Ano95, Bal75, Bar63, Bir71, Bla76, Bor04, Bro66, Cou71, Fil70, Gil62, Goo70, GG71, Hou65, Jam70, Lan67c, Lew51, Mal65, Moo71, See65, Smi63, Tei57, Tod58, Wea01, Wre66, Mee05]. **Reviews** [Dic67, Isa96]. **revisited** [PM08]. **rewards** [Par92]. **Richardson** [Grc81]. **Riemann** [DGN75, DG03a, DG08, Edg03, Ger03, Lan32a, Lan38c, Lan62c, Lan62d, Lan62b, Tau75]. **Riemannian** [AD94, FJ05, Lan31c, Lan32c, Lan32e, Lan32f, Lan49a, Lan63a, Lan64g, Lan74a, Lan75]. **Riemannschen** [Lan32c, Lan32a]. **Right** [ARMNW10, MB10, Saa87, GJS04]. **Right-Hand** [ARMNW10, MB10, Saa87, GJS04]. **Riquier** [DG03a]. **Ritz** [LY93, VV06, Wül05a]. **RME** [GVBV06, VVBG07]. **Robert** [Isa96]. **Robust** [BTGV07, SWC97, HRT08]. **Rockwell** [GZA86]. **role** [Lan59]. **Root** [Bor00, Mor09]. **Roots** [Tei94, BS56, Mar94]. **Rotation** [Rei23, Lan23d]. **rotations** [ER87]. **Rotationsproblem** [Lan23d, Rei23]. **Rotverschiebung** [Lan23c]. **Routines** [Sch96a, Sch96b]. **Rowan** [Lan67h, Lan67i]. **Rowna**

[Lan67c]. **Royal** [Mil73]. **rugged** [Lan38a]. **rukovodstvo** [Lan61d]. **Runge** [Wri70]. **Russell** [CW67]. **Russian** [Lan61d, Lan65b, Lan67a].

Safeguarded [AA94]. **Samuelson** [Hou64a, Hou75, Hou06a]. **San** [ACM97, IEE95]. **say** [Lan67d]. **SC97** [ACM97, ACM97]. **SC98** [ACM98, ACM98]. **scalar** [WCL⁺93]. **scalars** [AE00]. **Scale** [BCR03, Cul94c, Lan58a, Sor95b, GZA86, JK94, Lan53, LYS98, Rad96, Sor95a, Sor96a, WZ94]. **scaling** [DFS92, JZ08]. **SCAN** [Cse99]. **SCAN-98** [Cse99]. **Scattering** [Fra94, Dan40, DL42a, DL42b, HL83]. **scene** [Par84]. **Scheinwerferlicht** [Kar78b]. **scheme** [vdV82]. **Schemes** [Pin94, Par82, TMC94]. **Schild** [AE98]. **Scholarship** [Ban02]. **Schrödinger** [BSPL96]. **Schroedinger** [Eck26]. **schwachen** [Lan25f]. **Schwinger** [ÇHM00]. **Science** [F⁺00, Lan55d, SM07, CW67, Gel10, Lan70a, Lax94, Mar96, Lán73d]. **Sciences** [GL84, GL82]. **Scientific** [Cse99, Nas90, NN93]. **Scientists** [Jen77, Kar78a, Kar78b]. **SCS** [GS87]. **SCS-40** [GS87]. **Searching** [Boy95]. **Second** [MO01]. **Sections** [GAVC07]. **Segmented** [Ode03]. **sehr** [Lan30c]. **Seismic** [Ber94d, ZT07]. **Selected** [CGO07, Kiz66, Wri66]. **Selective** [PS79, CSW01]. **Self** [Lan58b, Thi94, Lan78a]. **Self-Adjoint** [Lan58b, Lan78a]. **Self-Dual** [Thi94]. **Semi** [LG94, Mee01b, PNOL88, Par92]. **semi-definite** [Mee01b]. **Semi-Orthogonality** [LG94, PNOL88, Par92]. **Semiclassical** [Kie94]. **semidefinite** [PS11]. **Semiorthogonal** [Ste02]. **Sense** [Lan97b, Lan24b]. **Sensitivity** [Kni10, PV99, DBK05]. **Separation** [RLHK51]. **September** [BR76, SM07]. **sequences** [LG75]. **serial** [RLAS97]. **Series** [Hig93, Hig96, Hig97, Lan66c, Lan66d, YR09, GG71, Dic67]. **Set** [WTV87, Lan36b]. **Sets** [RS94, ELT79]. **Seventh** [ME96]. **Several** [Saa87, Ret82, SBPH73]. **shaped** [VVBG07]. **shared** [JP93]. **shared-memory** [JP93]. **Sharpness** [Li10]. **Shear** [Cla94]. **shell** [ÇHM00]. **Shest** [Lan67a]. **Shift** [PS11, HL06, Lan23c, Lan30a, Mee98, Sim03]. **Shift-and-Invert** [Sim03]. **Shift-invert** [PS11, HL06, Mee98]. **Shifted** [GLS94]. **SHMEM** [Sch96a, Sch96b]. **Shock** [KVOM94, KS94]. **Shock-Generated** [KVOM94]. **Short** [NOC85]. **should** [KP76]. **SIAM** [Ano95]. **Sided** [CZ02]. **Sides** [ARMNW10, MB10, Saa87, GJS04]. **Signal** [Bol94a, ISO86, Lan64g, Ng94, Ple94, Vac91, XCK94, MdM95]. **similarity** [GS74, VV06]. **Simple** [Eck26, MO01, Lan36b, Lan38a]. **simplified** [FN96]. **simplifying** [Lan22b]. **simply** [WC04]. **Simulation** [Gal94, Kli94, LL94, WCS98, MGRB11]. **Simulations** [DW94, SW94, SGN94, Tre94, TMC94]. **Simultane** [Sch81]. **Simultaneous** [Sch82, Sch81]. **single** [KDLK94]. **single-phase** [KDLK94]. **Singular** [GLO81, JN03, JN10, Ste93, CS09, CWL83, Fie01, KBG04]. **Singularities** [BGG⁺94, KCGR94, Rud94]. **Singularity** [Gru94]. **Sinne** [Lan24b]. **Sir** [Lan67c]. **SIRT** [vdV94a]. **Sitter** [Lan22a, Lan23c]. **Sitterschen** [Lan22a, Lan23c]. **six** [Lan65a, Lan67a]. **Sixth** [GL84]. **Sixties** [Ort75b]. **Skeletal** [SSS96, SSS93, SSS94]. **SLDM** [WCL⁺93]. **Slightly** [Gre89]. **Slowly** [Sco79]. **small** [HE05, Kni10, Kry31b]. **Smallest** [JN10, KBG04].

Smoluchowski [WTVNF87]. **Smoothing** [Lan52c, RG98, ISO86]. **Society** [Lan55d]. **Software** [Ber94b, Ber94c, FN96, HVB94, JP94, ER82, Par84, Ric77]. **soil** [RR99]. **solid** [CD69]. **Solution** [Coo48, Eck26, FF87, Gal94, GB94, Jou92, Lan52d, Lan58a, Lan60b, Ode02, Ort94c, Pai19, Arn51, Bau86, CLWE89, Fis00, GP94a, GLA92, KL99, Kry31a, Kry31b, Lan50, Lan51a, Lan51b, Lan53, Lan55b, LYS98, LP99, NOPT83a, NOPT83b, RA93, Sim03, Sun99, WCL⁺93, Wra66]. **Solutions** [Che81, Dra94, Wei94, Lan32d, LP10, TLP08]. **Solve** [AHB94, BD97]. **Solver** [HE98, SFvdV94, HRT08, Son89]. **Solving** [Boy95, Cop93, GLRT99, GLS94, GZA86, LO96, Saa87, Sei94, YC94, AA94, BRS92b, BS93, CDvdV91, CC03, Cul96, GM97, JY93, JZ08, KDLK94, Lan35b, Lan36a, Lan36b, Mai93, Par80, Rad96, Saa80a, Saa82]. **Some** [BF01b, Bun97, DL42a, DL42b, Gol73, GO87, GO89, Il05, KWPP89, Lan62c, Tor94, Wri70, DGN75, DG04, PdH02, Tor95, Lan68c]. **sound** [RA93]. **Source** [FP94, KVOM94]. **Sources** [Wil94]. **Space** [AMM94, Bol94b, Bro94b, Cou71, Lan70b, Lew94, Rud94, SW94, DM98, GSV96, Lan33a, Lan64g, Lan66e, Lan74a, Lan75, Lán76, Tor95, Jam70, Bir71]. **Space-time** [Rud94, Tor95]. **Spaces** [Fer94, Lan33b, Lan49a, Lan63a]. **spacetime** [ACLB07, DGN75]. **spacetimes** [AE98]. **Sparse** [Bas97, Bor00, BR76, ESB84, Gal94, GG96, GLS94, TC94, YC94, BF06, ELT79, GP94a, GZZ99, GZZ00, KV93, Mai93, MS86, MS93, Par84, Sch82, BR76]. **Spatially** [Lan25e]. **Spatially-Closed** [Lan25e]. **Special** [Lan72a]. **spectra** [MGRB11, WC04]. **Spectral** [ER82, KDLK94, MT94, MT95, Mas94, MF86, Ano55, Lam08, Lan31b, Mee98, Sun99, WCL⁺93]. **Spectroscopic** [Lan55c]. **Spectrum** [SP99, WTVNF87, DBK05]. **Spektrallinien** [Lan31b]. **Spin** [AE00, AD94, MC92]. **Spin-0** [AD94]. **Spin-2** [AD94]. **spinning** [GL88]. **Spinor** [PT94, AE00, Il05]. **spline** [Pay87]. **splitting** [Lan62d, Tau75]. **Spontaneous** [Rim94]. **spotlight** [Kar78b]. **Spravocnoje** [Lan61d]. **Spring** [Lan65a, Lan67a]. **Square** [Bor00, Hon01, Mor09]. **square-lattice** [Hon01]. **squared** [CDvdV91]. **Squares** [Bjö94, BES98]. **Stability** [BES98, FM94, Pai10, Wri70, TCI⁺00]. **Stabilization** [Wül05a, Wül05b]. **stabilizing** [LWA98]. **Stable** [Cla94, RS94, SFvdV94]. **Stand** [Hig93, Hig96, Hig97]. **Standards** [Bro94b]. **Star** [Pir94]. **Stark** [Lan30c, Lan30d]. **Stark-effect** [Lan30c]. **Starkeffekt** [Lan30c]. **Starkeffekt-Linien** [Lan30c]. **Starkeffekts** [Lan30d]. **starken** [Lan30c]. **Start** [KW92, LW98]. **Starting** [YC99, ABFH00]. **State** [Wea01, CD69, GSV96]. **States** [KBGE97, CKLS05, HL83]. **stationäre** [Lan24b, Lan25b]. **Stationary** [Lan97b, Lan24b, Lan25b]. **Stefan** [Wra66]. **Stellung** [Lan32b]. **Step** [Ort75a, SSS96, KL07, MSW87]. **Stieltjes** [GAVC07]. **STLM** [ER82]. **Stokes** [LS97]. **storage** [KV93]. **storage-efficient** [KV93]. **strategies** [KWPP89]. **Strength** [KCGR94, Blo84]. **stroenie** [Lan67a]. **Strong** [Kep94, Rud94, Lan30c, Lan30a, Lan31b]. **Structural**

[BF87, KC88, AA94, CGL94, NOR89, RLAS97, TLP08]. **Structure**
 [LM94, Szc94, WCS98, WCSW99, Lan66e, LP10, RR99, TMC94, WZ94].
Structured [BTGV07, Fre94a]. **Structures**
 [CS94b, BJSR93, GL88, KL99, KJKL03, NOC84, NOC85, SH83, SSS93, SSS94].
Struktur [Lan66e]. **Studies** [Sca74, S⁺62, Ort75b]. **Study**
 [Ton92, BF06, Hon01, MC92]. **Style** [FSvdV98]. **Subproblem** [GLRT99].
Subspace [GW98, Leu90, Pai94, Saa11a, Sid94, YBS⁺10, Fie01, Lam08,
 Loh84, NOPT83a]. **Subspaces** [BKS08, EDO94, RS94]. **Substance** [Lan32g].
Substitution [CG97]. **sufficient** [VV06]. **summation** [ISO86].
Supercollider [FKS94]. **Supercolliders** [She94]. **Supercomputer**
 [LO96, Num85]. **Supercomputers** [Sei94]. **Supercomputing** [ACM96].
superfluid [CD69]. **Superiority** [BP14]. **Superlinear** [Han97].
Surface [Lan24a]. **Superspace** [FM94]. **Supersymmetry** [She94].
Survey [Lan24a]. **Surprises** [BV94a]. **Surprisingly** [SFvdV94]. **Survey**
 [Ber94c, Bol94b, CW85b]. **SVD**
 [Ber94a, FJ05, HRT08, Mdm95, Sor95a, Vac91]. **Swinburne** [ME96].
Symbolic [Kau05, Küc97]. **Symmetric** [ARMNW10, BF01b, BS70, CW85c,
 CW85a, Cul94a, Cul94c, Fer94, GUW72, GLS94, KP74, LY93, MB10, Ng00,
 Pai70, Pai76, Pai80, PR81, Par94, Saa87, Sim84a, Tem10, WS98, WS00, ZS07,
 vDHvdV01, BJSR93, BG91a, BS56, CRZ94, CRS94, CW81, CW85b, CW02,
 Dav75, ELT79, ER87, GP94a, GZZ99, GZZ00, ITS10, JP93, Li10, MS86,
 MS93, PS11, Par80, Ret82, RLHK51, SBPH73, Vos00, vDHvdV00].
Symmetries [Wal94]. **Symmetry** [BM94a, Lan74d, DG04, Vos00, GS74].
Symplectic [BF97, BF00, GO94, BF98, Fas00, Wat04]. **Symposium**
 [BR76, Cse99, GL82, GL84, GGMP88, KvSR90, Kau05, Küc97, Ano55, GS74,
 Ric77, Tre66]. **Synge** [SO72]. **System**
 [GW98, XCK94, Edg03, GM97, KvSR90, Lan22b]. **Systems**
 [AHB94, BGV94, FF94, FW99b, FW99a, GZA86, Jou92, Lan58a, Lan58b,
 LGGT93, MB10, Saa87, SS94, SSS96, Ton92, YC94, vdV94b, Bau86, BRS92b,
 BS93, Bre97, BRZ98, BZS99, CRZ94, CDvdV91, CdvvdV98, CC03, DG03a,
 DG03b, FGN93a, GSV96, GJS04, JK94, JY93, JZ08, JHZ⁺09, Kry31b,
 Lan52d, Lan53, Lan78a, LP99, Mai93, MS01, NOR89, Par80, Saa80a, Saa82,
 SHS08, Son89, Ste91, Ste94, Wan01, WB99]. **Számok** [Lán72d]. **Szeged**
 [Cse99]. **Szekeres** [KCGR94]. **Szekf** [Ban02]. **Szekfü** [Ban02, Ban02].

T [Ano95, Isa96, ÇHM00]. **T-matrix** [ÇHM00]. **T3D**
 [AHP97, Sch96a, Sch96b]. **T3E** [HE98]. **T3E-900** [HE98]. **Tables**
 [Ano52, Hig93, Hig96, Hig97]. **Tal** [Lan70c]. **talk** [Pea94]. **Tau**
 [Haz02, Ort69, ZB95, Zha95, Col76, Cri86, LP99, Zha96, Bun97, EDO94,
 NO93, Ort75a, Ort94b, Ort94c, Rap94]. **Tau-method**
 [ZB95, Zha95, Col76, Zha96, Rap94]. **technical** [Kry31b]. **technique**
 [AA94, RR99, SSS93, SSS94]. **Techniques**
 [SWC99b, TC94, ADRS92, ADRS95, Lyn74, ME96]. **Technology** [ME96].
Teller [Blo84]. **tenseur** [Lan62b]. **Tensor**

[Edg94, Lan58e, PT94, Tau94, DGN75, DT94, DG04, HN94, Lan29b, Lan38c, Lan62c, Lan62d, Lan05d, Tau75]. **tensor-analytical** [Lan29b]. **tensoranalytischen** [Lan29b]. **tensorial** [Lan26c]. **tensorielle** [Lan26c]. **Térfogalom** [Lán76]. **Term** [GR00, RG98, Cri86, NO93]. **Termination** [KS94]. **terms** [Lan30a]. **Testing** [HVB94, GMG11]. **Tetrad** [Lan66e]. **Tetraden** [Lan66e]. **Tetraden-Formalismus** [Lan66e]. **TEV** [Fra94]. **Their** [Dav93, RRB94, SWC99b, Dan40, DL42a, DL42b, DG08, Wri70]. **Theorem** [Sch60]. **Theoretic** [Hal94a, Tau94, GS74]. **Theoretical** [Lan26b, Min56, Saa94a, Saa94b, Lan21, Lan25c, Lan29a, Lan30e, Lan05a, Lan05b, Mee98]. **Theorie** [Lan23a, Lan23b, Lan30e, Lan30d, Lan29a]. **Theorien** [Lan32b]. **Theories** [Eck26, Lan32b]. **Theory** [BKS08, CS94a, CW85c, Gut92, Gut94a, Hou64b, Hou64c, Hou06b, Mas94, Opf94, Rei23, Riv90, SBS94, WTVNF87, WTV87, Ano55, MGRB11, Bun97, CL94b, CD69, DG03a, KvSR90, Lan23a, Lan21, Lan29a, Lan30e, Lan30d, Lan31a, Lan34a, Lan34b, Lan59, Lan04, Lan05a, Lan05b, Mad85, Meu06, OR97b, Per06, SW72, Lan23d, Lan24a, Lan24b, Lan25f, Lan25g, Lan27a, Lan27b, Lan29d, Lan30b, Lan32b, Lan55a, Lan97b]. **thermodynamic** [WB99]. **Thermodynamics** [And94, Bro94a]. **Thick** [WS98, WCSW99, WS00, YBS⁺10]. **Thick-Restart** [WS98, WCSW99, WS00, YBS⁺10]. **things** [Gel10]. **third** [BDLS96]. **thoughts** [DGN75]. **Three** [BP14, GR00, RG98, DG03a, Ger03]. **three-dimensional** [Ger03]. **Three-Term** [GR00, RG98]. **Time** [Bro94b, Car94a, Co094b, Kie94, Kuc94, Lan25d, Tor94, WTV87, MGRB11, KL07, Lan66e, RR99]. **Time-Dependent** [WTV87, MGRB11]. **time-step** [KL07]. **times** [DM98, Rud94, Tor95]. **Toeplitz** [Ng00, PS11, Vos00]. **Tolerance** [BBGL92]. **Tolman** [Flo94]. **Tomography** [Ber94d, ZT07]. **Top** [Cip00]. **topics** [S⁺62, Mil73]. **Topological** [Tei94]. **Toronto** [Bar63, Lew51]. **total** [Lan41b]. **Tracking** [PR81]. **Trajectories** [Lan25b, Lan61a]. **transfer** [BY98, GV99, IC99]. **Transformation** [ER82, WTVNF87, WTV87, Lan34a, Lan34b, Mee98]. **Transformations** [AMM94, Lew94, Fie01, VV06]. **Transformationstheorie** [Lan34a]. **transient** [CLWE89, IC99]. **translation** [LWA98]. **transport** [LWA99]. **Transpose** [BRZ98, CdvdV98, Pin94, CDvdV91]. **Transpose-Free** [Pin94, BRZ98, CdvdV98, CDvdV91]. **Transputer** [Pin94]. **Treatment** [Lan25d]. **Trends** [HKS93]. **tri** [Yam68]. **tri-diagonalization** [Yam68]. **Tridiagonalization** [Pai10, Tem10, HPS06, HS07]. **Tridiagonalizing** [CG61, Pai76]. **Trigonometric** [Lan38b, PQ94, LD39, Lan52c, Lan60b]. **Triplets** [JN10, KBG04]. **truncated** [Pap90]. **truncation** [Lan52c]. **Trust** [GLRT99]. **Trust-Region** [GLRT99]. **Truth** [BPP⁺11]. **tudomány** [Lán73d]. **turboTDDFT** [MGRB11]. **Turbulence** [KVOM94]. **Two** [CZ02, Par82, DG03a, MSW87]. **Two-Sided** [CZ02]. **two-step** [MSW87]. **Type** [BV94b, Fre94a, GR00, Pin94, RG98, Saa94a, Saa94b, Van02, ABFH00, BRS91, BRS92a, BRS92b, BS93, BZS99, Bre07, CdvdV98, CWS97, FG02, JY93,

Kal84, KW94a, Nas84, RG02, Son89, Tor95, YR09, Gut00, BRZ98, JHZ⁺09].

Ultra [KO94]. **Ultra-high** [KO94]. **Umdeutung** [Lan25c]. **Uncertainty** [Hal94a]. **undamped** [Bau86]. **underdetermined** [MS01]. **Underlying** [AE00]. **Understand** [Par94]. **understanding** [Rut53]. **Undulatory** [Lan63a]. **unendlich** [Lan25f]. **Uniform** [HL06]. **Universe** [Har94, Lan25e, Lan25d, Lan22a, Lan23c, Lan71]. **universitete** [Lan67a].

University

[F⁺00, GS74, Lan67c, Lew51, ME96, Ric77, Wea01, Lan65a, Lan67a].

Unsymmetric

[Gut92, Gut94a, Jia95, Yan97, DB98, Huc95, Jia98, Khe91, KC88, KC90, LWA98, LWA99, PT81, PTL84, PTL85, RR91, Saa80a, Saa82, TC08, LAW98].

Updating [BBG⁺87]. **upon** [CW80]. **Upper** [SS94]. **USA**

[Küc97, ACM96, ACM97, ACM98]. **Use**

[ELT79, Pai70, SH83, AA94, Oja85, Wra66]. **Used** [Opf94]. **user** [LYS98].

uses [Gol73]. **Using**

[AHB94, BKS08, BBGL92, BH95, BH96, DGK98, Gre58, GZA86, HVB94, MO01, MCSW96, MCSW97, Nag94, NOPR88, SZ00, Thi94, WC04, XK94, MGRB11, BCA08, GVBV06, GLRT99, IC99, KC88, KL99, KJKL03, KL07, MC92, NOC84, PNOR87, RA93, RR99, RLAS97, Sim03, VVBG07, WZ94]. **utilizing** [CLWE89].

V [GL82, Hig93, Hig96, Hig97, Lan67a]. **Vacuum** [Ji94, DM98]. **Validated** [Cse99]. **Value**

[JN03, Lan66a, Ste93, BS05, Che81, ER87, Lan60a, Lan68a, Ode02]. **Valued** [Sid94]. **Values**

[BH95, BH96, GLO81, Wül05a, CWL83, Hou64a, Hou75, Hou06a, VV06].

Variable [Vui94]. **Variables** [Smo94, Thi94]. **Variacionnyje** [Lan65b].

Variant [YC99, Vos01]. **variants** [JHZ⁺09, Pai72]. **variation**

[Ye94, Lan26d]. **Variational** [Lan49b, Lan69b, Wal94, Lan25a, Lan62f, Lan64h, Lan65b, Lan66f, Lan70d, Lan77, Lan86, Lew51, Ray78]. **Variations**

[RG02, Lan62a, Lan73b]. **Variationsprinzip** [Lan25a, Lan26d]. **Vector**

[Lan72b, Lan74a, PNOJ85, Sid94, SS94, Van02, Lan32c].

Vector-Orthogonality [Van02]. **Vector-Valued** [Sid94]. **Vectors**

[DGK98, GLO81, YC99, ABFH00, BS56, CS09, CWL83, Hou64a, Hou75, Hou06a, KV93, Oja85, PNOL88, Par92, RR99]. **Vektorpotentials** [Lan32c].

Velocity [Cla94, Gru94]. **veramente** [Lan67d]. **vereinfchendes** [Lan22b].

Verified [FW99b, FW99a]. **Versailles** [GL82, GL84]. **Verschiebung**

[Lan30a]. **Version** [MT94, MT95]. **versus** [CS09, Cul96, Lan73c, NOPT83a].

Verteilung [Lan24a]. **very** [CW81, CW84, CW85b, Lan30c, SBPH73].

vesnoi [Lan67a]. **vi** [Bro66, Hou65, Mal65, See65, Wre66, D⁺98, GL84]. **via**

[BY98, BF01a, CGR99, CHR02, CG97, CrFS09, FF87, GV99, GSV96, JK94, JZ08, LP10, Nas84, TLP08]. **Vibration**

[BF87, Min56, BER02, GL88, SSS93, SSS94]. **vibrational** [WC04].

- vibrations** [LP10]. **virtual** [BDLS96]. **Vlasov** [Kli94]. **Voetter** [Hou64a, Hou75, Hou06a]. **Volume** [CW85c, CW85a, Lan67c]. **Volumes** [D⁺98]. **vom** [Tre66]. **Vorlage** [Tre66]. **Vorobyev** [Bre96]. **Vorträge** [Tre66]. **VPP500** [LO96].
- W** [SSS94]. **Wasserstoffterme** [Lan30a]. **Wave** [DK94, GB94, DG03b, DG04, Lan30e, Lan33c, Lan05b, WCL⁺93, Lan33a]. **wave-mechanical** [Lan30e]. **Waveform** [Wic94]. **wavefunction** [BCA08, Pea94]. **waveguide** [GVBV06, VVBG07]. **Wavelet** [Opf94, Fis00]. **wavelet-based** [Fis00]. **Wavelets** [Cui94, PQ94, Wel94]. **Waves** [Dun94, KVOM94, Lan42c]. **weak** [Lan25f]. **weakening** [Lan31b]. **Webber** [Hou64a, Hou75, Hou06a]. **Webber-Voetter** [Hou64a, Hou75, Hou06a]. **weighted** [CNO08]. **weighted-GCV** [CNO08]. **Weighting** [EDO94]. **Weights** [Wül05b, BEGG91, Kni10]. **Wellenmechanik** [Lan33a]. **wellenmechanische** [Lan30e]. **Welt** [Lan25d, Lan22a, Lan23c, Lan25e]. **Weltgeometrie** [Lan35a]. **Weyl** [DG03b, DG04, RS94]. **Which** [Kui00, Kry31b]. **Wiley** [Bro66, Wre66]. **William** [Lan67c, Lan67h, Lan67i]. **Williams** [SSS94]. **Wilson** [Gut00, Mas94]. **windowing** [TLP08]. **winning** [Abb78]. **Wirkungsprinzip** [Lan25g]. **Wisconsin** [Ric77]. **Wissenschaftler** [Kar78b]. **without** [Fil70, Goo70, Lan68b, Lán72d, Moo71]. **Witten** [LM94]. **work** [Ban02, Rei23, Wea01]. **Works** [CGO07, Ano94a, Per06]. **Workshop** [IEE95, F⁺00]. **World** [Bri66, Bro66, Wre66, Hou65, Lan35a, Lan65a, Lan67a, Lan67f, Mal65, See65]. **wszczęświata** [Lan67b]. **Wuppertal** [F⁺00]. **Wynn** [ÇHM00].
- x** [Cou71, Fil70, Jam70, Dan40, DL42a, DL42b, GZA86, LD39, Wea01]. **X-MP** [GZA86]. **X-ray** [DL42a, DL42b, Dan40, LD39]. **xx** [Bel57]. **xxv** [Lew51]. **xxvi** [Hig93, Hig96, Hig97].
- years** [Ban02]. **Yokohama** [NN93]. **York** [Bar63, Bir71, Bla76, Cou71, Jam70].
- Zeit** [Lan66e]. **Zeit-Struktur** [Lan66e]. **zeitlich** [Lan25d]. **Zhang** [RG02]. **Zum** [Rei23, Lan25a, Lan23d, Lan25e, Lan25f, Lan25g, Lan27a, Lan32c]. **zur** [Lan21, Lan22a, Lan23b, Rut53, Lan23a, Lan27b, Lan29c, Lan30c, Lan30d, Lan30a, Lan31b, Lan32d, Lan33b].

References

Abdel-Aziz:1994:SUI

- [AA94] Mohammedi R. Abdel-Aziz. Safeguarded use of the implicit restarted Lanczos technique for solving non-linear structural eigensystems. *International Journal for Numerical Methods in*

Engineering, 37(18):3117–3133, September 30, 1994. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Abbott:1978:CPC

- [Abb78] James Crawford Abbott, editor. *The Chauvenet papers: a collection of prize-winning expository papers in mathematics*. Mathematical Association of America, Washington, DC, USA, 1978. ISBN 0-88385-425-2 (vol. 1), 0-08-835427-9 (vol. 2). xviii + 312 (vol. 1), vii + 313–595 (vol. 2) pp. LCCN QA7 .C43 1978. Two volumes.

Aliaga:2000:LTM

- [ABFH00] J. I. Aliaga, D. L. Boley, R. W. Freund, and V. Hernández. A Lanczos-type method for multiple starting vectors. *Mathematics of Computation*, 69(232):1577–1601, October 2000. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic). URL <http://www.ams.org/journal-getitem?pii=S0025-5718-99-01163-1>; <http://www.ams.org/mcom/2000-69-232/S0025-5718-99-01163-1/S0025-5718-99-01163-1.dvi>; <http://www.ams.org/mcom/2000-69-232/S0025-5718-99-01163-1/S0025-5718-99-01163-1.pdf>; <http://www.ams.org/mcom/2000-69-232/S0025-5718-99-01163-1/S0025-5718-99-01163-1.ps>; <http://www.ams.org/mcom/2000-69-232/S0025-5718-99-01163-1/S0025-5718-99-01163-1.tex>.

AresdeParga:1989:LP

- [ACL89] Gonzálo Ares de Parga, Oscar Chavoya A., and José L. López Bonilla. Lanczos potential. *Journal of Mathematical Physics*, 30(6):1294–1295, June 1989. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Ahsan:2007:LPG

- [ACLB07] Z. Ahsan, J. H. Caltenco, and J. López-Bonilla. Lanczos potential for the Gödel spacetime. *Annalen der Physik (1900)*, 16(4):311–313, April 2007. ISSN 1521-3889.

ACM:1996:FCP

- [ACM96] ACM, editor. *FCRC '96: Conference proceedings of the 1996 International Conference on Supercomputing: Philadelphia, Pennsylvania, USA, May 25–28, 1996*. ACM Press, New York, NY 10036, USA, 1996. ISBN 0-89791-803-7. LCCN QA76.5 I61 1996. ACM order number 415961.

ACM:1997:SHP

- [ACM97] ACM, editor. *SC'97: High Performance Networking and Computing: Proceedings of the 1997 ACM/IEEE SC97 Conference: November 15–21, 1997, San Jose, California, USA*. ACM Press and IEEE Computer Society Press, New York, NY 10036, USA and 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1997. ISBN 0-89791-985-8. LCCN QA76.88 .S8571 1997. URL <http://www.supercomp.org/sc97/proceedings/>. ACM SIGARCH order number 415972. IEEE Computer Society Press order number RS00160.

ACM:1998:SHP

- [ACM98] ACM, editor. *SC'98: High Performance Networking and Computing: Proceedings of the 1998 ACM/IEEE SC98 Conference: Orange County Convention Center, Orlando, Florida, USA, November 7–13, 1998*. ACM Press and IEEE Computer Society Press, New York, NY 10036, USA and 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1998. ISBN ???? LCCN ???? URL <http://www.supercomp.org/sc98/papers/>.

Atkins:1994:NRA

- [AD94] William K. Atkins and William R. Davis. On a new relationship among Lanczos' $H_{\mu\lambda\nu}$, $Q_{\mu\lambda}$, q Lagrange multipliers leading to coupled spin-0 and spin-2 fields associated with Riemannian geometry. In Brown et al. [BCEP94], pages 506–508. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Arioli:1992:BLT

- [ADRS92] M. Arioli, Iain S. Duff, D. Ruiz, and M. Sadkane. Block Lanczos techniques for accelerating the Block Cimmino method. Technical Report TR/PA/92/70, CERFACS, Toulouse, France, 1992. Published in [ADRS95].

Arioli:1995:BLT

- [ADRS95] Mario Arioli, Iain S. Duff, Daniel Ruiz, and Miloud Sadkane. Block Lanczos techniques for accelerating the Block Cimmino method. *SIAM Journal on Scientific Computing*, 16(6):1478–1511, November 1995. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Andersson:1998:CFA

- [AE98] F. Andersson and S. Brian Edgar. Curvature-free asymmetric metric connections and Lanczos potentials in Kerr–Schild space-

times. *Journal of Mathematical Physics*, 39(5):2859–2861, May 1998. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Andersson:2000:SCL

- [AE00] F. Andersson and S. B. Edgar. Spin coefficients as Lanczos scalars: Underlying spinor relations. *Journal of Mathematical Physics*, 41(5):2990–3001, May 2000. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Aliaga:1994:UBC

- [AHB94] Jose I. Aliaga, Vicente Hernandez, and Daniel L. Boley. Using the block clustered nonsymmetric Lanczos algorithm to solve control problems for MIMO linear systems. In Brown et al. [BCEP94], pages 387–389. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Aliaga:1997:PIG

- [AHP97] J. I. Aliaga, V. Hernandez, and J. L. Perez. A parallel implementation of the general Lanczos method on the Cray T3D. *Lecture Notes in Computer Science*, 1215:168–??, 1997. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Ashtekar:1994:ISC

- [AMM94] Abhay Ashtekar, Donald Marolf, and José Mourão. Integration on the space of connections modulo gauge transformations. In Brown et al. [BCEP94], pages 143–160. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. Plenary presentations, theoretical physics and astrophysics.

Anderson:1994:BHE

- [And94] Paul R. Anderson. Black hole evaporation and thermodynamics. In Brown et al. [BCEP94], pages 543–544. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Anonymous:1952:TCP

- [Ano52] Anonymous, editor. *Tables of Chebyshev polynomials, $S_n(x)$ and $C_n(x)$* , volume 9 of *Applied Mathematics Series*. United States Government Printing Office, Washington, DC, USA, 1952. xxx + 161 pp. LCCN ???? Foreword by J. C. P. Miller. Introduction by Cornelius Lanczos.

Anonymous:1955:PSS

- [Ano55] Anonymous, editor. *Proceedings of the [1951] symposium on spectral theory and differential problems*. Mathematics Department, Oklahoma Agricultural and Mechanical College, Stillwater, OK, USA, 1955. LCCN QA3 .O5 1951.

Anonymous:1956:CLM

- [Ano56] Anonymous. Computation by Lanczos's method. *Journal of the Institution of Electrical Engineers*, 2(22):607, 1956. CODEN JISEAL. ISSN 0368-2692.

Anonymous:1962:RDG

- [Ano62] Anonymous, editor. *Recent Developments in General Relativity*. Pergamon Press, London, UK, 1962. 472 pp. LCCN QC 6 .R295. This book is dedicated to Leopold Infeld in connection with his 60th birthday.

Anonymous:1994:LWC

- [Ano94a] Anonymous. The life and works of Cornelius Lanczos. Cornelius Lanczos: a photographic essay. In Brown et al. [BCEP94], pages xvii–xx. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Anonymous:1994:PPB

- [Ano94b] Anonymous. Published papers and books of Cornelius Lanczos. In Brown et al. [BCEP94], pages lx–lxv. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Anonymous:1995:BRP

- [Ano95] Anonymous. Book review: *Proceedings of the Cornelius Lanczos International Centenary Conference*, J. D. Brown, M. T. Chu, D. C. Ellison and R. J. Plemmons, Eds., SIAM, Philadelphia, PA, 1994, lxv + 644 pp. *Journal of Approximation Theory*, 82(3):479, September 1995. CODEN JAXTAZ. ISSN 0021-9045 (print), 1096-0430 (electronic).

Abdel-Rehim:2010:DRS

- [ARMNW10] Abdou M. Abdel-Rehim, Ronald B. Morgan, Dwayne A. Nicely, and Walter Wilcox. Deflated and restarted symmetric Lanczos methods for eigenvalues and linear equations with multiple right-hand sides. *SIAM Journal on Scientific Computing*, 32(1):129–149, 2010. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Arnoldi:1951:PMI

- [Arn51] W. E. Arnoldi. The principle of minimized iteration in the solution of the matrix eigenvalue problem. *Quarterly of Applied Mathematics*, 9(??):17–29, 1951. CODEN QAMAAAY. ISSN 0033-569x (print), 1552-4485 (electronic). URL <http://www.ams.org/publications/journals/journalsframework/qam>.

Antoulas:2001:LLI

- [AS01] A. C. Antoulas and D. C. Sorensen. Lyapunov, Lanczos, and inertia. *Linear Algebra and its Applications*, 326(1–3):137–150, March 15, 2001. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL <http://www.elsevier.nl/gej-ng/10/30/19/148/24/32/abstract.html>; <http://www.elsevier.nl/gej-ng/10/30/19/148/24/32/article.pdf>.

Baglama:2000:DLD

- [Bag00] J. Baglama. Dealing with linear dependence during the iterations of the restarted block Lanczos methods. *Numerical Algorithms*, 25(1–4):23–36, September 2000. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp007.kluweronline.com/content/getfile/5058/3/23/abstract.htm>; <http://ipsapp007.kluweronline.com/content/getfile/5058/3/23/fulltext.pdf>. Mathematical journey through analysis, matrix theory and scientific computation (Kent, OH, 1999).

Baheux:1995:NIL

- [Bah95] C. Baheux. New implementations of Lanczos method. *Journal of Computational and Applied Mathematics*, 57(1–2):3–15, February 20, 1995. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Bai:1994:EAL

- [Bai94] Zhao Jun Bai. Error analysis of the Lanczos algorithm for the nonsymmetric eigenvalue problem. *Mathematics of Computation*, 62(205):209–226, January 1994. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Balazs:1975:BRE

- [Bal75] Nandor L. Balazs. Book review: *The Einstein Decade (1905–1915)*, by Cornelius Lanczos. *Physics Today*, 28(8):70, August

1975. CODEN PHTOAD. ISSN 0031-9228 (print), 1945-0699 (electronic).

Banizs:2002:LKS

- [Ban02] Banizs Károly. *A “Lánczos Kornél — Szekfü Gyula Ösztöndíj” Alapítvány 10 éve, 1993-2002: jubileumi kiadvány: Lánczos Kornél és Szekf Gyula élete és munkássága. (Hungarian) [The Lánczos Kornel Gyula Szekfü Scholarship Foundation 10 years anniversary 1993–2002: jubilee publication: Kornel Lánczos and Gyula Szekfü life and work]*. Székesfehérvár Megyei-jogú Város Önkormányzata, Székesfehérvár, Hungary, 2002. ISBN ????. 134 pp. LCCN ????

Barton:1963:BRBf

- [Bar63] D. E. Barton. Book review: *Linear Differential Operators*, by C. Lanczos. London; New York; Princeton and Toronto: D. Van Nostrand Co. 1961, 564 pp. *Biometrika*, 50(3/4):555, December 1963. CODEN BIOKAX. ISSN 0006-3444 (print), 1464-3510 (electronic). URL <http://www.jstor.org/stable/2333943>.

Basermann:1997:CGL

- [Bas97] A. Basermann. Conjugate gradient and Lanczos methods for sparse matrices on distributed memory multiprocessors. *Journal of Parallel and Distributed Computing*, 45(1):46–52, August 25, 1997. CODEN JPDCER. ISSN 0743-7315 (print), 1096-0848 (electronic). URL <http://www.idealibrary.com/links/doi/10.1006/jpdc.1997.1364/production>; <http://www.idealibrary.com/links/doi/10.1006/jpdc.1997.1364/production/pdf>; <http://www.idealibrary.com/links/doi/10.1006/jpdc.1997.1364/production/ref>.

Bauchau:1986:SEU

- [Bau86] O. A. Bauchau. A solution of the eigenproblem for undamped gyroscopic systems with the Lanczos algorithm. *International Journal for Numerical Methods in Engineering*, 23(9):1705–1713, September 1986. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Barbour:1987:UFL

- [BBG⁺87] I. M. Barbour, N.-E Behilil, P. E. Gibbs, M. Rafiq, K. J. M. Moriarty, and G. Schierholz. Updating fermions with the Lanczos method. *Journal of Computational Physics*, 68(1):227–236, January 1987. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716

(electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999187900532>.

Boley:1992:AFT

- [BBGL92] Daniel L. Boley, Richard P. Brent, Gene H. Golub, and Franklin T. Luk. Algorithmic fault tolerance using the Lanczos method. *SIAM Journal on Matrix Analysis and Applications*, 13(1):312–332, January 1992. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Bekas:2008:AWI

- [BCA08] C. Bekas, A. Curioni, and W. Andreoni. Atomic wavefunction initialization in ab initio molecular dynamics using distributed Lanczos. *Parallel Computing*, 34(6–8):441–450, July 2008. CODEN PACOEJ. ISSN 0167-8191 (print), 1872-7336 (electronic).

Brown:1994:PCL

- [BCEP94] J. David Brown, Moody T. Chu, Donald C. Ellison, and Robert J. Plemmons, editors. *Proceedings of the Cornelius Lanczos International Centenary Conference, Raleigh, North Carolina, December 12–17, 1993*, volume 73 of *Proceedings in Applied Mathematics*. SIAM Press, Philadelphia, PA, USA, 1994. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Baglama:2003:IIR

- [BCR03] J. Baglama, D. Calvetti, and L. Reichel. IRBL: An implicitly restarted block-Lanczos method for large-scale Hermitian eigenproblems. *SIAM Journal on Scientific Computing*, 24(5):1650–1677, September 2003. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/39794>.

Besalu:1997:IMS

- [BD97] Emili Besalú and Ramon Carbó Dorca. An iterative method to solve the algebraic eigenvalue problem. *Journal of Mathematical Chemistry*, 21(4):395–412, 1997. CODEN JMCHEG. ISSN 0259-9791 (print), 1572-8897 (electronic).

Bode:1996:PVM

- [BDLS96] Arndt Bode, J. Dongarra, T. Ludwig, and V. Sunderam, editors. *Parallel virtual machine, EuroPVM '96: third European PVM conference, Munich, Germany, October 7–9, 1996: proceedings*,

volume 1156 of *Lecture Notes in Computer Science*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1996. ISBN 3-540-61779-5. ISSN 0302-9743 (print), 1611-3349 (electronic). LCCN QA76.58 .E975 1996 Bar.

Bai:1999:AAB

- [BDY99] Zhaojun Bai, David Day, and Qiang Ye. ABLE: An adaptive block Lanczos method for non-Hermitian eigenvalue problems. *SIAM Journal on Matrix Analysis and Applications*, 20(4):1060–1082, 1999. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/31780>.

Beffa:1994:PGA

- [Bef94] Gloria Marí Beffa. Poisson geometry of Adler–Gel’fand–Dikii manifolds. In Brown et al. [BCEP94], pages 635–637. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Boley:1991:NLF

- [BEGG91] Daniel L. Boley, Sylvan Elhay, Gene H. Golub, and Martin H. Gutknecht. Nonsymmetric Lanczos and finding orthogonal polynomials associated with indefinite weights. *Numerical Algorithms*, 1(1):21–43, 1991. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic).

Bentbib:2018:EGL

- [BEJ⁺18] A. H. Bentbib, M. El Ghomari, C. Jagels, K. Jbilou, and L. Reichel. The extended global Lanczos method for matrix function approximation. *Electronic Transactions on Numerical Analysis*, 50:144–163, 2018. CODEN ???? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.50.2018/pp144-163.dir/pp144-163.pdf>; <http://etna.mcs.kent.edu/volumes/2011-2020/vol50/abstract.php?vol=50&pages=144-163>.

Bellman:1957:RPA

- [Bel57] Richard Bellman. Recent publications: *Applied Analysis*, by C. Lanczos. Prentice-Hall, Englewood Cliffs, NJ, 1957, xx + 539pp. \$9.00. *American Mathematical Monthly*, 64(6):447–448, June/July 1957. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic). URL <http://www.jstor.org/stable/2310192>.

Berry:1994:BLS

- [Ber94a] M. W. Berry. A block Lanczos SVD method with adaptive re-orthogonalization. In Brown et al. [BCEP94], pages 329–331. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Berry:1994:SLB

- [Ber94b] Michael W. Berry. Software for Lanczos-based algorithms. In Brown et al. [BCEP94], pages 311–312. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Berry:1994:SPD

- [Ber94c] Michael W. Berry. A survey of public-domain Lanczos-based software. In Brown et al. [BCEP94], pages 332–334. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Berryman:1994:RII

- [Ber94d] James G. Berryman. Resolution of iterative inverses in seismic tomography. In Brown et al. [BCEP94], pages 297–299. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. URL <http://sepwww.stanford.edu/sep/berryman/PS/ltexlanczos.ps>.

Bergqvist:1997:LPK

- [Ber97] Göran Bergqvist. A Lanczos potential in Kerr geometry. *Journal of Mathematical Physics*, 38(6):3142–3154, June 1997. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Braun:2002:EV

- [BER02] Simon (Simon G.) Braun, D. J. Ewins, and S. S. Rao, editors. *Encyclopedia of vibration*. Academic Press, New York, USA, 2002. ISBN 0-12-227085-1 (set), 0-12-227086-X (volume 1), 0-12-227087-8 (volume 2), 0-12-227088-6 (volume 3). xxviii + 1595 pp. LCCN TA355 .E52 2002. URL (E-STREAMS); http://www.e-streams.com/es0504/es0504_1818.htm; <http://www.loc.gov/catdir/description/els031/2001092782.html>; <http://www.loc.gov/catdir/toc/els051/2001092782.html>. Three volumes.

Bjorck:1998:SCG

- [BES98] Åke Björck, Tommy Elfving, and Zdeněk Strakoš. Stability of conjugate gradient and Lanczos methods for linear least squares problems. *SIAM Journal on Matrix Analysis and Applications*,

19(3):720–736, July 1998. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/31202>.

Bostic:1987:ILM

- [BF87] S. Bostic and R. Fulton. Implementation of the Lanczos method for structural vibration analysis on a parallel computer. *Computers and Structures*, 25:395–404, 1987. CODEN CMSTCJ. ISSN 0045-7949 (print), 1879-2243 (electronic).

Benner:1997:IRS

- [BF97] Peter Benner and Heike Faßbender. An implicitly restarted symplectic Lanczos method for the Hamiltonian eigenvalue problem. *Linear Algebra and its Applications*, 263(1–3):75–111, September 15, 1997. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL http://www.elsevier.com/cgi-bin/cas/tree/store/laa/cas_sub/browse/browse.cgi?year=1997&volume=263&issue=1-3&aid=9600524.

Benner:1998:SEP

- [BF98] Peter Benner and Heike Faßbender. The symplectic eigenvalue problem, the butterfly form, the *SR* algorithm, and the Lanczos method. *Linear Algebra and its Applications*, 275/276(1–3):19–47, May 15, 1998. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL <http://www.elsevier.com/cas/tree/store/laa/sub/1998/275-276/1-3/6047.pdf>; http://www.elsevier.com/cgi-bin/cas/tree/store/laa/cas_sub/browse/browse.cgi?year=1998&volume=275-276&issue=1-3&aid=6047. Proceedings of the Sixth Conference of the International Linear Algebra Society (Chemnitz, 1996).

Benner:2000:IRS

- [BF00] Peter Benner and Heike Fassbender. An implicitly restarted symplectic Lanczos method for the symplectic eigenvalue problem. *SIAM Journal on Matrix Analysis and Applications*, 22(3):682–713, 2000. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/34311>.

Bai:2001:PPL

- [BF01a] Zhaojun Bai and Roland W. Freund. A partial Padé-via-Lanczos method for reduced-order modeling. *Linear Algebra*

and its Applications, 332–334(1):139–164, August 1, 2001. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL <http://www.elsevier.nl/gej-ng/10/30/19/157/25/34/abstract.html>; <http://www.elsevier.nl/gej-ng/10/30/19/157/25/34/article.pdf>.

Bai:2001:SBL

- [BF01b] Zhaojun Bai and Roland W. Freund. A symmetric band Lanczos process based on coupled recurrences and some applications. *SIAM Journal on Scientific Computing*, 23(2):542–562, March 2001. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/37177>.

Bisseling:2006:MSM

- [BF06] Rob H. Bisseling and Ildikó Flesch. Mondriaan sparse matrix partitioning for attacking cryptosystems by a parallel block Lanczos algorithm — a case study. *Parallel Computing*, 32(7–8):551–567, September 2006. CODEN PACOEJ. ISSN 0167-8191 (print), 1872-7336 (electronic).

Boley:1984:LAA

- [BG84] D. L. Boley and G. H. Golub. The Lanczos–Arnoldi algorithm and controllability. *Systems and Control Letters*, 4(6):317–324, September 1984. CODEN SCLEDC. ISSN 0167-6911 (print), 1872-7956 (electronic).

Boley:1991:MNL

- [BG91a] D. Boley and G. H. Golub. A modified non-symmetric Lanczos algorithm and applications. In Vaccaro [Vac91], pages 189–196. ISBN 0-444-88896-9. LCCN TK5102.5.S93 1991.

Boley:1991:NLA

- [BG91b] Daniel Boley and Gene Golub. The nonsymmetric Lanczos algorithm and controllability. *Systems and Control Letters*, 16(2):97–105, February 1991. CODEN SCLEDC. ISSN 0167-6911 (print), 1872-7956 (electronic).

Berger:1994:NIC

- [BGG⁺94] B. K. Berger, D. Garfinkle, B. Grubišić, V. Moncrief, and V. Swamy. Numerical investigation of cosmological singularities. In Brown et al. [BCEP94], pages 532–534. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Bjorck:1994:IRB

- [BGV94] Åke Björck, Eric Grimme, and Paul Van Dooren. An implicitly restarted bidiagonalization algorithm for ill-posed systems. In Brown et al. [BCEP94], pages 305–307. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Braconnier:1995:CFV

- [BH95] Thierry Braconnier and Nicholas J. Higham. Computing the field of values and pseudospectra using the Lanczos method with continuation. Numerical Analysis Report 279, Manchester Centre for Computational Mathematics, Manchester, England, November 1995. 20 pp. Submitted to BIT.

Braconnier:1996:CFV

- [BH96] Thierry Braconnier and Nicholas J. Higham. Computing the field of values and pseudospectra using the Lanczos method with continuation. *BIT Numerical Mathematics*, 36(3):422–440, September 1996. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.mai.liu.se/BIT/contents/bit36.html>; <http://www.springerlink.com/openurl.asp?genre=article&iissn=0006-3835&volume=36&issue=3&spage=422>. International Linear Algebra Year (Toulouse, 1995).

Bireline:1971:BRS

- [Bir71] J. Bireline. Book review: *Space through the ages: the evolution of geometrical ideas from Pythagoras to Hilbert and Einstein*, by Cornelius Lanczos. 320 pages. London, New York, Academic Press, 1970. *Journal of The Franklin Institute*, 291(5):403, May 1971. CODEN JFINAB. ISSN 0016-0032 (print), 1879-2693 (electronic).

Bjorck:1994:LS

- [Bjö94] Åke Björck. Least squares. In Brown et al. [BCEP94], page 301. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Balasubramanian:1993:ABL

- [BJSR93] P. Balasubramanian, J. G. Jagadeesh, H. K. Suhas, and V. Ramamurti. Application of block Lanczos method for analysis of cyclic symmetric structures. *International Journal for Numerical Methods in Engineering*, 36(2):273–285, January 30, 1993. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Beem:1994:CCH

- [BK94] John K. Beem and Andrzej Krolak. Censorship and Cauchy horizons. In Brown et al. [BCEP94], pages 515–517. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Bekas:2008:CLI

- [BKS08] C. Bekas, E. Kokiopoulou, and Yousef Saad. Computation of large invariant subspaces using polynomial filtered Lanczos iterations with applications in density functional theory. *SIAM Journal on Matrix Analysis and Applications*, 30(1):397–418, 2008. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Blackmore:1976:BRE

- [Bla76] John T. Blackmore. Book review: *The Einstein decade*: By Cornelius Lanczos. New York and London (Academic Press), 1974. \$12.50. *Historia Mathematica*, 3(2):236, May 1976. CODEN HIMADS. ISSN 0315-0860 (print), 1090-249X (electronic). URL <http://www.sciencedirect.com/science/article/pii/0315086076900598>.

Boley:1992:LAH

- [BLL92] Daniel L. Boley, Tong J. Lee, and Franklin T. Luk. The Lanczos algorithm and Hankel matrix factorization. *Linear Algebra and its Applications*, 172:109–135, July 15, 1992. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Bloom:1984:GTS

- [Blo84] S. D. Bloom. Gamow–Teller strength functions with the Lanczos algorithm. *Progress in Particle and Nuclear Physics*, 11(??):505–528, 1984. CODEN PPNPDB. ISSN 0146-6410 (print), 1873-2224 (electronic).

Balakrishna:1994:CGF

- [BM94a] B. S. Balakrishna and K. T. Mahahthappa. Composite gauge field models and dynamical symmetry breaking. In Brown et al. [BCEP94], pages 618–620. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Benzi:1994:EPC

- [BM94b] Michele Benzi and Carl D. Meyer. An explicitly preconditioner for the conjugate gradient method. In Brown et al. [BCEP94], pages 294–296. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Boley:1994:LMC

- [Bol94a] Daniel Boley. Lanczos methods in control and signal processing. In Brown et al. [BCEP94], pages 375–376. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Boley:1994:KSM

- [Bol94b] Daniel L. Boley. Krylov space methods in linear control and model reduction: A survey. In Brown et al. [BCEP94], pages 377–379. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Borici:2000:LAI

- [Bor00] Artan Boriçi. A Lanczos approach to the inverse square root of a large and sparse matrix. *Journal of Computational Physics*, 162(1):123–131, July 20, 2000. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S002199910096529X>.

Borchers:2004:BRL

- [Bor04] Brian Borchers. Book review: *The Lanczos Method: Evolution and Application*, by Louis Komzsik. *Scientific Programming*, 12(3):197–198, 2004. CODEN SCIPEV. ISSN 1058-9244 (print), 1875-919X (electronic).

Boyd:1995:CPI

- [Boy95] John P. Boyd. A Chebyshev polynomial interval-searching method (“Lanczos economization”) for solving a nonlinear equation with application to the nonlinear eigenvalue problem. *Journal of Computational Physics*, 118(1):1–8, April 1995. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999185710753>.

Boyd:2014:RBC

- [BP14] John P. Boyd and Rolfe Petschek. The relationships between Chebyshev, Legendre and Jacobi polynomials: The generic superiority of Chebyshev polynomials and three important exceptions. *Journal of Scientific Computing*, 59(1):1–27, April 2014. CODEN JSCOEB. ISSN 0885-7474 (print), 1573-7691 (electronic). URL <http://link.springer.com/article/10.1007/s10915-013-9751-7>; <http://link.springer.com/content/pdf/10.1007/s10915-013-9751-7.pdf>. See [Lan52b].

Baaz:2011:KGF

- [BPP⁺11] Matthias Baaz, Christos H. Papadimitriou, Hilary W. Putnam, Dana S. Scott, and Charles L. Harper, Jr., editors. *Kurt Gödel and the Foundations of Mathematics: Horizons of Truth*. Cambridge University Press, Cambridge, UK, 2011. ISBN 0-521-76144-1 (print), 0-511-97423-X (e-book). xxiv + 515 pp. LCCN QA9.65 .K87 2011.

Browne:2009:LBA

- [BQW09] Kevin Browne, Sanzheng Qiao, and Yimin Wei. A Lanczos bidiagonalization algorithm for Hankel matrices. *Linear Algebra and its Applications*, 430(5–6):1531–1543, March 1, 2009. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Bunch:1976:SMC

- [BR76] James R. Bunch and Donald J. Rose, editors. *Sparse Matrix Computations: Proceedings of the Symposium on Sparse Matrix Computations at Argonne National Laboratory on September 9–11, 1975*. Academic Press, New York, USA, 1976. ISBN 0-12-141050-1. LCCN QA188 .S989 1975.

Baglama:2005:AIR

- [BR05] James Baglama and Lothar Reichel. Augmented implicitly restarted Lanczos bidiagonalization methods. *SIAM Journal on Scientific Computing*, 27(1):19–42, January 2005. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/60593>.

Baglama:2006:RBL

- [BR06] James Baglama and Lothar Reichel. Restarted block Lanczos bidiagonalization methods. *Numerical Algorithms*, 43(3):251–272, November 2006. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=1017-1398&volume=43&issue=3&spage=251>.

Brezinski:1996:MVL

- [Bre96] C. Brezinski. The methods of Vorobyev and Lanczos. *Linear Algebra and its Applications*, 234(1–3):21–41, February ??, 1996. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL http://www.elsevier.com/cgi-bin/cas/tree/store/laa/cas_sub/browse/browse.cgi?year=1996&volume=234&issue=1-3&aid=9400081.

Brezinski:1997:PMS

- [Bre97] Claude Brezinski. *Projection methods for systems of equations*, volume 7 of *Studies in computational mathematics*. Elsevier Science, Amsterdam, The Netherlands, 1997. ISBN 0-444-82777-3. vii + 400 pp. LCCN QA214 .B74 1997. URL <http://www.loc.gov/catdir/enhancements/fy0602/97043588-d.html>; <http://www.loc.gov/catdir/enhancements/fy0602/97043588-t.html>.

Brezinski:2007:LTM

- [Bre07] Claude Brezinski. *Lanczos-type methods*, chapter 4, pages 141–182. Volume 7 of *Studies in computational mathematics* [Bre97], 2007. ISBN 0-444-82777-3. LCCN QA214 .B74 1997. URL <http://www.loc.gov/catdir/enhancements/fy0602/97043588-d.html>; <http://www.loc.gov/catdir/enhancements/fy0602/97043588-t.html>.

Brill:1966:RPP

- [Bri66] Dieter Brill. Recent publications and presentations: *Albert Einstein and the Cosmic World Order*, by Cornelius Lanczos. *American Mathematical Monthly*, 73(10):1145, December 1966. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic).

Broadbent:1966:BRA

- [Bro66] T. A. A. Broadbent. Book review: *Albert Einstein and the Cosmic World Order*, by Cornelius Lanczos. vi + 139 pp. 1956 (Wiley). *Mathematical Gazette*, 50(371):60, February 1966. CODEN MAGAAS. ISSN 0025-5572 (print), 2056-6328 (electronic). URL <http://www.jstor.org/stable/3614838>.

Brown:1994:BHT

- [Bro94a] David Brown. Black hole thermodynamics in a box. In Brown et al. [BCEP94], pages 548–550. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Brown:1994:RFS

- [Bro94b] David Brown. Reference fluids as standards of space and time. In Brown et al. [BCEP94], pages 563–565. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Brezinski:1991:ABN

- [BRS91] C. Brezinski, M. Redivo Zaglia, and H. Sadok. Avoiding breakdown and near-breakdown in Lanczos type algorithms. *Numer-*

ical Algorithms, 1(3):261–284, September 1991. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). See erratum [BRS92a].

Brezinski:1992:AAB

- [BRS92a] C. Brezinski, M. Redivo Zaglia, and H. Sadok. Addendum to: “Avoiding breakdown and near-breakdown in Lanczos type algorithms” [Numer. Algorithms **1** (1991), no. 3, 261–284, MR92j:65041]. *Numerical Algorithms*, 2(2):133–136, 1992. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). See [BRS91].

Brezinski:1992:BFL

- [BRS92b] C. Brezinski, M. Redivo Zaglia, and H. Sadok. A breakdown-free Lanczos type algorithm for solving linear systems. *Numerische Mathematik*, 63(1):29–38, October 1992. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic).

Brezinski:1998:TFL

- [BRZ98] C. Brezinski and M. Redivo-Zaglia. Transpose-free Lanczos-type algorithms for nonsymmetric linear systems. *Numerical Algorithms*, 17(1–2):67–103, March 1998. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp007.kluweronline.com/content/getfile/5058/31/5/abstract.htm>; <http://ipsapp007.kluweronline.com/content/getfile/5058/31/5/fulltext.pdf>.

Brooker:1956:MLC

- [BS56] R. A. Brooker and F. H. Sumner. The method of Lanczos for calculating the characteristic roots and vectors of a real symmetric matrix. *Proceedings of the IEE — Part B: Radio and Electronic Engineering*, 103(1):114, April 1956.

Bender:1970:IPC

- [BS70] C. F. Bender and I. Shavitt. An iterative procedure for the calculation of the lowest real eigenvalue and eigenvector of a non-symmetric matrix. *Journal of Computational Physics*, 6(1):146–149, August 1970. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0021999170900148>.

Brezinski:1993:LTA

- [BS93] Claude Brezinski and Hassane Sadok. Lanczos-type algorithms for solving systems of linear equations. *Applied Numerical Mathematics*, 11(6):443–473, April 1993. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Blondin:1994:CMA

- [BS94] John Blondin and James Stone. Computational magnetohydrodynamics in astrophysics. In Brown et al. [BCEP94], pages 431–451. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Borisov:2005:LPM

- [BS05] Andrei G. Borisov and Sergei V. Shabanov. Lanczos pseudospectral method for initial-value problems in electrodynamics and its applications to ionic crystal gratings. *Journal of Computational Physics*, 209(2):643–664, November 1, 2005. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999105001920>.

Braun:1996:ECL

- [BSPL96] M. Braun, S. A. Sofianos, D. G. Papageorgiou, and I. E. Lagaris. An efficient Chebyshev–Lanczos method for obtaining eigensolutions of the Schrödinger equation on a grid. *Journal of Computational Physics*, 126(2):315–327, July 1996. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999196901400>.

Bernabeu:2007:RPI

- [BTGV07] Miguel O. Bernabeu, Mária Taroncher, Víctor M. García, and Ana Vidal. Robust parallel implementation of a Lanczos-based algorithm for an structured electromagnetic eigenvalue problem. *Scalable Computing: Practice and Experience*, 8(3):263–270, September 2007. CODEN ???? ISSN 1895-1767. URL http://www.scpe.org/vols/vol108/no3/SCPE_8_3_04.pdf; http://www.scpe.org/vols/vol108/no3/SCPE_8_3_04.zip.

Bunchaft:1997:SEL

- [Bun97] M. E. Froes Bunchaft. Some extensions of the Lanczos–Ortiz theory of canonical polynomials in the Tau Method. *Mathematics of Computation*, 66(218):609–621, April 1997. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

URL <http://www.ams.org/jourcgi/jour-pbprocess?fn=110&arg1=S0025-5718-97-00816-8&u=/mcom/1997-66-218/>.

Butler:1975:LL

- [But75] R. Butler. The Lanczos legend. *Computers and Mathematics with Applications*, 1(??):258–??, ??? 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic).

Butcher:1994:LPA

- [But94] John C. Butcher. Laguerre polynomials: Applications in numerical ordinary differential equations. In Brown et al. [BCEP94], pages 371–373. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

BarberoG:1994:SDG

- [BV94a] J. Fernando Barbero G. and Madhavan Varadarajan. Surprises in $2 + 1$ dimensional geometry. In Brown et al. [BCEP94], pages 576–578. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Bultheel:1994:FOP

- [BV94b] Adhemar Bultheel and Marc Van Barel. Formal orthogonal polynomials for an arbitrary moment matrix and Lanczos type methods. In Brown et al. [BCEP94], pages 273–275. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Bultheel:1997:LA

- [BvB97] Adhemar Bultheel and Marc van Barel. *Lanczos algorithm*, volume 6 of *Studies in computational mathematics*, chapter 3, pages 99–133. Elsevier, Amsterdam, The Netherlands, 1997. ISBN 0-444-82872-9. LCCN QA242 .B88 1997. URL <http://www.loc.gov/catdir/enhancements/fy0601/97040610-d.html>.

Bai:1998:EEP

- [BY98] Zhaojun Bai and Qiang Ye. Error estimation of the Padé approximation of transfer functions via the Lanczos process. *Electronic Transactions on Numerical Analysis*, 7:1–17, 1998. CODEN ??? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.7.1998/pp1-17.dir/pp1-17.pdf>. Large scale eigenvalue problems (Argonne, IL, 1997).

Brezinski:1999:NLA

- [BZS99] C. Brezinski, M. Redivo Zaglia, and H. Sadok. New look-ahead Lanczos-type algorithms for linear systems. *Numerische Math-*

ematik, 83(1):53–85, July 1999. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL <http://link.springer-ny.com/link/service/journals/00211/bibs/9083001/90830053.htm>; <http://link.springer-ny.com/link/service/journals/00211/papers/9083001/90830053.pdf>.

Calvetti:1994:MNA

- [Cal94] Daniella Calvetti. Moments in numerical analysis. In Brown et al. [BCEP94], pages 265–266. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Carlip:1994:TDQ

- [Car94a] S. Carlip. Time in $(2+1)$ -dimensional quantum gravity. In Brown et al. [BCEP94], pages 560–562. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Carlson:1994:PQC

- [Car94b] Carl E. Carlson. Perturbative QCD calculations of heavy meson decays. In Brown et al. [BCEP94], pages 605–607. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Clutton-Brock:1987:GFL

- [CB87] M. Clutton-Brock. Generalized Fejér and Lanczos kernels. *SIAM Journal on Mathematical Analysis*, 18(1):259–272, January 1987. CODEN SJMAAH. ISSN 0036-1410 (print), 1095-7154 (electronic).

Chien:2003:ALA

- [CC03] C.-S. Chien and S.-L. Chang. Application of the Lanczos algorithm for solving the linear systems that occur in continuation problems. *Numerical Linear Algebra with Applications*, 10(4):335–355, June 2003. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Clark:1969:MMS

- [CD69] R. C. (Roger Cortham) Clark and G. H. (Graham Holbrook) Derrick, editors. *Mathematical methods in solid state and superfluid theory*. Oliver and Boyd, Edinburgh, UK, 1969. LCCN QC176.A1 S36 1967.

Chan:1991:TFS

- [CDvdV91] T. F. Chan, L. De Pillis, and H. A. van der Vorst. A transpose-free squared Lanczos algorithm and application to solving non-

symmetric linear systems. Technical Report Preprint 690, Utrecht University, Utrecht, The Netherlands, 1991.

Chan:1998:TFF

- [CdvdV98] Tony F. Chan, Lisette de Pillis, and Henk van der Vorst. Transpose-free formulations of Lanczos-type methods for non-symmetric linear systems. *Numerical Algorithms*, 17(1-2):51-66, March 1998. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp007.kluweronline.com/content/getfile/5058/31/12/abstract.htm>; <http://ipsapp007.kluweronline.com/content/getfile/5058/31/12/fulltext.pdf>.

Causey:1961:LAT

- [CG61] R. L. Causey and R. T. Gregory. On Lanczos' algorithm for tridiagonalizing matrices. *SIAM Review*, 3(4):322-328, 1961. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Chen:1997:DEL

- [CG97] Rongqing Chen and Hua Guo. Determination of eigenstates via Lanczos-based forward substitution and filter-diagonalization. *Journal of Computational Physics*, 136(2):494-502, September 15, 1997. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999197957776>.

Carey:1994:LBM

- [CGL94] Cheryl M. M. Carey, Gene H. Golub, and Kincho H. Law. A Lanczos-based method for structural dynamic reanalysis problems. *International Journal for Numerical Methods in Engineering*, 37(16):2857-2883, August 30, 1994. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Chan:2007:MMC

- [CGO07] Raymond H. Chan, Chen Greif, and Dianne P. O'Leary, editors. *Milestones in Matrix Computation: the Selected Works of Gene H. Golub with Commentaries*. Oxford University Press, Walton Street, Oxford OX2 6DP, UK, 2007. ISBN 0-19-920681-3. xi + 565 + 3 pp. LCCN QA188 .G67 2007. URL <http://www.loc.gov/catdir/enhancements/fy0737/2007276086-d.html>.

Calvetti:1999:ECL

- [CGR99] D. Calvetti, G. H. Golub, and L. Reichel. Estimation of the L -curve via Lanczos bidiagonalization. *BIT Numerical Mathematics*, 39(4):603–619, December 1999. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=39&issue=4&spage=603>.

Cox:1990:RNC

- [CH90] M. G. Cox and S. Hammarling, editors. *Reliable numerical computation*. Oxford University Press, Walton Street, Oxford OX2 6DP, UK, 1990. ISBN 0-19-853564-3. LCCN QA297 .R435 1990. US\$75.00. Based on papers from a conference in honour of the late James Hardy Wilkinson (died Sunday 5th October 1986) held at National Physical Laboratory, Teddington, Middlesex, UK, 8th–10th July 1987.

Chen:1981:SBV

- [Che81] Peter Y. P. Chen. Solutions of boundary-value problems by the Lanczos–Chebyshev reduction method. *International Journal for Numerical Methods in Engineering*, 17(2):291–299, February 1981. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Çizek:2000:SLC

- [ÇHM00] M. Çizek, J. Horáček, and H.-D. Meyer. Schwinger–Lanczos for calculation of off-shell T-matrix elements and Wynn’s epsilon algorithm. *Computer Physics Communications*, 131(1–2):41–51, September 1, 2000. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic).

Calvetti:2002:CCB

- [CHR02] D. Calvetti, P. C. Hansen, and L. Reichel. L -curve curvature bounds via Lanczos bidiagonalization. *Electronic Transactions on Numerical Analysis*, 14:20–35, 2002. CODEN ???? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.14.2002/pp20-35.dir/pp20-35.pdf>.

Cipra:2000:BCE

- [Cip00] Barry A. Cipra. The best of the 20th Century: Editors name top 10 algorithms. *SIAM News*, 33(4):1–2, May 2000. ISSN 0036-1437. URL <https://archive.siam.org/pdf/news/637.pdf>.

Chang:2005:CBL

- [CKLS05] Shu-Ming Chang, Yuen-Cheng Kuo, Wen-Wei Lin, and Shih-Feng Shieh. A continuation BSOR–Lanczos–Galerkin method for positive bound states of a multi-component Bose–Einstein condensate. *Journal of Computational Physics*, 210(2):439–458, December 10, 2005. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999105002287>.

Cullum:1989:GNL

- [CKW89] J. Cullum, W. Kerner, and R. Willoughby. A generalized nonsymmetric Lanczos procedure. *Computer Physics Communications*, 53(1–3):19–48, May 1989. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic).

Chu:1994:ECA

- [CL94a] Moody Chu and John G. Lewis. Eigenvalue computations: Applications. In Brown et al. [BCEP94], pages 249–250. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Chu:1994:ECT

- [CL94b] Moody Chu and John G. Lewis. Eigenvalue computations: theory and algorithms. In Brown et al. [BCEP94], pages 241–242. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Clarke:1994:CMM

- [Cla94] David A. Clarke. CMoC: A multidimensional MHD algorithm stable to the effects of velocity shear. In Brown et al. [BCEP94], pages 436–439. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Coutinho:1989:MST

- [CLWE89] Alvaro L. G. A. Coutinho, Luiz Landau, Luiz C. Wrobel, and Nelson F. F. Ebecken. Modal solution of transient heat conduction utilizing Lanczos algorithm. *International Journal for Numerical Methods in Engineering*, 28(1):13–25, January 1989. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Chung:2007:WGM

- [CNO08] Julianne Chung, James G. Nagy, and Dianne P. O’Leary. A weighted-GCV method for Lanczos-hybrid regularization. *Electronic Transactions on Numerical Analysis*, 28:149–167, 2007/

2008. CODEN ????? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.28.2007-2008/pp149-167.dir/pp149-167.pdf>. Special volume for Gene Golub.

Coleman:1976:LTM

- [Col76] J. P. Coleman. The Lanczos tau-method. *Journal of the Institute of Mathematics and its Applications*, 17(1):85–97, 1976. CODEN JMATAA8. ISSN 0020-2932. URL <http://imamat.oxfordjournals.org/content/17/1/85.abstract>.

Coleman:1987:CPA

- [Col87] John P. Coleman. Complex polynomial approximation by the Lanczos τ -method: Dawson's integral. *Journal of Computational and Applied Mathematics*, 20(?):137–151, November 1987. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0377042787901312>.

Cooper:1948:SNF

- [Coo48] J. L. B. Cooper. The solution of natural frequency equations by relaxation methods. *Quarterly of Applied Mathematics*, 6(?):179–183, 1948. CODEN QAMAAY. ISSN 0033-569x (print), 1552-4485 (electronic). URL <http://www.ams.org/publications/journals/journalsframework/qam>.

Cooley:1987:HFG

- [Coo87] J. W. Cooley. How the FFT gained acceptance. In G. E. Crane, editor, *Proceedings of the ACM Conference on the History of Scientific and Numeric Computation, Princeton, NJ May 13–15, 1987*. ACM Press, New York, NY 10036, USA, 1987. ISBN 0-89791-229-2. LCCN QA297 .A32 1987.

Cooley:1990:HFG

- [Coo90] J. W. Cooley. How the FFT gained acceptance. In Nash [Nas90], pages 133–140. ISBN 0-201-50814-1. LCCN QA76.17 .H59 1990. Nowack [Now94, p. 395] quotes Cooley from this paper: *it appears that Lanczos had the FFT algorithm; and if he had had an electronic computer, he would have been able to write a program permitting him to go to arbitrarily high N.*

Cooley:1994:DF

- [Coo94a] James W. Cooley. Development of the FFT. In Brown et al. [BCEP94], pages 393–394. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Cooley:1994:LFD

- [Coo94b] James W. Cooley. Lanczos and the FFT: A discovery before its time. In Brown et al. [BCEP94], pages 3–9. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. Plenary presentations, computational mathematics.

Coppersmith:1993:SLE

- [Cop93] Don Coppersmith. Solving linear equations over GF(2): block Lanczos algorithm. *Linear Algebra and its Applications*, 192:33–60, October 1993. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). Computational linear algebra in algebraic and related problems (Essen, 1992).

Coulson:1971:BRS

- [Cou71] C. A. Coulson. Book review: *Space through the Ages*, by Cornelius Lanczos, x + 320 pp., £4.00, 1970 (Academic Press, London and New York). *Mathematical Gazette*, 55(393):334–344, June 1971. CODEN MAGAAS. ISSN 0025-5572 (print), 2056-6328 (electronic). URL <http://www.jstor.org/stable/3615043>.

Calvetti:1999:BLM

- [CR99] D. Calvetti and L. Reichel. A block-Lanczos method for large continuation problems. *Numerical Algorithms*, 21(1–4):109–118, December 1999. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp007.kluweronline.com/content/getfile/5058/20/15/abstract.htm>; <http://ipsapp007.kluweronline.com/content/getfile/5058/20/15/fulltext.pdf>.

Calvetti:2002:LBE

- [CR02] D. Calvetti and L. Reichel. Lanczos-based exponential filtering for discrete ill-posed problems. *Numerical Algorithms*, 29(1–3):45–65, March 2002. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp008.lwwonline.com/content/getfile/5058/38/4/abstract.htm>; <http://ipsapp008.lwwonline.com/content/getfile/5058/38/4/fulltext.pdf>.

Craig:2001:KLM

- [Cra01] R. R. Craig, Jr. Krylov–Lanczos methods. In Braun et al. [BER02], pages 691–698. ISBN 0-12-227085-1 (set), 0-12-227086-X (volume 1), 0-12-227087-8 (volume 2), 0-12-227088-6 (volume

3). LCCN TA355 .E52 2002. URL (E-STREAMS); http://www.e-streams.com/es0504/es0504_1818.htm; <http://www.loc.gov/catdir/description/els031/2001092782.html>; <http://www.loc.gov/catdir/toc/els051/2001092782.html>. Three volumes.

Chen:2009:FAG

[CrFS09] Jie Chen, Haw ren Fang, and Yousef Saad. Fast approximate k NN graph construction for high dimensional data via recursive Lanczos bisection. *J. Mach. Learn. Res.*, 10:1989–2012, 2009. ISSN 1532-4435.

Crisci:1986:TMP

[Cri86] M. R. Crisci. The tau method with perturbation term depending on the differential operator. *Journal of Computational and Applied Mathematics*, 15(1):123–136, May 1986. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0377042786902451>.

Calvetti:1994:IRL

[CRS94] D. Calvetti, L. Reichel, and D. C. Sorensen. An implicitly restarted Lanczos method for large symmetric eigenvalue problems. *Electronic Transactions on Numerical Analysis*, 2:1–21, 1994. CODEN ????? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.2.1994/pp1-21.dir/pp1-21.pdf>.

Calvetti:1994:CGA

[CRZ94] Daniella Calvetti, Lothar Reichel, and Qin Zhang. Conjugate gradient algorithms for symmetric inconsistent linear systems. In Brown et al. [BCEP94], pages 267–272. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Carlson:1994:OQP

[CS94a] Carl Carlson and Adam Szczepaniak. Open questions in particle theory. In Brown et al. [BCEP94], pages 603–604. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Craig:1994:AKL

[CS94b] Roy R. Craig, Jr. and Tzu-Jeng Su. Application of Krylov/Lanczos methods to model reduction and control of flexible structures. In Brown et al. [BCEP94], pages 380–383. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Chen:2009:LVV

- [CS09] Jie Chen and Yousef Saad. Lanczos vectors versus singular vectors for effective dimension reduction. *IEEE Transactions on Knowledge and Data Engineering*, 21(8):1091–1103, 2009. CODEN ITKKEH. ISSN 1041-4347 (print), 1558-2191 (electronic).

Csendes:1999:DRC

- [Cse99] Tibor Csendes, editor. *Developments in Reliable Computing: Papers presented at the International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics, SCAN-98, in Szeged, Hungary*, volume 5(3) of *Reliable Computing = Nadezhnye vychisleniia*. Kluwer Academic Publishers Group, Norwell, MA, USA, and Dordrecht, The Netherlands, 1999. ISBN 0-7923-6057-5. LCCN QA76.9.E94 D48 1999.

Cooper:2001:ESO

- [CSW01] A. Cooper, M. Szularz, and J. Weston. External selective orthogonalization for the Lanczos algorithm in distributed memory environments. *Parallel Computing*, 27(7):913–923, June 2001. CODEN PACOEJ. ISSN 0167-8191 (print), 1872-7336 (electronic). URL <http://www.elsevier.nl/gej-ng/10/35/21/47/31/27/abstract.html>; <http://www.elsevier.nl/gej-ng/10/35/21/47/31/27/article.pdf>.

Cooper:2002:ALE

- [CSW02] A. Cooper, M. Szularz, and J. Weston. Analysis of the Lanczos error bounds and its application to the explicitly restarted Lanczos algorithm. *Lecture Notes in Computer Science*, 2328:410–412, 2002. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic). URL <http://link.springer-ny.com/link/service/series/0558/bibs/2328/23280410.htm>; <http://link.springer-ny.com/link/service/series/0558/papers/2328/23280410.pdf>.

Cui:1994:W

- [Cui94] Charles K. Cui. Wavelets. In Brown et al. [BCEP94], pages 411–412. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Cullum:1994:BLAa

- [Cul94a] Jane K. Cullum. Block Lanczos algorithms for large matrix eigenvalue problems: Part I. real symmetric case. In Brown et al. [BCEP94], pages 313–315. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Cullum:1994:BLAb

- [Cul94b] Jane K. Cullum. Block Lanczos algorithms for large matrix eigenvalue problems: Part II. nonsymmetric case. In Brown et al. [BCEP94], pages 316–318. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Cullum:1994:LAL

- [Cul94c] Jane K. Cullum. Lanczos algorithms for large scale symmetric and nonsymmetric matrix eigenvalue problems. In Brown et al. [BCEP94], pages 11–31. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Cullum:1996:AVN

- [Cul96] Jane Cullum. Arnoldi versus nonsymmetric Lanczos algorithms for solving matrix eigenvalue problems. *BIT Numerical Mathematics*, 36(3):470–493, September 1996. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.mai.liu.se/BIT/contents/bit36.html>; <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=36&issue=3&spage=470>. International Linear Algebra Year (Toulouse, 1995).

Cohen:1967:PBC

- [CW67] Robert Sonné Cohen and Marx W. Wartofsky, editors. *Proceedings of the Boston colloquium for the philosophy of science 1964/1966, in memory of Norwood Russell Hanson*, volume 3 of *Boston Studies in the Philosophy of Science*. D. Reidel, Dordrecht, The Netherlands; Boston, MA, USA; Lancaster, UK; Tokyo, Japan, 1967. ISBN 90-277-0013-3, 94-010-3508-3. ISSN 0068-0346. LCCN Q175 .B731 v.3. URL <https://link.springer.com/book/10.1007/978-94-010-3508-8>.

Cullum:1980:LPI

- [CW80] Jane Cullum and Ralph A. Willoughby. The Lanczos phenomenon—an interpretation based upon conjugate gradient optimization. *Linear Algebra and its Applications*, 29(??):63–90, February 1980. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Cullum:1981:CEV

- [CW81] Jane Cullum and Ralph A. Willoughby. Computing eigenvalues of very large symmetric matrices—an implementation of a Lanczos algorithm with no reorthogonalization. *Journal of*

Computational Physics, 44(2):329–358, December 1981. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0021999181900565>.

Cullum:1984:LPM

- [CW84] Jane Cullum and Ralph A. Willoughby. A Lanczos procedure for the modal analysis of very large nonsymmetric matrices. In IEEE, editor, *The 23rd IEEE Conference on Decision and Control, December 12–14, 1984, Las Vegas, Nevada*, volume 23, pages 1758–1761. IEEE Computer Society Press, 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, December 1984. ISBN ????. LCCN ????. IEEE Catalog Number 79-640961.

Cullum:1985:LALb

- [CW85a] J. Cullum and R. A. Willoughby. *Lanczos Algorithms for Large Symmetric Eigenvalue Computations, Volume 2: Programs*. Birkhäuser Verlag, Basel, Switzerland, 1985.

Cullum:1985:SLP

- [CW85b] Jane Cullum and Ralph A. Willoughby. A survey of Lanczos procedures for very large real ‘symmetric’ eigenvalue problems. *Journal of Computational and Applied Mathematics*, 12–13(??): 37–60, May 1985. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic).

Cullum:1985:LALa

- [CW85c] Jane K. Cullum and Ralph A. Willoughby. *Lanczos Algorithms for Large Symmetric Eigenvalue Computations, Volume 1. Theory*. Birkhäuser Verlag, Basel, Switzerland, 1985. ISBN 0-8176-3292-1 (Boston: set), 0-8176-3058-9 (Boston: vol. 1), 0-8176-3294-8 (Boston: vol. 2), 3-7643-3292-6 (Basel: set), 3-7643-3058-9 (Basel: vol. 1), 3-7643-3294-8 (Basel: vol. 2). xiv + 273 pp. LCCN QA193 .C84 1985. URL <http://www.math.utah.edu/pub/bibnet/subjects/acc-stab-num-alg.bib>.

Cullum:2002:LAL

- [CW02] Jane K. Cullum and Ralph A. Willoughby. *Lanczos algorithms for large symmetric eigenvalue computations*, volume 41 of *Classics in applied mathematics*. SIAM Press, Philadelphia, PA, USA, 2002. ISBN 0-89871-523-7 (paperback). xx + 268 pp. LCCN QA193 .C84 2002. URL <http://www.loc.gov/catdir/enhancements/fy0664/2002075847-d.html>; <http://www.loc.gov/catdir/enhancements/fy0664/2002075847-d.html>;

[//www.loc.gov/catdir/enhancements/fy0664/2002075847-t.html](http://www.loc.gov/catdir/enhancements/fy0664/2002075847-t.html).

Cullum:1983:LAC

- [CWL83] Jane Cullum, Ralph A. Willoughby, and Mark Lake. A Lanczos algorithm for computing singular values and vectors of large matrices. *SIAM Journal on Scientific and Statistical Computing*, 4(2):197–215, June 1983. CODEN SIJCD4. ISSN 0196-5204.

Chien:1997:LTM

- [CWS97] C.-S. Chien, Z.-L. Weng, and C.-L. Shen. Lanczos-type methods for continuation problems. *Numerical Linear Algebra with Applications*, 4(1):23–41, January/February 1997. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract?ID=15001012>; <http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=15001012&PLACEBO=IE.pdf>.

Cybenko:1987:EFL

- [Cyb87] George Cybenko. An explicit formula for Lanczos polynomials. *Linear Algebra and its Applications*, 88/89:99–115, 1987. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Cullum:2002:TSA

- [CZ02] Jane Cullum and Tong Zhang. Two-sided Arnoldi and nonsymmetric Lanczos algorithms. *SIAM Journal on Matrix Analysis and Applications*, 24(2):303–319, 2002. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/33901>.

Davis:1998:CLC

- [D⁺98] William R. (William Robert) Davis et al. *Cornelius Lanczos, collected published papers with commentaries, Volumes I–VI*. College of Physical and Mathematical Sciences, North Carolina State University, Raleigh, NC, USA, 1998. ISBN 0-929493-00-1, 0-929493-01-X. xlvii + 3117 pp. LCCN QC19.3 .L35 1998. URL <http://catalog.hathitrust.org/Record/004015572>. Six volumes. With a foreword by George Marx and a biographical essay by Barbara Gellai, Translated by József Illy, Laurent Choquet, Don Ridgeway and Judith Kontság Meskó.

Danielson:1940:IPF

- [Dan40] Gordon Charles Danielson. *Improvement in practical Fourier analysis and their application to X-ray scattering from liquids*. Ph.D. thesis, Purdue University, West Lafayette, IN, USA, 1940. 95 pp.

Davidson:1975:NIC

- [Dav75] Ernest R. Davidson. Note: The iterative calculation of a few of the lowest eigenvalues and corresponding eigenvectors of large real-symmetric matrices. *Journal of Computational Physics*, 17(1):87–94, January 1975. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://comptop.stanford.edu/u/references/da.pdf>; <http://www.sciencedirect.com/science/article/pii/0021999175900650>. This paper generalizes the work of Lanczos [Lan50] by a modification that improves the convergence. See also later generalizations [MS86, Ret82, Sad89].

Davidson:1993:MMT

- [Dav93] Ernest R. Davidson. Monster matrices: Their eigenvalues and eigenvectors. *Computers in Physics*, 7(5):519–522, September 1993. CODEN CPHYE2. ISSN 0894-1866 (print), 1558-4208 (electronic). URL <https://aip.scitation.org/doi/10.1063/1.4823212>. See [LGGT93].

Day:1997:EIN

- [Day97] David Day. An efficient implementation of the nonsymmetric Lanczos algorithm. *SIAM Journal on Matrix Analysis and Applications*, 18(3):566–589, July 1997. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/29250>.

DeSamblanx:1998:NLI

- [DB98] Gorik De Samblanx and Adhemar Bultheel. Nested Lanczos: Implicitly restarting an unsymmetric Lanczos algorithm. *Numerical Algorithms*, 18(1):31–50, September 1998. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp007.kluweronline.com/content/getfile/5058/13/3/abstract.htm>; <http://ipsapp007.kluweronline.com/content/getfile/5058/13/3/fulltext.pdf>.

Druskin:2005:SLR

- [DBK05] Vladimir Druskin, Liliana Borcea, and Leonid Knizhnerman. On the sensitivity of Lanczos recursions to the spectrum. *Linear Algebra and its Applications*, 396(1):103–125, February 1, 2005. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Denisenko:2006:LMO

- [Den06] P. N. Denisenko. Lanczos τ -method optimal algorithm in APS for approximating the mathematical functions. Technical report, ????, ????, 2006. 10 pp. URL <http://arxiv.org/abs/math/0603606>. Based on a talk given at the Workshop on Symbolic Calculations and Exact Methods in Mathematical Physics, Kiev, June 20-26, 2005.

Dallwig:1992:CCS

- [DFS92] Stefan Dallwig, Norman Fahrner, and Christoph Schlier. The combination of complex scaling and the Lanczos algorithm. *Chemical Physics Letters*, 191(1–2):69–76, March 27, 1992. CODEN CH-PLBC. ISSN 0009-2614 (print), 1873-4448 (electronic).

Dolan:2003:EDS

- [DG03a] P. Dolan and A. Gerber. Exterior differential systems, Janet–Riquier theory and the Riemann–Lanczos problems in two, three, and four dimensions. *Journal of Mathematical Physics*, 44(7):3013–3034, July 2003. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Dolan:2003:WLE

- [DG03b] P. Dolan and A. Gerber. The Weyl–Lanczos equations and the Lanczos wave equation in four dimensions as systems in involution. *Journal of Mathematical Physics*, 44(7):3035–3045, July 2003. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Dolan:2004:WLR

- [DG04] P. Dolan and A. Gerber. The Weyl–Lanczos relations and the four-dimensional Lanczos tensor wave equation and some symmetry generators. *Journal of Mathematical Physics*, 45(1):310–326, January 2004. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Dolan:2008:RLE

- [DG08] P. Dolan and A. Gerber. The Riemann–Lanczos equations in general relativity and their integrability. *Journal of Mathematical Physics*, 49(6):062501:1–062501:13, July 2008. CODEN JMA-PAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Druskin:1998:UNL

- [DGK98] V. Druskin, A. Greenbaum, and L. Knizhnerman. Using nonorthogonal Lanczos vectors in the computation of matrix functions. *SIAM Journal on Scientific Computing*, 19(1):38–54, January 1998. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/30366>.

Davis:1975:ESL

- [DGN75] W. R. Davis, L. H. Green, and L. K. Norris. Elucidation of some of Lanczos’ thoughts concerning spacetime curvature and the local and non-local parts of the Riemann tensor. *Computers and Mathematics with Applications*, 1(3–4):361–364, 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/089812217590036X>.

Dickinson:1967:RDF

- [Dic67] David Dickinson. Reviews: *Discourse on Fourier Series*, by Cornelius Lanczos. *American Mathematical Monthly*, 74(6):750, June/July 1967. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic).

Dolan:1994:LPW

- [DK94] P. Dolan and C. W. Kim. On the Lanczos potential and its wave equation. In Brown et al. [BCEP94], pages 497–499. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Danielson:1942:SIPa

- [DL42a] Gordon C. Danielson and Cornelius Lanczos. Some improvements in practical Fourier analysis and their application to X-ray scattering from liquids. *Journal of The Franklin Institute*, 233(4):365–380, April 1942. CODEN JFINAB. ISSN 0016-0032 (print), 1879-2693 (electronic).

Danielson:1942:SIPb

- [DL42b] Gordon C. Danielson and Cornelius Lanczos. Some improvements in practical Fourier analysis and their application to X-ray scattering from liquids. *Journal of The Franklin Institute*, 233(5): 435–452, May 1942. CODEN JFINAB. ISSN 0016-0032 (print), 1879-2693 (electronic).

Dolan:1998:LPV

- [DM98] P. Dolan and B. D. Muratori. The Lanczos potential for vacuum space-times with an Ernst potential. *Journal of Mathematical Physics*, 39(10):5406–5420, October 1998. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Drake:1994:EES

- [Dra94] G. W. F. Drake. Essentially exact solutions of the helium problem. In Brown et al. [BCEP94], pages 251–254. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Druskin:2008:MLA

- [Dru08] Vladimir Druskin. On monotonicity of the Lanczos approximation to the matrix exponential. *Linear Algebra and its Applications*, 429(7):1679–1683, October 1, 2008. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Dolan:1994:LT

- [DT94] P. Dolan and A. H. Taub. Lanczos H -tensor. In Brown et al. [BCEP94], pages 488–489. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Dunn:1994:PWE

- [Dun94] C. T. Dunn. Plasma waves in the electron foreshock. In Brown et al. [BCEP94], pages 461–463. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Dai:1994:NSI

- [DW94] W. Dai and P. R. Woodward. Numerical simulations for ideal magnetohydrodynamics. In Brown et al. [BCEP94], pages 446–448. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Eckart:1926:SPS

- [Eck26] Carl Eckart. The solution of the problem of the simple oscillator by a combination of the Schroedinger and the Lanczos theories.

Proceedings of the National Academy of Sciences of the United States of America, 12(6):473–476, 1926. CODEN PNASA6. ISSN 0027-8424 (print), 1091-6490 (electronic).

Edgar:1994:LTD

- [Edg94] S. Brian Edgar. The Lanczos H -tensor, dimension and tensor identities. In Brown et al. [BCEP94], pages 494–496. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Edgar:2003:ECR

- [Edg03] S. Brian Edgar. On effective constraints for the Riemann–Lanczos system of equations. *Journal of Mathematical Physics*, 44(11):5375–5385, November 2003. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

El-Daou:1994:WSC

- [EDO94] M. K. El-Daou and E. L. Ortiz. The weighting subspaces of collocation and the Tau Method. In Brown et al. [BCEP94], pages 337–340. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Eijkhout:1992:QPC

- [Eij92] Victor Eijkhout. Qualitative properties of the conjugate gradient and Lanczos methods in a matrix framework. LAPACK Working Note 51, Department of Computer Science, University of Tennessee, Knoxville, Knoxville, TN 37996, USA, May 1992. URL <http://www.netlib.org/lapack/lawns/lawn51.ps>; <http://www.netlib.org/lapack/lawnspdf/lawn51.pdf>. UT-CS-92-170, May 1992.

Eberly:1997:RLA

- [EK97] Wayne Eberly and Erich Kaltofen. On randomized Lanczos algorithms. In Küchlin [Küc97], pages 176–183. ISBN 0-89791-875-4. LCCN QA76.95. URL <http://www.acm.org:80/pubs/citations/proceedings/issac/258726/p176-eberly/>.

Edwards:1979:ULM

- [ELT79] J. T. Edwards, D. C. Licciardello, and D. J. Thouless. Use of the Lanczos method for finding complete sets of eigenvalues of large sparse symmetric matrices. *Journal of the Institute of Mathematics and its Applications*, 23(3):277–283, 1979. CODEN JMTAA8. ISSN 0020-2932.

Ericsson:1982:SSP

- [ER82] Thomas Ericsson and Axel Ruhe. STLM — a software package for the spectral transformation Lanczos algorithm. Technical report, UMINF-101, 1982. 1–32 pp.

Ericsson:1987:LAF

- [ER87] Thomas Ericsson and Axel Ruhe. Lánczos algorithms and field of value rotations for symmetric matrix pencils. *Linear Algebra and its Applications*, 88/89:733–746, 1987. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Evans:1984:ICG

- [ESB84] D. Evans, J. Shanehchi, and R. Barlow. Implementation of the conjugate gradient and Lanczos algorithms for large sparse banded matrices on the ICL DAP. In Feilmeier et al. [FJS84], pages 143–151.

Frommer:2000:NCL

- [F⁺00] Andreas Frommer et al., editors. *Numerical challenges in lattice quantum chromodynamics: joint interdisciplinary workshop of John von Neumann Institute for Computing, Jülich, and Institute of Applied Computer Science, Wuppertal University, August 1999*, volume 15 of *Lecture Notes in Computational Science and Engineering*. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2000. ISBN 3-540-67732-1. ISSN 1439-7358. LCCN QC793.3.G38 N86 2000.

Fassbender:2000:EAS

- [Fas00] Heike Fassbender. Error analysis of the symplectic Lanczos method for the symplectic eigenvalue problem. *BIT Numerical Mathematics*, 40(3):471–496, September 2000. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=40&issue=3&spage=471>.

Chan:1994:CIO

- [fCL94] Raymond Hon fu Chan and F. R. Lin. Circulant integral operators and circulant preconditioners. In Brown et al. [BCEP94], pages 407–409. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Feler:1974:CEL

- [Fel74] M. Guy Feler. Calculation of eigenvectors of large matrices. *Journal of Computational Physics*, 14(4):341–349, March 1974. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0021999174900175>.

Fernandes:1994:NPS

- [Fer94] Rui L. Fernandes. A note on Poisson symmetric spaces. In Brown et al. [BCEP94], pages 638–642. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Friedrichs:1987:SPM

- [FF87] Mark S. Friedrichs and Richard A. Friesner. Solution of the Pauli master equation via the Lanczos algorithm. *Chemical Physics Letters*, 137(3):285–290, June 12, 1987. CODEN CHPLBC. ISSN 0009-2614 (print), 1873-4448 (electronic).

Fischer:1994:IPF

- [FF94] Bernd Fischer and Roland W. Freund. An inner product-free conjugate gradient-like algorithm for Hermitian positive definite systems. In Brown et al. [BCEP94], pages 288–290. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Fasino:2002:LTA

- [FG02] Dario Fasino and Luca Gemignani. A Lanczos-type algorithm for the QR factorization of regular Cauchy matrices. *Numerical Linear Algebra with Applications*, 9(4):305–319, June 2002. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract/92012855/START>; <http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=92012855&PLACEBO=IE.pdf>.

Freund:1993:RALa

- [FGN93a] Roland W. Freund, Gene H. Golub, and Noël M. Nachtigal. Recent advances in Lanczos-based iterative methods for nonsymmetric linear systems. In Hussaini et al. [HKS93], pages 137–162. ISBN 0-387-94014-6 (New York), 3-540-94014-6 (Berlin). LCCN QA911 .A555 1993.

Freund:1993:ILAb

- [FGN93b] Roland W. Freund, Martin H. Gutknecht, and Noël M. Nachtigal. An implementation of the look-ahead Lanczos algorithm for non-

Hermitian matrices. *SIAM Journal on Scientific Computing*, 14 (1):137–158, January 1993. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Ferng:1990:ALM

- [FGP90] W. R. Ferng, G. H. Golub, and R. J. Plemmons. Adaptive Lanczos methods for recursive condition estimation. *Proceedings of the SPIE — The International Society for Optical Engineering*, 1348: 326–337, 1990. CODEN PSISDG. ISSN 0277-786X (print), 1996-756X (electronic).

Ferng:1991:ALM

- [FGP91] William R. Ferng, Gene H. Golub, and Robert J. Plemmons. Adaptive Lanczos methods for recursive condition estimation. *Numerical Algorithms*, 1(1):1–20, 1991. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic).

Fierro:2001:LHT

- [Fie01] Ricardo D. Fierro. Lanczos, Householder transformations, and implicit deflation for fast and reliable dominant singular subspace computation. *Numerical Linear Algebra with Applications*, 8(4): 245–264, June 2001. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Filippov:1970:BRN

- [Fil70] Yu. A. Filippov. Book review: *Numbers without end*, by C. Lanczos. Oliver and Boyd, Edinburgh, x + 164 pp., 1968. *U.S.S.R. Computational Mathematics and Mathematical Physics*, 10(5): 335–336, 1970. CODEN CMMPA9. ISSN 0041-5553, 0502-9902.

Finn:1994:OBI

- [Fin94] Lee Samuel Finn. Observing binary inspiral with LIGO. In Brown et al. [BCEP94], pages 479–481. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Fischer:2000:NSE

- [Fis00] Patrick Fischer. Numerical solution of eigenvalue problems by means of a wavelet-based Lanczos decomposition. *International Journal of Quantum Chemistry*, 77(2):552–562, 2000. CODEN IJQCB2. ISSN 0020-7608 (print), 1097-461X (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract/70002215/START>; <http://www3.interscience.wiley.com/cgi-bin/abstract/70002215/START>;

wiley.com/cgi-bin/fulltext/70002215/FILE?TPL=ftx_start;
<http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=70002215&PLACEBO=IE.pdf>.

Fierro:2005:LRS

- [FJ05] Ricardo D. Fierro and Eric P. Jiang. Lanczos and the Riemannian SVD in information retrieval applications. *Numerical Linear Algebra with Applications*, 12(4):355–372, May 2005. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Feilmeier:1984:PCP

- [FJS84] M. Feilmeier, G. Joubert, and U. Schendel, editors. *Parallel Computing 83: Proceedings of the International Conference on Parallel Computing*. North-Holland, Amsterdam, The Netherlands, 1984.

Frampton:1994:SP

- [FKS94] Paul Frampton, Tom Kephart, and Marc Sher. Supercollider physics. In Brown et al. [BCEP94], pages 621–622. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ferng:1997:NNL

- [FLL97] William R. Ferng, Kun-Yi Lin, and Wen-Wei Lin. A novel non-symmetric K -Lanczos algorithm for the generalized nonsymmetric K -eigenvalue problems. *Linear Algebra and its Applications*, 252(1–3):81–105, February ??, 1997. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL http://www.elsevier.com/cgi-bin/cas/tree/store/laa/cas_sub/browse/browse.cgi?year=1997&volume=252&issue=1-3&aid=9600670.

Florides:1994:TMM

- [Flo94] P. S. Florides. On the Tolman and Møller mass-energy formulae in General Relativity. In Brown et al. [BCEP94], pages 503–505. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Fischer:1994:CCS

- [FM94] Arthur E. Fischer and Vincent Moncrief. Classical and conformal superspace, linearization stability, and the reduction of Einstein's equations. In Brown et al. [BCEP94], pages 535–542. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Freund:1996:SSL

- [FN96] Roland W. Freund and Noël M. Nachtigal. Software for simplified Lanczos and QMR algorithms. *Applied Numerical Mathematics*, 19(3):319–341, January 15, 1996. CODEN AN-MAEL. ISSN 0168-9274 (print), 1873-5460 (electronic). URL http://www.elsevier.com/cgi-bin/cas/tree/store/apnum/cas_sub/browse/browse.cgi?year=1996&volume=19&issue=3&aid=637. Special issue on iterative methods for linear equations (Atlanta, GA, 1994).

Frasca:1994:SPE

- [FP94] Sergio Frasca and Maria Alessandra Papa. Source parameter estimation and filtering with local and geographical networks of resonant gravitational antennas. In Brown et al. [BCEP94], pages 485–487. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. URL <http://www.roma1.infn.it/rog/array/lancz.html>.

Frampton:1994:NGB

- [Fra94] Paul H. Frampton. New gauge bosons for multi-TeV pp scattering. In Brown et al. [BCEP94], pages 623–625. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Freund:1994:LTA

- [Fre94a] Roland W. Freund. Lanczos-type algorithms for structured non-Hermitian eigenvalue problems. In Brown et al. [BCEP94], pages 243–245. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. URL <ftp://netlib.att.com/netlib/att/cs/doc/94/4-05.ps.Z>.

Freund:1994:LAL

- [Fre94b] Roland W. Freund. The look-ahead Lanczos process for nonsymmetric matrices and its applications. In Brown et al. [BCEP94], pages 33–47. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. URL <ftp://netlib.att.com/netlib/att/cs/doc/94/4-06.ps.Z>.

Frommer:2009:MCL

- [Fro09] Andreas Frommer. Monotone convergence of the Lanczos approximations to matrix functions of Hermitian matrices. *Electronic Transactions on Numerical Analysis*, 35:118–128, 2009. CODEN ???? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.35.2009/pp118-128.dir/pp118-128.pdf>.

Fokkema:1998:JDS

- [FSvdV98] Diederik R. Fokkema, Gerard L. G. Sleijpen, and Henk A. van der Vorst. Jacobi–Davidson style QR and QZ algorithms for the reduction of matrix pencils. *SIAM Journal on Scientific Computing*, 20(1):94–125, January 1998. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/30007>; <http://epubs.siam.org/sam-bin/dbq/toc/SISC/20/1>.

Frommer:1999:VEBb

- [FW99a] A. Frommer and A. Weinberg. Verified error bounds for linear systems through the Lanczos process. *Reliable Computing = Nadezhnye vychisleniia*, 5(3):255–267, 1999. CODEN RCOMF8. ISSN 1385-3139 (print), 1573-1340 (electronic).

Frommer:1999:VEBa

- [FW99b] Andreas Frommer and Andre Weinberg. Verified error bounds for linear systems through the Lanczos process. In Csendes [Cse99], pages 255–267. ISBN 0-7923-6057-5. LCCN QA76.9.E94 D48 1999.

Galick:1994:ESL

- [Gal94] Albert T. Galick. Efficient solution of large sparse eigenvalue problems in microelectronic simulation. In Brown et al. [BCEP94], pages 258–260. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ganguli:1994:IGL

- [Gan94] G. Ganguli. Interdependence of global and local physics in the magnetotail. In Brown et al. [BCEP94], pages 470–472. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Garfinkle:1994:CC

- [Gar94] David Garfinkle. Cosmic censorship. In Brown et al. [BCEP94], pages 513–514. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Gokhberg:2007:MPC

- [GAVC07] K. Gokhberg, V. Averbukh, V. Vysotskiy, and L. S. Cederbaum. Molecular photoionization cross-sections by application of Stieltjes imaging to Lanczos pseudospectra. In Simos and Maroulis [SM07], pages 151–154. ISBN 0-7354-0476-3 (set), 0-7354-0477-1 (vol. 1), 0-7354-0478-X (vol. 2). ISSN 0094-243X

(print), 1551-7616 (electronic), 1935-0465. LCCN Q183.9 .I524 2007. URL <http://proceedings.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=APCPCS000963000002000151000001&idtype=cvips>.

Geers:1994:NSW

- [GB94] D. Glenn Geers and I. M. Bassett. Numerical solution of the wave equation in an optical fibre. In Brown et al. [BCEP94], pages 255–257. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Gellai:1993:CLB

- [Gel93] Barbara Gellai. Cornelius Lanczos, a biographical essay. Report, Department of Physics, North Carolina State University, Raleigh, NC, USA, 1993.

Gellai:1994:CLB

- [Gel94] Barbara Gellai. Cornelius Lanczos: a biographical essay. In Brown et al. [BCEP94], pages xxi–xlviii. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Gellai:2010:INT

- [Gel10] Barbara Gellai. *The intrinsic nature of things: the life and science of Cornelius Lanczos*. American Mathematical Society, Providence, RI, USA, 2010. ISBN 0-8218-5166-7. xv + 168 pp. LCCN QA29.L285 G45 2010.

Gerber:2003:PMC

- [Ger03] A. Gerber. Prolongation methods and Cartan characters for the three-dimensional Riemann–Lanczos problem. *Journal of Mathematical Physics*, 44(7):3059–3070, July 2003. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Grattan-Guinness:1971:BRD

- [GG71] I. Grattan-Guinness. Book review: *Discourse on Fourier series*, by C. Lanczos. 255 pages. Edinburgh and London, Oliver and Boyd. 1966. *Journal of The Franklin Institute*, 292(4):308, October 1971. CODEN JFINAB. ISSN 0016-0032 (print), 1879-2693 (electronic).

Garzon:1996:PIL

- [GG96] E. M. Garzon and I. Garcia. Parallel implementation of the Lanczos method for sparse matrices: Analysis of data distributions.

In ACM [ACM96], pages 294–300. ISBN 0-89791-803-7. LCCN QA76.5 I61 1996. ACM order number 415961.

Glowinski:1988:FIS

- [GGMP88] Roland Glowinski, Gene H. Golub, Gérard Meurant, and Jacques Périaux, editors. *First International Symposium on Domain Decomposition Methods for Partial Differential Equations: Proceedings of the First International Symposium on Domain Decomposition Methods for Partial Differential Equations, Ecole Nationale des Ponts et Chaussées, Paris, France, January 7–9, 1987*. SIAM Press, Philadelphia, PA, USA, 1988. ISBN 0-89871-220-3. LCCN QA402.2 .I571 1987. URL <http://www.jstor.org/stable/2008749>.

Garfinkle:1994:EPP

- [GGS94] David Garfinkle, Steven Giddings, and Andrew Strominger. Entropy of pair production of charged black holes. In Brown et al. [BCEP94], pages 551–553. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Gallivan:1996:RLA

- [GGV96] K. Gallivan, E. Grimme, and P. Van Dooren. A rational Lanczos algorithm for model reduction. *Numerical Algorithms*, 12(1–2): 33–63, April 1996. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic).

Gander:1994:LCQ

- [GGvM94] Walter Gander, Gene H. Golub, and Urs von Matt. Large constrained quadratic problems. In Brown et al. [BCEP94], pages 308–310. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Gsponer:1994:LER

- [GH94] André A. Gsponer and Jean-Pierre Hurni. Lanczos’s equation to replace Dirac’s equation? In Brown et al. [BCEP94], pages 509–512. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Gillis:1962:BRL

- [Gil62] J. Gillis. Book review: *Linear Differential Operators*, by Cornelius Lanczos. *Physics Today*, 15(7):51, July 1962. CODEN PHTOAD. ISSN 0031-9228 (print), 1945-0699 (electronic).

Guenouni:2004:BLM

- [GJS04] A. El Guennoui, K. Jbilou, and H. Sadok. The block Lanczos method for linear systems with multiple right-hand sides. *Applied*

Numerical Mathematics, 51(2–3):243–256, November 2004. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Glowinski:1982:CMA

- [GL82] R. Glowinski and Jacques Louis Lions, editors. *Computing methods in applied sciences and engineering, V: proceedings of the Fifth International Symposium on Computing Methods in Applied Sciences and Engineering, Versailles, France, December 14–18, 1981*. North-Holland, Amsterdam, The Netherlands, 1982. ISBN 0-444-86450-4. LCCN QA297 .E53 1981.

Glowinski:1984:CMA

- [GL84] R. Glowinski and J.-L. Lions, editors. *Computing Methods in Applied Sciences and Engineering, VI: Proceedings of the Sixth International Symposium on Computing Methods in Applied Sciences and Engineering, Versailles, France, December 12–16, 1983*. North-Holland, Amsterdam, The Netherlands, 1984. ISBN 0-444-87597-2. LCCN QA297 .I57 1983.

Gupta:1988:DBL

- [GL88] K. K. Gupta and C. L. Lawson. Development of a block Lanczos algorithm for free vibration analysis of spinning structures. *International Journal for Numerical Methods in Engineering*, 26(5):1029–1037, May 1988. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Gupta:1992:DFD

- [GLA92] K. K. Gupta, C. L. Lawson, and A. R. Ahmadi. On development of a finite dynamic element and solution of associated eigenproblem by a block Lanczos procedure. *International Journal for Numerical Methods in Engineering*, 33(8):1611–1623, June 30, 1992. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Golub:1981:BLM

- [GLO81] Gene H. Golub, Franklin T. Luk, and Michael L. Overton. A block Lanczos method for computing the singular values and corresponding singular vectors of a matrix. *ACM Transactions on Mathematical Software*, 7(2):149–169, June 1981. CODEN ACM-SCU. ISSN 0098-3500 (print), 1557-7295 (electronic). Cited in Åke Björck’s bibliography on least squares, which is available by anonymous ftp from math.liu.se in `pub/references`.

Gould:1999:STR

- [GLRT99] Nicholas I. M. Gould, Stefano Lucidi, Massimo Roma, and Philippe L. Toint. Solving the trust-region subproblem using the Lanczos method. *SIAM Journal on Optimization*, 9(2):504–525, March 1999. CODEN SJOPE8. ISSN 1052-6234 (print), 1095-7189 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/32273>.

Grimes:1994:SBL

- [GLS94] Roger G. Grimes, John G. Lewis, and Horst D. Simon. A shifted block Lanczos algorithm for solving sparse symmetric generalized eigenproblems. *SIAM Journal on Matrix Analysis and Applications*, 15(1):228–272, January 1994. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/15111>.

Graves-Morris:1997:LAL

- [GM97] P. R. Graves-Morris. A “look-around Lanczos” algorithm for solving a system of linear equations. *Numerical Algorithms*, 15(3–4): 247–274, January 1997. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic).

Gruning:2011:ITL

- [GMG11] Myrta Grüning, Andrea Marini, and Xavier Gonzee. Implementation and testing of Lanczos-based algorithms for Random-Phase Approximation eigenproblems. *Computational Materials Science*, 50(7):2148–2156, May 2011. CODEN CMMSEM. ISSN 0927-0256 (print), 1879-0801 (electronic).

Golub:1987:SHC

- [GO87] Gene H. Golub and Dianne P. O’Leary. Some history of the conjugate gradient and Lanczos algorithms: 1948–1976. Technical Report TR-1859, UMIACS-TR-87-20, Department of Computer Science, University of Maryland, College Park, MD, USA, ?? 1987. 51 pp.

Golub:1989:SHC

- [GO89] Gene H. Golub and Dianne P. O’Leary. Some history of the conjugate gradient and Lanczos algorithms: 1948–1976. *SIAM Review*, 31(1):50–102, March 1989. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic). URL <http://www.jstor.org/stable/2030847>.

Gotay:1994:SMP

- [GO94] Mark J. Gotay and Peter J. Olver. Symplectic methods in physics. In Brown et al. [BCEP94], pages 633–634. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Godfrey:2001:NCC

- [God01] P. Godfrey. A note on the computation of the convergent Lanczos complex gamma approximation. Unpublished Web file., 2001. URL <http://my.fit.edu/~gabdo/gamma.txt>.

Golub:1973:SUL

- [Gol73] G. H. Golub. Some uses of the Lanczos algorithm in numerical algebra. In Miller [Mil73], pages 173–184. ISBN 0-12-496950-X. LCCN QA297 .R691 1972.

Goodstein:1970:BRN

- [Goo70] R. L. Goodstein. Book review: *Numbers without end*, by C. Lanczos, 164 p. 1968, Oliver & Boyd, Edinburgh. *Mathematical Gazette*, 54(388):174–175, May 1970. CODEN MAGAAS. ISSN 0025-5572 (print), 2056-6328 (electronic). URL <http://www.jstor.org/stable/3612127>.

Gazzola:2016:LGK

- [GORR16] Silvia Gazzola, Enyinda Onunwor, Lothar Reichel, and Giuseppe Rodriguez. On the Lanczos and Golub–Kahan reduction methods applied to discrete ill-posed problems. *Numerical Linear Algebra with Applications*, 23(1):187–204, January 2016. CODEN NLAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Gambolati:1994:CLO

- [GP94a] Giuseppe Gambolati and Mario Putti. A comparison of Lanczos and optimization methods in the partial solution of sparse symmetric eigenproblems. *International Journal for Numerical Methods in Engineering*, 37(4):605–621, February 28, 1994. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Guarracino:1994:PBL

- [GP94b] Mario Rosario Guarracino and Francesca Perla. A parallel block Lanczos algorithm for distributed memory architectures. *Parallel Algorithms and Applications*, 4(3–4):211–221, 1994. CODEN PAAPEC. ISSN 1063-7192. URL <http://www.informaworld.com/smpp/content~content=a777314732>.

Guarracino:1995:PMB

- [GP95] M. R. Guarracino and F. Perla. A parallel modified block Lanczos algorithm for distributed memory architectures. In IEEE [IEE95], pages 424–431. ISBN 0-8186-7031-2, 0-8186-7032-0. LCCN QA76.58 .E97 1995.

Gutknecht:2000:LAP

- [GR00] Martin H. Gutknecht and Klaus J. Ressel. Look-ahead procedures for Lanczos-type product methods based on three-term Lanczos recurrences. *SIAM Journal on Matrix Analysis and Applications*, 21(4):1051–1078, 2000. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/30674>.

Grcar:1981:ALA

- [Grc81] Joseph F. Grcar. Analyses of the Lanczos algorithm and of the approximation problem in Richardson’s method. Technical Report 1074, Dept. of Computer Science, University of Illinois at Urbana-Champaign, Urbana, IL, USA, 1981. iv + 192 pp.

Gregory:1958:RUL

- [Gre58] Robert T. Gregory. Results using Lanczos’ method for finding eigenvalues of arbitrary matrices. *Journal of the Society for Industrial and Applied Mathematics*, 6(2):182–188, June 1958. CODEN JSIMAV. ISSN 0368-4245 (print), 1095-712X (electronic).

Greenbaum:1989:BSP

- [Gre89] Anne Greenbaum. Behavior of slightly perturbed Lanczos and conjugate-gradient recurrences. *Linear Algebra and its Applications*, 113:7–63, 1989. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Greenbaum:1994:LCG

- [Gre94] Anne Greenbaum. The Lanczos and conjugate gradient algorithms in finite precision arithmetic. In Brown et al. [BCEP94], pages 49–60. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Groetsch:1998:LGD

- [Gro98] C. W. Groetsch. Lanczos’ generalized derivative. *American Mathematical Monthly*, 105(4):320–326, April 1998. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic). URL http://www.maa.org/pubs/monthly_apr98_toc.html.

Grubisic:1994:VDN

- [Gru94] Boro Grubišić. Velocity dominance near a crushing singularity. In Brown et al. [BCEP94], pages 524–526. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. URL <http://xxx.lanl.gov/abs/gr-qc/9404056>.

Glockner:1974:SSG

- [GS74] P. G. Glockner and M. C. Singh, editors. *Symmetry, similarity and group theoretic methods in mechanics. Proceedings of symposium held at the University of Calgary, August 19–21, 1974*. University of Calgary, Calgary, AB, Canada, 1974. LCCN QA805.C65x 1974.

Grimes:1987:DAL

- [GS87] R. Grimes and H. Simon. Dynamic analysis with the Lanczos algorithm on the SCS-40. Technical Report ETA-TR-43, Boeing Computer Services, January 1987.

Greenbaum:1992:PBF

- [GS92] Anne Greenbaum and Zdeněk Strakoš. Predicting the behavior of finite precision Lanczos and conjugate gradient computations. *SIAM Journal on Matrix Analysis and Applications*, 13(1):121–137, January 1992. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Grimme:1996:MRS

- [GSV96] E. J. Grimme, D. C. Sorensen, and P. Van Dooren. Model reduction of state space systems via an implicitly restarted Lanczos method. *Numerical Algorithms*, 12(1–2):1–31, April 1996. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic).

Greenbaum:1994:GCA

- [GT94] Anne Greenbaum and Lloyd N. Trefethen. GMRES/CR and Arnoldi/Lanczos as matrix approximation problems. *SIAM Journal on Scientific Computing*, 15(2):359–368, March 1994. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). Iterative methods in numerical linear algebra (Copper Mountain Resort, CO, 1992).

Gutknecht:1992:CTU

- [Gut92] Martin H. Gutknecht. A completed theory of the unsymmetric Lanczos process and related algorithms, Part I. *SIAM Journal on*

Matrix Analysis and Applications, 13(2):594–639, April 1992. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Gutknecht:1994:CTU

- [Gut94a] Martin H. Gutknecht. A completed theory of the unsymmetric Lanczos process and related algorithms, Part II. *SIAM Journal on Matrix Analysis and Applications*, 15(1):15–58, January 1994. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/18880>.

Gutknecht:1994:LPP

- [Gut94b] Martin H. Gutknecht. The Lanczos process and Padé approximation. In Brown et al. [BCEP94], pages 61–75. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Gutknecht:2000:LTM

- [Gut00] M. H. Gutknecht. On Lanczos-Type methods for Wilson fermions. In Frommer et al. [F⁺00], pages 48–65. ISBN 3-540-67732-1. ISSN 1439-7358. LCCN QC793.3.G38 N86 2000.

Golub:1972:LAS

- [GUW72] G. H. Golub, R. Underwood, and J. H. Wilkinson. The Lanczos algorithm for the symmetric $Ax = \lambda Bx$ problem. Technical Report STAN-CS-72-270, Computer Science, Stanford University, Stanford, CA, ?? 1972. 24 pp.

Golub:1983:MC

- [GV83] Gene H. Golub and Charles F. Van Loan. *Matrix Computations*. Johns Hopkins Series in the Mathematical Sciences. The Johns Hopkins University Press and North Oxford Academic, Baltimore, MD, USA and Oxford, England, 1983. ISBN 0-8018-3010-9 (hardcover), 0-8018-3011-7 (paperback), 0-946536-00-7, 0-946536-05-8 (paperback). xvi + 476 pp. LCCN QA188 .G65 1983. URL <http://www.jstor.org/stable/2008107>; <http://www.jstor.org/stable/2030489>; <http://www.jstor.org/stable/3616959>.

Golub:1989:MC

- [GV89] Gene H. Golub and Charles F. Van Loan. *Matrix Computations*, volume 3 of *Johns Hopkins Series in the Mathematical Sciences*. The Johns Hopkins University Press, Baltimore, MD, USA, second edition, 1989. ISBN 0-8018-3772-3 (hardcover), 0-8018-3739-1 (paperback). xix + 642 pp. LCCN QA188 .G65 1989. US\$14.50.

Gallivan:1999:RAP

- [GV99] Kyle Gallivan and Paul Van Dooren. Rational approximations of pre-filtered transfer functions via the Lanczos algorithm. *Numerical Algorithms*, 20(4):331–342, December 1999. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp007.kluweronline.com/content/getfile/5058/19/3/abstract.htm>; <http://ipsapp007.kluweronline.com/content/getfile/5058/19/3/fulltext.pdf>.

Golub:2013:MC

- [GV13] Gene H. Golub and Charles F. Van Loan. *Matrix Computations*. Johns Hopkins Studies in the Mathematical Sciences. The Johns Hopkins University Press, Baltimore, MD, USA, fourth edition, 2013. ISBN 1-4214-0794-9 (hardcover), 1-4214-0859-7 (e-book). xxi + 756 pp. LCCN QA188 .G65 2013. URL <https://jhupbooks.press.jhu.edu/title/matrix-computations>.

Garcia:2006:EAW

- [GVBV06] V. M. García, A. Vidal, V. E. Boria, and A. M. Vidal. Efficient and accurate waveguide mode computation using BI-RME and Lanczos methods. *International Journal for Numerical Methods in Engineering*, 65(11):1773–1788, March 12, 2006. CODEN IJN-MBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Garza-Vargas:2020:LAU

- [GVK20] Jorge Garza-Vargas and Archit Kulkarni. The Lanczos algorithm under few iterations: Concentration and location of the output. *SIAM Journal on Matrix Analysis and Applications*, 41(3):1312–1346, ??? 2020. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Guiang:1998:QDL

- [GW98] Chona S. Guiang and Robert E. Wyatt. Quantum dynamics with Lanczos subspace propagation: Application to a laser-driven molecular system. *International Journal of Quantum Chemistry*, 67(5):273–285, ??? 1998. CODEN IJQCB2. ISSN 0020-7608 (print), 1097-461X (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract?ID=29906>; <http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=29906&PLACEBO=IE>.pdf.

Gupta:1986:SLS

- [GZA86] Viney K. Gupta, Scott D. Zillmer, and Robert E. Allison. Solving large-scale dynamic systems using band Lanczos method in Rockwell NASTRAN on Cray X-MP. *NASA conference publication*, pages 236–246, 1986. CODEN NACPDJ. ISSN 0191-7811.

Golub:1999:LSS

- [GZZ99] Gene H. Golub, Zhenyue Zhang, and Hongyuan Zha. Large sparse symmetric eigenvalue problems with homogeneous linear constraints: the Lanczos process with inner-outer iterations. In *Advances in numerical mathematics: Proceedings of the Fourth Japan-China Joint Seminar on Numerical Mathematics (Chiba, 1998)*, volume 12 of *GAKUTO Internat. Ser. Math. Sci. Appl.*, pages 21–34. Gakkōtoshō, Tokyo, Japan, 1999.

Golub:2000:LSS

- [GZZ00] Gene H. Golub, Zhenyue Zhang, and Hongyuan Zha. Large sparse symmetric eigenvalue problems with homogeneous linear constraints: the Lanczos process with inner-outer iterations. *Linear Algebra and its Applications*, 309(1–3):289–306, April 15, 2000. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). URL <http://www.elsevier.nl/gej-ng/10/30/19/126/25/39/abstract.html>; <http://www.elsevier.nl/gej-ng/10/30/19/126/25/39/article.pdf>.

Halliwel:1994:QMH

- [Hal94a] J. J. Halliwel. Quantum-mechanical histories and the Uncertainty Principle: An information-theoretic approach. In Brown et al. [BCEP94], pages 600–602. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Halliwel:1994:DFQ

- [Hal94b] Jonathan J. Halliwel. Decoherence and the foundations of quantum mechanics. In Brown et al. [BCEP94], pages 589–590. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Hanke:1997:SCR

- [Han97] Martin Hanke. Superlinear convergence rates for the Lanczos method applied to elliptic operators. *Numerische Mathematik*, 77(4):487–499, October 1997. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL <http://link.springer.de/link/service/journals/00211/bibs/7077004/>

70770487.htm; <http://science.springer.de/nmee/bibs/7077004/70770487.htm>.

Hanke:2001:LBM

- [Han01] Martin Hanke. On Lanczos based methods for the regularization of discrete ill-posed problems. *BIT Numerical Mathematics*, 41(5):1008–1018, December 2001. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=41&issue=5&spage=1008>.

Hartle:1994:QDQ

- [Har94] James B. Hartle. Quasiclassical domains in a quantum universe. In Brown et al. [BCEP94], pages 161–172. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Hazewinkel:2002:EM

- [Haz02] Michiel Hazewinkel, editor. *Tau method*, page ?? Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 2002. ISBN 1-4020-0609-8. LCCN QA5 20. URL <http://eom.springer.de/t/t130040.htm>.

Horoi:1998:EIL

- [HE98] M. Horoi and R. Enbody. Efficient implementation of a Lanczos eigenvalue solver on a Cray T3E-900. *Lecture Notes in Computer Science*, 1401:907–??, 1998. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Hovinen:2005:RBL

- [HE05] Bradford Hovinen and Wayne Eberly. A reliable block Lanczos algorithm over small finite fields. In Kauers [Kau05], pages 177–184. ISBN 1-59593-095-7. LCCN QA76.95 .I59 2005. ACM Order Number 505050.

Higham:1993:CCL

- [Hig93] Nicholas J. Higham. Commentary on C. Lanczos, “Introduction” to “Tables of Chebyshev Polynomials $S_n(x)$ and $C_n(x)$ ”, Nat. Bur. Stand., Appl. Math. Series 9, 1952, v–xxvi. In M. Chu et al., editors, *The Lanczos Collected Papers with Commentaries*. ????, ????, 1993. To appear.

Higham:1996:CCL

- [Hig96] Nicholas J. Higham. Commentary on C. Lanczos, “Introduction” to “Tables of Chebyshev Polynomials $S_n(x)$ and $C_n(x)$ ”, Nat.

Bur. Stand., Appl. Math. Series 9, 1952, v–xxvi. In M. Chu et al., editors, *The Lanczos Collected Papers with Commentaries*, page ?? ????, 1996. To appear.

Higham:1997:CCL

- [Hig97] Nicholas J. Higham. Commentary on C. Lanczos, “Introduction” to “Tables of Chebyshev Polynomials $S_n(x)$ and $C_n(x)$ ”, Nat. Bur. Stand., Appl. Math. Series 9, 1952, v–xxvi. In William R. Davis et al., editors, *Cornelius Lanczos Collected Published Papers with Commentaries*, volume VI(3), pages 557–559. ????, 1997. To appear.

Heller:2008:IDM

- [HKP08] Eric J. Heller, Lev Kaplan, and Frank Pollmann. Inflationary dynamics for matrix eigenvalue problems. *Proceedings of the National Academy of Sciences of the United States of America*, 105(22):7631–7635, ????, 2008. CODEN PNASA6. ISSN 0027-8424 (print), 1091-6490 (electronic).

Hussaini:1993:ATC

- [HKS93] M. Y. Hussaini, A. Kumar, and M. D. Salas, editors. *Algorithmic Trends in Computational Fluid Dynamics*. ICASE/NASA LaRC Series. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1993. ISBN 0-387-94014-6 (New York), 3-540-94014-6 (Berlin). xvi + 423 pp. LCCN QA911 .A555 1993.

Hermann:1983:LPL

- [HL83] M. R. Hermann and P. W. Langhoff. Löwdin partitioning in a Lanczos basis: Applications to scattering states. *International Journal of Quantum Chemistry*, 23(1):135–146, January 1983. CODEN IJQCB2. ISSN 0020-7608 (print), 1097-461X (electronic).

Hicks:2000:LGD

- [HL00] D. L. Hicks and L. M. Liebrock. Lanczos’ generalized derivative: Insights and applications. *Applied Mathematics and Computation*, 112(1):63–73, June 1, 2000. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic). URL <http://www.elsevier.nl/gej-ng/29/17/20/86/21/26/abstract.html>; <http://www.elsevier.nl/gej-ng/29/17/20/86/21/26/article.pdf>.

Hetmaniuk:2006:UAE

- [HL06] U. L. Hetmaniuk and R. B. Lehoucq. Uniform accuracy of eigenpairs from a shift-invert Lanczos method. *SIAM Journal on Matrix Analysis and Applications*, 28(4):927–948, January 2006. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Hammon:1994:LTG

- [HN94] K. S. Hammon and L. K. Norris. The Lanczos H -tensor and generalized affine geometry. In Brown et al. [BCEP94], pages 500–502. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Hogben:2007:HLA

- [Hog07] Leslie Hogben, editor. *Handbook of Linear Algebra*. Discrete Mathematics and its Applications (Boca Raton). Chapman and Hall/CRC, Boca Raton, FL, USA, 2007. ISBN 1-58488-510-6 (hardcover), 1-4200-1057-3 (e-book). xxx + 1370 pp. LCCN QA184.2 .H36 2007. URL <http://www.crcnetbase.com/isbn/9781420010572>; <http://www.crcnetbase.com/isbn/9781584885108>; <http://www.loc.gov/catdir/enhancements/fy0647/2006045491-d.html>. Associate editors: Richard Brualdi, Anne Greenbaum and Roy Mathias.

Honecker:2001:LSF

- [Hon01] A. Honecker. Lanczos study of the $S = 1/2$ frustrated square-lattice anti-ferromagnet in a magnetic field. *Canadian Journal of Physics = Journal canadien de physique*, 79(??):1557–1563, ??? 2001. CODEN CJPHAD. ISSN 0008-4204 (print), 1208-6045 (electronic).

Horvay:1977:CLM

- [Hor77] Gabriel Horvay. Cornelius Lanczos, in memoriam. *Computers and Mathematics with Applications*, 3(4):251–252, ??? 1977. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0898122177900827>.

Householder:1964:PVV

- [Hou64a] Alston Scott Householder. Proper values and vectors: normalization and reduction of the matrix (methods of Krylov, Webber-Voetter, Danilevskii, Hessenberg, Lanczos, Samuelson and Bryan, Leverrier, etc.). In *The Theory of Matrices in Numerical Analysis* [Hou64b], chapter 6, page ?? LCCN QA188 .H67 1964.

Householder:1964:TMN

- [Hou64b] Alston Scott Householder. *The Theory of Matrices in Numerical Analysis*. Introductions to higher mathematics; A Blaisdell book in the pure and applied sciences. Blaisdell Pub. Co., Waltham, MA, USA, 1964. viii + 257 pp. LCCN QA188 .H67 1964.

Householder:1975:TMN

- [Hou64c] Alston Scott Householder. *The Theory of Matrices in Numerical Analysis*. Dover Publications, Inc., New York, NY, USA, 1975c1964. ISBN 0-486-61781-5. xi + 257 pp. LCCN QA188 .H67 1975. US\$4.00.

Houston:1965:BRA

- [Hou65] William V. Houston. Book review: *Albert Einstein and the cosmic world order*, by Cornelius Lanczos, Interscience Publishers, vi + 139 pp. *The Physics Teacher*, 3(5):231, ??? 1965. CODEN PHTEAH. ISSN 0031-921X (print), 1943-4928 (electronic).

Householder:1975:PVV

- [Hou75] Alston Scott Householder. Proper values and vectors: normalization and reduction of the matrix (methods of Krylov, Webber-Voetter, Danilevskii, Hessenberg, Lanczos, Samuelson and Bryan, Leverrier, etc.). In *The Theory of Matrices in Numerical Analysis* [Hou64c], chapter 6, page ?? ISBN 0-486-61781-5. LCCN QA188 .H67 1975. US\$4.00.

Householder:2006:PVV

- [Hou06a] Alston Scott Householder. Proper values and vectors: normalization and reduction of the matrix (methods of Krylov, Webber-Voetter, Danilevskii, Hessenberg, Lanczos, Samuelson and Bryan, Leverrier, etc.). In *The Theory of Matrices in Numerical Analysis* [Hou06b], chapter 6, page ?? ISBN 0-486-44972-6 (paperback). LCCN QA188 .H67 2006. URL <http://www.loc.gov/catdir/enhancements/fy0634/2005054775-d.html>.

Householder:2006:TMN

- [Hou06b] Alston Scott Householder. *The Theory of Matrices in Numerical Analysis*. Dover Publications, Inc., New York, NY, USA, 2006. ISBN 0-486-44972-6 (paperback). xi + 257 pp. LCCN QA188 .H67 2006. URL <http://www.loc.gov/catdir/enhancements/fy0634/2005054775-d.html>.

Hnetynkova:2006:LTG

- [HPS06] Iveta Hnětynková, Martin Plešinger, and Zdeněk Strakoš. Lanczos tridiagonalization, Golub–Kahan bidiagonalization and coreproblem. *Proceedings in Applied Mathematics and Mechanics*, 6(1):717–718, December 2006. ISSN 1617-7061.

Hernandez:2008:REP

- [HRT08] Vicente Hernández, José E. Román, and Andrés Tomás. A robust and efficient parallel SVD solver based on restarted Lanczos bidiagonalization. *Electronic Transactions on Numerical Analysis*, 31:68–85, 2008. CODEN ????? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.31.2008/pp68-85.dir/pp68-85.pdf>.

Hnetynkova:2007:LTC

- [HS07] Iveta Hnětynková and Zdeněk Strakoš. Lanczos tridiagonalization and core problems. *Linear Algebra and its Applications*, 421(2–3):243–251, March 1, 2007. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic). Special Issue in honor of Miroslav Fiedler.

Huckle:1995:LRM

- [Huc95] Thomas Huckle. Low-rank modification of the unsymmetric Lanczos algorithm. *Mathematics of Computation*, 64(212):1577–1588, October 1995. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Huhtanen:2002:HLM

- [Huh02] Marko Huhtanen. A Hermitian Lanczos method for normal matrices. *SIAM Journal on Matrix Analysis and Applications*, 23(4):1092–1108, 2002. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/39846>.

Husain:1994:CCN

- [Hus94] Viqar Husain. Conserved currents for non-linear gravitons. In Brown et al. [BCEP94], pages 582–584. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Hendrikx:1994:MIE

- [HVB94] Koen Hendrikx, Marc Van Burel, and Adhemar Bultheel. Mat-Man: An interactive environment for using and testing linear al-

gebra software. In Brown et al. [BCEP94], pages 326–328. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Haydock:1984:CAR

- [HW84] Roger Haydock and D. Weaire. Computational advantages of the recursion and Lanczos methods. *Computer Physics Communications*, 31(4):431–432, March 1984. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic).

Im:1999:NLT

- [IC99] C. K. Im and S. P. Chang. Non-linear transient heat transfer analysis based on Lanczos co-ordinates using pseudo-force method. *Communications in Numerical Methods in Engineering*, 15(9): 629–639, September 1999. ISSN 1069-8299 (print), 1099-0887 (electronic).

IEEE:1995:PEW

- [IEE95] IEEE, editor. *Proceedings: Euromicro Workshop on Parallel and Distributed Processing, San Remo, Italy, January 25–27, 1995*, Euromicro Workshop on Parallel and Distributed Processing 1995; 3rd. IEEE Computer Society Press, 1109 Spring Street, Suite 300, Silver Spring, MD 20910, USA, 1995. ISBN 0-8186-7031-2, 0-8186-7032-0. LCCN QA76.58 .E97 1995.

Illge:2005:SGA

- [Ill05] Reinhard Illge. Some general ansätze for the Lanczos potential spinor. *Mathematische Nachrichten*, 278(14):1681–1688, November 2005. CODEN MTMNAQ. ISSN 0025-584X.

Isaacson:1996:BRP

- [Isa96] Eugene Isaacson. Book reviews: *Proceedings of the Cornelius Lanczos international centenary conference*, by J. David Brown, Moody T. Chu, Donald C. Ellison and Robert J. Plemmons. *Mathematics of Computation*, 65(213):423–435, January 1996. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic). URL <http://www.ams.org/jourcgi/jour-pbprocess?fn=110&arg1=S0025-5718-96-00666-7&u=/mcom/1996-65-213/>.

Isenberg:1994:CPG

- [Ise94] James Isenberg. Cauchy problem of General Relativity. In Brown et al. [BCEP94], pages 527–528. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Imiya:1986:SSS

- [ISO86] Atsushi Imiya, Toshio Sasaki, and Hidemitsu Ogawa. Signal smoothing by summation—generalized Fejer method and generalized Lanczos method. *Electronics and Communications in Japan (Part I: Communications)*, 69(12):21–28, 1986. ISSN 1520-6424 (print), 8756-6621 (electronic).

Ilic:2010:RLA

- [ITS10] M. Ilić, I. W. Turner, and D. P. Simpson. A restarted Lanczos approximation to functions of a symmetric matrix. *IMA Journal of Numerical Analysis*, 30(4):1044–1061, October 2010. CODEN IJNADH. ISSN 0272-4979 (print), 1464-3642 (electronic). URL <http://imajna.oxfordjournals.org/content/30/4/1044.full.pdf+html>.

Jammer:1970:BRS

- [Jam70] Max Jammer. Book review: Space through the Ages. The Evolution of Geometrical Ideas from Pythagoras to Hilbert and Einstein. Cornelius Lanczos. Academic Press, New York, 1970. x + 322 pp., illus. \$11.50. *Science*, 170(3963):1183, December 11, 1970. CODEN SCIEAS. ISSN 0036-8075 (print), 1095-9203 (electronic).

Jennings:1977:MCE

- [Jen77] Alan Jennings. *Matrix Computation for Engineers and Scientists*. Wiley, New York, NY, USA, 1977. ISBN 0-471-99421-9 (hardcover), 0-471-27832-7 (paperback). xv + 330 pp. LCCN TA347 .D4J461.

Jing:2009:LTV

- [JHZ⁺09] Yan-Fei Jing, Ting-Zhu Huang, Yong Zhang, Liang Li, Guang-Hui Cheng, Zhi-Gang Ren, Yong Duan, Tomohiro Sogabe, and Bruno Carpentieri. Lanczos-type variants of the COCR method for complex nonsymmetric linear systems. *Journal of Computational Physics*, 228(17):6376–6394, September 20, 2009. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999109002800>.

Ji:1994:LV

- [Ji94] Chueng-Ryong Ji. The lightcone vacuum. In Brown et al. [BCEP94], pages 615–617. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Jia:1995:CGL

- [Jia95] Zhong Xiao Jia. The convergence of generalized Lanczos methods for large unsymmetric eigenproblems. *SIAM Journal on Matrix Analysis and Applications*, 16(3):843–862, July 1995. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/24675>.

Jia:1998:GBL

- [Jia98] Zhongxiao Jia. Generalized block Lanczos methods for large unsymmetric eigenproblems. *Numerische Mathematik*, 80(2):239–266, August 1998. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL <http://link.springer.de/link/service/journals/00211/bibs/8080002/80800239.htm>; <http://link.springer.de/link/service/journals/00211/papers/8080002/80800239.pdf>; <http://link.springer.de/link/service/journals/00211/papers/8080002/80800239.ps.gz>.

Jaimoukha:1994:MRL

- [JK94] Imad M. Jaimoukha and Ebrahim M. Kasenally. Model reduction of large scale systems via the Arnoldi process. In Brown et al. [BCEP94], pages 384–386. ISBN 0-89871-339-0. LCCN QC19.2.C67 1993.

Jia:2003:IRR

- [JN03] Zhongxiao Jia and Datian Niu. An implicitly restarted refined bidiagonalization Lanczos method for computing a partial singular value decomposition. *SIAM Journal on Matrix Analysis and Applications*, 25(1):246–265, 2003. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/40419>.

Jia:2010:RHL

- [JN10] Zhongxiao Jia and Datian Niu. A refined harmonic Lanczos bidiagonalization method and an implicitly restarted algorithm for computing the smallest singular triplets of large matrices. *SIAM Journal on Scientific Computing*, 32(2):714–744, 2010. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Joubert:1992:LMS

- [Jou92] Wayne Joubert. Lanczos methods for the solution of nonsymmetric systems of linear equations. *SIAM Journal on Matrix Analysis*

and Applications, 13(3):926–943, July 1992. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). Iterative methods in numerical linear algebra (Copper Mountain, CO, 1990).

Jones:1993:LAG

- [JP93] Mark T. Jones and Merrell L. Patrick. Lanczos algorithm for the generalized symmetric eigenproblem on shared-memory architectures. *Applied Numerical Mathematics*, 12(5):377–389, July 1993. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Jones:1994:SGE

- [JP94] Mark T. Jones and Paul E. Plassman. Software for the generalized eigenproblem on distributed memory architectures. In Brown et al. [BCEP94], pages 322–325. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Jea:1993:LMS

- [JY93] Kang C. Jea and David M. Young. Lanczos-type methods for solving nonsymmetric linear systems. In Natori and Nodera [NN93], pages 14–24. LCCN ????

Jia:2008:ASI

- [JZ08] Chunxia Jia and Detong Zhu. An affine scaling interior algorithm via Lanczos path for solving bound-constrained nonlinear systems. *Applied Mathematics and Computation*, 195(2):558–575, February 1, 2008. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Kalamboukis:1984:LTA

- [Kal84] T. Z. Kalamboukis. A Lanczos-type algorithm for the generalized eigenvalue problem $Ax = \lambda Bx$. *Journal of Computational Physics*, 53(1):82–89, January 1984. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0021999184900536>.

Kardos:1974:LK

- [Kar74] I. Kardos. *Lánczos Kornél*, page 452ff. MRT-Minerva, Budapest, Hungary, 1974. ISBN ????? LCCN ?????

Kardos:1978:SFF

- [Kar78a] István Kardos, editor. *Scientists face to face*. Corvina, Budapest, Hungary, 1978. ISBN 963-13-0373-X. ISSN 0139-3014. 400 pp. LCCN Q141 .S3714. Translated from Hungarian to English by Inez Kemenes and others.

Kardos:1978:WIS

- [Kar78b] István Kardos, editor. *Wissenschaftler im Scheinwerferlicht. (German) [Scientists in the spotlight]*. Corvina, Budapest, Hungary, 1978. ISBN 963-13-0374-8. ISSN 0139-3022. 443 pp. LCCN ???? Translated from Hungarian to German by Tamás Szántó und Hannelore Weichenhain.

Karolyhazy:1994:GEB

- [Kar94] F. Karolyhazy. Gravitation and the eventual breakdown of the quantummechanical superposition principle. In Brown et al. [BCEP94], pages 597–599. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Kauers:2005:IJB

- [Kau05] Manuel Kauers, editor. *ISSAC '05: July 24–27, 2005, Beijing, China: Proceedings of the 2005 International Symposium on Symbolic and Algebraic Computation*. ACM Press, New York, NY 10036, USA, 2005. ISBN 1-59593-095-7. LCCN QA76.95 .I59 2005. ACM Order Number 505050.

Kokiopoulou:2004:CSS

- [KBG04] E. Kokiopoulou, C. Bekas, and E. Gallopoulos. Computing smallest singular triplets with implicitly restarted Lanczos bidiagonalization. *Applied Numerical Mathematics*, 49(1):39–61, April 2004. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Karlsson:1997:DSA

- [KBGE97] H. O. Karlsson, G. L. Bendazzoli, O. Goscinski, and S. Evangelisti. Density of states of alternant cyclic polyenes $(CH)_N$ by a direct Lanczos method. *International Journal of Quantum Chemistry*, 63(3):719–728, June 5, 1997. CODEN IJQCB2. ISSN 0020-7608 (print), 1097-461X (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract?ID=42615>; <http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=42615&PLACEBO=IE.pdf>.

Kim:1988:SDA

- [KC88] Hyoung M. Kim and Roy R. Craig, Jr. Structural dynamics analysis using an unsymmetric block Lanczos algorithm. *International Journal for Numerical Methods in Engineering*, 26(10):2305–2318, October 1988. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Kim:1990:CEU

- [KC90] Hyoung M. Kim and Roy R. Craig, Jr. Computational enhancement of an unsymmetric block Lanczos algorithm. *International Journal for Numerical Methods in Engineering*, 30(5):1083–1089, October 5, 1990. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Kim:1991:CLL

- [KC91] S. K. Kim and A. T. Chronopoulos. A class of Lanczos-like algorithms implemented on parallel computers. *Parallel Computing*, 17(6–7):763–778, September 1991. CODEN PACOEJ. ISSN 0167-8191 (print), 1872-7336 (electronic).

Krolak:1994:NSS

- [KCGR94] Andrzej Królak, Andrzej Czyrka, Janusz Gaber, and Wiesław Rudnicki. On the nature and strength of singularities in the Szekeres quasispherical collapse. In Brown et al. [BCEP94], pages 518–520. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Knizhnerman:1994:SLD

- [KDLK94] Leonid Knizhnerman, Vladimir Druskin, Qing-Huo Liu, and Fikri J. Kuchuk. Spectral Lanczos decomposition method for solving single-phase fluid flow porous media. *Numerical Methods for Partial Differential Equations*, 10(5):569–580, September 1994. CODEN NMPDEB. ISSN 0749-159x (print), 1098-2426 (electronic).

Kephart:1994:GNS

- [Kep94] Thomas W. Kephart. Gravity, naturalness, and the strong CP problem. In Brown et al. [BCEP94], pages 626–628. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Khelifi:1991:LMA

- [Khe91] Mohamed Khelifi. Lanczos maximal algorithm for unsymmetric eigenvalue problems. *Applied Numerical Mathematics*, 7(2):179–

193, February 1991. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Kiefer:1994:SGP

- [Kie94] Claus Kiefer. Semiclassical gravity and the problem of time. In Brown et al. [BCEP94], pages 566–569. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Kizner:1966:ECL

- [Kiz66] W. Kizner. Error curves for Lanczos' 'selected points' method. *The Computer Journal*, 8(4):372–382, January 1966. CODEN CMPJA6. ISSN 0010-4620 (print), 1460-2067 (electronic). URL http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/080372.sgm.abs.html; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/372.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/373.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/374.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/375.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/376.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/377.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/378.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/379.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/380.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/381.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_08/Issue_04/tiff/382.tif. See comment [Wri66].

Kim:2003:DAS

- [KJKL03] Byoung-Wan Kim, Hyung-Jo Jung, Woon-Hak Kim, and In-Won Lee. Dynamic analysis of structures using modified Lanczos coordinates. *Earthquake engineering & structural dynamics*, 32(9): 1469–1474, July 25, 2003. CODEN IJEEBG. ISSN 0098-8847 (print), 1096-9845 (electronic).

Kim:1999:CEA

- [KL99] Man-Cheol Kim and In-Won Lee. A computationally efficient algorithm for the solution of eigenproblems for large structures with non-proportional damping using Lanczos method. *Earthquake engineering & structural dynamics*, 28(2):157–172, Febru-

ary 1999. CODEN IJEEBG. ISSN 0098-8847 (print), 1096-9845 (electronic).

Koteras:2007:ECT

- [KL07] J. R. Koteras and R. B. Lehoucq. Estimating the critical time-step in explicit dynamics using the Lanczos method. *International Journal for Numerical Methods in Engineering*, 69(13): 2780–2788, March 26, 2007. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Klimas:1994:VSF

- [Kli94] Alex Klimas. Vlasov simulation with filamentation removed. In Brown et al. [BCEP94], pages 458–460. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Knizhnerman:2010:SLR

- [Kni10] Leonid Knizhnerman. Sensitivity of the Lanczos recurrence to Gaussian quadrature data: How malignant can small weights be? *Journal of Computational and Applied Mathematics*, 233(5):1238–1244, January 1, 2010. CODEN JCAMDI. ISSN 0377-0427 (print), 1879-1778 (electronic). Special Issue Dedicated to William B. Gragg on the Occasion of His 70th Birthday.

Khajah:1994:UHP

- [KO94] H. G. Khajah and E. L. Ortiz. Ultra-high precision computations. *Computers and Mathematics with Applications*, 27(7):41–57, April 1994. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0898122194901481>.

Komzsik:2003:LME

- [Kom03] Louis Komzsik. *The Lanczos method: evolution and application*. Software, environments, tools. SIAM Press, Philadelphia, PA, USA, 2003. ISBN 0-89871-537-7 (paperback). xii + 87 pp. LCCN QA76.9.M35 .K66 2003. URL <http://www.loc.gov/catdir/enhancements/fy0708/2002044643-d.html>; <http://www.loc.gov/catdir/enhancements/fy0708/2002044643-t.html>.

Kahan:1974:ALA

- [KP74] W. Kahan and B. N. Parlett. An analysis of Lanczos algorithms for symmetric matrices. Technical Report ERL-M467, University of California, Berkeley, Berkeley, CA, USA, 1974.

Kahan:1976:HFSa

- [KP76] W. Kahan and B. N. Parlett. How far should you go with the Lanczos process? In J. Bunch and D. Rose, editors, *Sparse matrix computations (Proc. Sympos., Argonne Nat. Lab., Lemont, Ill., 1975)*, pages 131–144. Academic Press, New York, USA, 1976.

Kryloff:1931:MSA

- [Kry31a] N. Kryloff. *Les méthodes de solution approchée des problèmes de la physique mathématique*. Gauthier-Villars, Paris, France, 1931. ???? pp. LCCN ????

Krylov:1931:NSE

- [Kry31b] A. N. Krylov. On the numerical solution of the equation by which, in technical matters, frequencies of small oscillations of material systems are determined. *Izvestija Akademia Nauk SSSR. Otdel. mat. i estest. nauk*, 7(4):491–539, ???? 1931. URL <http://alexei-krylov.co.tv/>; <http://ta.twi.tudelft.nl/users/viuk/burgers/krylov.html>; <http://www.encyclopedia.com/doc/1G2-2830902397.html>.

Kucharek:1994:IPI

- [KS94] H. Kucharek and M. Scholer. Interstellar pick-up ions at the heliospheric termination shock. In Brown et al. [BCEP94], pages 473–475. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Kuchar:1994:PTQ

- [Kuc94] Karl V. Kuchař. The problem of time in quantum gravity. In Brown et al. [BCEP94], pages 555–556. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Kuchlin:1997:IJM

- [Küc97] Wolfgang W. Kuchlin, editor. *ISSAC 97: July 21–23, 1997, Maui, Hawaii, USA: proceedings of the 1997 International Symposium on Symbolic and Algebraic Computation*. ACM Press, New York, NY 10036, USA, 1997. ISBN 0-89791-875-4. LCCN QA76.95. URL <http://www.acm.org/pubs/contents/proceedings/issac/258726/>.

Kuijlaars:2000:WEF

- [Kui00] A. B. J. Kuijlaars. Which eigenvalues are found by the Lanczos method? *SIAM Journal on Matrix Analysis and Applications*, 22(1):306–321, 2000. CODEN SJMAEL. ISSN 0895-4798 (print),

1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/35527>.

Koslowski:1993:LCL

- [KV93] T. Koslowski and W. Von Niessen. Linear combination of Lanczos vectors: a storage-efficient algorithm for sparse matrix eigenvector computations. *Journal of Computational Chemistry*, 14(7): 769–774, July 1993. CODEN JCCHDD. ISSN 0192-8651 (print), 1096-987X (electronic).

Krauss-Varban:1994:SGW

- [KVOM94] D. Krauss-Varban, N. Omid, and M. E. McKean. Shock-generated waves as a source of magnetosheath turbulence. In Brown et al. [BCEP94], pages 464–466. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Kaashoek:1990:PIS

- [KvSR90] Marinus A. Kaashoek, Jan H. van Schuppen, and André C. M. Ran, editors. *Proceedings of the International Symposium MTNS-89. Realization and modelling in system theory. Amsterdam, The Netherlands, June 19–23, 1989*, volume 3–5 of *Progress in systems and control theory*. Birkhäuser Boston Inc., Cambridge, MA, USA, 1990. ISBN 0-8176-3469-X (vol 1), 0-8176-3470-3 (vol. 2), 0-8176-3471-1 (vol. 3), 0-8176-3468-1 (set). LCCN QA402 .P766 1989.

Kuczynski:1992:ELE

- [KW92] J. Kuczyński and H. Woźniakowski. Estimating the largest eigenvalue by the power and Lanczos algorithms with a random start. *SIAM Journal on Matrix Analysis and Applications*, 13(4):1094–1122, October 1992. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Karlberg:1994:GQF

- [KW94a] Lennart Karlberg and Hans Wallin. General quadrature formulas and Padé type approximants. In Brown et al. [BCEP94], pages 368–370. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Kuczynski:1994:PBE

- [KW94b] J. Kuczyński and H. Woźniakowski. Probabilistic bounds on the extremal eigenvalues and condition number by the Lanczos algorithm. *SIAM Journal on Matrix Analysis and Applications*, 15(2):672–691, April 1994. CODEN SJMAEL. ISSN 0895-4798

(print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/23045>.

Kress:1989:SSE

- [KWPP89] J. D. Kress, S. B. Woodruff, G. A. Parker, and R. T. Pack. Some strategies for enhancing the performance of the block Lanczos method. *Computer Physics Communications*, 53(1-3):109-115, May 1989. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic).

Lambers:2008:EKS

- [Lam08] James V. Lambers. Enhancement of Krylov subspace spectral methods by block Lanczos iteration. *Electronic Transactions on Numerical Analysis*, 31:86-109, 2008. CODEN ????? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.31.2008/pp86-109.dir/pp86-109.pdf>.

Lanczos:1921:FBM

- [Lan21] Cornelius Lanczos. *Die funktionentheoretischen Beziehungen der Maxwell'sche Aethergleichungen — Ein Beitrag zur Relativitäts und Elektronentheorie. (German) [The function-theoretical relationships of the Maxwellian aether-equations — A contribution to the theory of relativity and electrons]*. Ph.D. thesis, University of Szeged, Szeged, Hungary, 1921. Dedicated, with permission, to Albert Einstein.

Lanczos:1922:BSW

- [Lan22a] Kornel Lanczos. Bemerkung zur de Sitterschen Welt (German) [Remark on the de Sitter universe]. *Physikalische Zeitschrift*, 23(24):539-543, December 15, 1922. CODEN PHZTAO. ISSN 0369-982X. URL <http://hdl.handle.net/2027/mdp.39015086723239?urlappend=%3Bseq=627>.

Lanczos:1922:VKE

- [Lan22b] Kornel Lanczos. Ein vereinfachendes Koordinatensystem für die Einsteinschen Gravitationsgleichungen (German) [A simplifying coordinate system for Einstein's equations of gravity]. *Physikalische Zeitschrift*, 22(24):537-539, December 15, 1922. CODEN PHZTAO. ISSN 0369-982X. URL <http://hdl.handle.net/2027/mdp.39015086723239?urlappend=%3Bseq=625>.

Lancius:1923:TEG

- [Lan23a] Kornel Lancius. Zur Theorie der Einsteinschen Gravitationsgleichungen. (German) [On the theory of Einstein's gravitational equations]. *Zeitschrift für Physik*, 13(1):7–16, ??? 1923. CODEN ZEPYAA. ISSN 0044-3328. Published with family name “Lancius” (for Lanczos), possibly a typographical, or audio transcription, error.

Lanczos:1923:BTM

- [Lan23b] Kornel Lanczos. Bemerkung zur Theorie der Merkurperihelverschiebung. (German) [Remark on the perihelion advance of Mercury]. *Naturwissenschaften*, 11(45):910–911, ??? 1923. CODEN NATWAY. ISSN 0028-1042 (print), 1432-1904 (electronic).

Lanczos:1923:RSW

- [Lan23c] Kornel Lanczos. Über die Rotverschiebung in der de Sitter'schen Welt. (German) [On the red shift in the de Sitter universe]. *Zeitschrift für Physik*, 17(1):168–189, ??? 1923. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1923:RAR

- [Lan23d] Kornel Lanczos. Zum Rotationsproblem der allgemeinen Relativitätstheorie. (German) [On the rotation problem in the Theory of General Relativity]. *Zeitschrift für Physik*, 14(1):204–219, ??? 1923. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1924:FVM

- [Lan24a] Kornel Lanczos. Flächenhafte Verteilung der Materie in der Einsteinschen Gravitationstheorie. (German) [Surface distribution of matter in Einstein's Theory of Gravity]. *Annalen der Physik (1900)*, 74(5):518–540, ??? 1924. ISSN 1521-3889.

Lanczos:1924:SKI

- [Lan24b] Kornel Lanczos. Über eine stationäre Kosmologie im Sinne der Einsteinschen Gravitationstheorie. (German) [On a stationary cosmology in the sense of Einstein's Theory of Gravitation]. *Zeitschrift für Physik*, 21(1):73–110, ??? 1924. CODEN ZEPYAA. ISSN 0044-3328. URL <http://adsabs.harvard.edu/abs/1924ZPhy...21...73L>. English translation in [Lan97b].

Lancius:1925:AVA

- [Lan25a] Kornel Lancius. Zum Anwendung des Variationsprinzip in der allgemeinen Relativitätstheorie. (German) [On the application of a

variational principle in General Relativity]. *Acta Litt. Adac. Scient. Regiae Univ. Hung. Francisco-Josephina*, 1–2(??):182–192, ??? 1925.

Lanczos:1925:SEM

- [Lan25b] Kornel Lanczos. Stationäre Elektronenbahnen und die Methode der Eigenfunktionen. (German) [Stationary electron trajectories and the method of eigenfunctions]. *Zeitschrift für Physik*, 33(1):128–143, ??? 1925. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1925:QUK

- [Lan25c] Kornel Lanczos. Über die quantentheoretische Umdeutung kinematischer und meckanischer Beziehungen. (German) [Quantum-theoretical reinterpretation of kinematics and mechanical relations]. *Zeitschrift für Physik*, 33(12):879–893, September 18, 1925. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1925:ZPW

- [Lan25d] Kornel Lanczos. Über eine zeitlich periodische Welt und eine neue Behandlung des Problems der Ätherstrahlung. (German) [On a universe periodic in time and a new treatment of the problem of aether radiation]. *Zeitschrift für Physik*, 32(1):56–80, ??? 1925. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1925:PAR

- [Lan25e] Kornel Lanczos. Zum Problem der Ätherstrahlung in einer räumlich geschlossenen Welt. (German) [On the problem of aether radiation in a spatially-closed universe]. *Zeitschrift für Physik*, 32(1):135–149, ??? 1925. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1925:PUS

- [Lan25f] Kornel Lanczos. Zum Problem der unendlich schwachen Felder in der Einsteinschen Gravitationstheorie. (German) [On the problem of the infinitely weak fields in the Einstein Theory of Gravitation]. *Zeitschrift für Physik*, 31(1):112–132, ??? 1925. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1925:WAR

- [Lan25g] Kornel Lanczos. Zum Wirkungsprinzip der allgemeinen Relativitätstheorie. (German) [On the action principle of the Theory of General Relativity]. *Zeitschrift für Physik*, 32(1):163–172, ??? 1925. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1926:KBQ

- [Lan26a] Kornel Lanczos. Über die komplexe Beschaffenheit der quantenmechanischen Matrizen. (German) [On the complex nature of the matrices in quantum mechanics]. *Zeitschrift für Physik*, 37 (6):405–413, 1926. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1926:FDN

- [Lan26b] Kornel Lanczos. Über eine feldmäßige Darstellung der neuen Quantenmechanik. (German) [On a field-theoretical representation of the new quantum mechanics]. *Zeitschrift für Physik*, 35 (11–12):812–830, February 26, 1926. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1926:TIG

- [Lan26c] Kornel Lanczos. Über tensorielle Integralgleichungen. (German) [On tensorial integral equations]. *Mathematische Annalen*, 95 (1):143–153, 1926. CODEN MAANA3. ISSN 0025-5831 (print), 1432-1807 (electronic).

Lanczos:1926:VQN

- [Lan26d] Kornel Lanczos. Variationsprinzip und Quantenbedingung in der neuen Quantenmechanik. (German) [Variation principle and quantum conditions in the new quantum mechanics]. *Zeitschrift für Physik*, 36(6):401–409, 1926. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1927:BAR

- [Lan27a] Kornel Lanczos. Zum Bewegungsprinzip der allgemeinen Relativitätstheorie. (German) [On the principle of motion of the Theory of General Relativity]. *Physikalische Zeitschrift*, 28(?):723–726, 1927. CODEN PHZTAO. ISSN 0369-982X.

Lanczos:1927:DAR

- [Lan27b] Kornel Lanczos. Zur Dynamik der allgemeinen Relativitätstheorie. (German) [On the dynamics of the Theory of General Relativity]. *Zeitschrift für Physik*, 44(11–12):773–792, 1927. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1929:efd

- [Lan29a] Corneli Lanczos. Die Erhaltungssätze in der feldmäßigen Darstellung der Diracschen Theorie. (German) [Conservation laws in the field-theoretical representation of Dirac's theory]. *Zeitschrift für*

Physik, 57(7–8):484–493, 1929. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1929:TBD

- [Lan29b] Cornel Lanczos. Die tensoranalytischen Beziehungen der Diracschen Gleichung. (German) [The tensor-analytical relationships of Dirac's equation]. *Zeitschrift für Physik*, 57(7–8):447–473, 1929. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1929:KFD

- [Lan29c] Cornel Lanczos. Zur kovarianten Formulierung der Diracschen Gleichung. (German) [On a covariant formulation of Dirac's equation]. *Zeitschrift für Physik*, 57(7–8):474–483, 1929. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1929:MEI

- [Lán29d] Lánczos Kornél. A megmaradási elvek invariáns fogalmazása az általános relativitási elméletben. (Hungarian) [An invariant formulation of the conservation laws in the Theory of General Relativity]. *A Magyar Tudományos Akadémia. III Osztályának Közleményei*, 46(??):554–575, 1929.

Lanczos:1930:VWH

- [Lan30a] C. Lanczos. Zur Verschiebung der Wasserstoffterme in hohen elektrischen Feldern. (German) [On the shift of the hydrogen terms in strong electrical fields]. *Zeitschrift für Physik*, 65(7–8):431–455, 1930. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1930:IFE

- [Lan30b] Cornel Lanczos. Über eine invariante Formulierung der Erhaltungssätze in der allgemeinen Relativitätstheorie. (German) [On an invariant formulation of the conservation laws in the Theory of General Relativity]. *Zeitschrift für Physik*, 59(7–8):514–539, 1930. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1930:ISL

- [Lan30c] Cornel Lanczos. Zur Intensitätsanomalie der Starkeffekt-Linien in sehr starken Feldern. (German) [On the anomalous intensity of the stark-effect lines in very strong fields]. *Naturwissenschaften*, 18(15):329–330, 1930. CODEN NATWAY. ISSN 0028-1042 (print), 1432-1904 (electronic).

Lanczos:1930:TSH

- [Lan30d] Cornel Lanczos. Zur Theorie des Starkeffekts in hohen Feldern. (German) [On the theory of the Stark effect in high fields]. *Zeitschrift für Physik*, 62(7–8):518–544, 1930. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1930:DWT

- [Lan30e] Cornelius Lanczos. Dirac's wellenmechanische Theorie des Elektrons und ihre feldtheoretische Ausgestaltung. (German) [Dirac's wave-mechanical theory of the electron and its field-theoretical interpretation]. *Physikalische Zeitschrift*, 31(??):120–130, 1930. CODEN PHZTAO. ISSN 0369-982X.

Lanczos:1931:NFE

- [Lan31a] Cornel Lanczos. Die neue Feldtheorie Einsteins. (German) [Einstein's new field theory]. *Ergebnisse der Exakten Naturwissenschaften*, 10(??):97–132, 1931. CODEN EENAA3. ISSN 0367-0325.

Lanczos:1931:ISH

- [Lan31b] Cornel Lanczos. Zur Intensitätsschwächung der Spektrallinien in hohen elektrischen Feldern. (German) [On intensity weakening of spectral lines in strong electrical fields]. *Zeitschrift für Physik*, 68(3–4):204–232, 1931. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1931:EFN

- [Lan31c] Cornelius Lanczos. The electromagnetic field as a natural property of Riemannian geometry. *Bulletin of the American Mathematical Society*, 37(??):829, 1931. CODEN BAMOAD. ISSN 0002-9904 (print), 1936-881X (electronic).

Lanczos:1932:ENEa

- [Lan32a] Cornel Lanczos. Elektromagnetismus als natürliche Eigenschaft der Riemannschen Geometrie. (German) [Electromagnetism as a natural property of Riemann geometry]. *Zeitschrift für Physik*, 73(3–4):147–168, 1932. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1932:SRA

- [Lan32b] Cornel Lanczos. Stellung der Relativitätstheorie zu andern physikalischen Theorien. (German) [The position of Relativity Theory to others physical theories]. *Naturwissenschaften*, 20(7):113–116, 1932. CODEN NATWAY. ISSN 0028-1042 (print), 1432-1904 (electronic).

Lanczos:1932:AVR

- [Lan32c] Cornel Lanczos. Zum Auftreten des Vektorpotentials in der Riemannschen Geometrie. (German) [on the appearance of the vector potential in Riemannian geometry]. *Zeitschrift für Physik*, 75 (1–2):63–77, 1932. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1932:FRL

- [Lan32d] Cornel Lanczos. Zur Frage der regulären Lösungen der Einsteinschen Gravitationsgleichungen. (German) [On the problem of the regular solutions of Einstein's equations of gravity]. *Annalen der Physik 5 (Berlin, Germany)*, 13(5):621–635, 1932. CODEN ANPYA2. ISSN 0003-3804 (print), 1521-3889 (electronic).

Lanczos:1932:ENEB

- [Lan32e] Cornelius Lanczos. Electricity as a natural element of Riemannian geometry. *Physical Review (2)*, 39(1):188, January 1932. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL http://prola.aps.org/abstract/PR/v39/i1/p175_1.

Lanczos:1932:ENP

- [Lan32f] Cornelius Lanczos. Electricity as a natural property of Riemannian geometry. *Physical Review (2)*, 39(4):716–736, February 1932. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL <http://link.aps.org/doi/10.1103/PhysRev.39.716>.

Lanczos:1932:EIS

- [Lan32g] Cornelius Lanczos. Ether — is it a substance? *The Purdue Engineer*, 29(??):87–102, 1932.

Lanczos:1933:WHD

- [Lan33a] Cornel Lanczos. Die Wellenmechanik als Hamiltonsche Dynamik des funktionenraumes. Eine neue Ableitung der Diracschen Gleichung. (German) [Wave mechanics as the Hamiltonian dynamics of the function space: a new derivation of the Dirac Equation]. *Zeitschrift für Physik*, 81(11–12):703–732, 1933. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1933:HDF

- [Lan33b] Cornel Lanczos. Zur Hamiltonschen Dynamik des Funktionenraumes. (German) [On the Hamiltonian dynamics of function spaces]. *Zeitschrift für Physik*, 85(1–2):107–127, 1933. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1933:FCB

- [Lan33c] Cornelius Lanczos. A fundamental connection between Hamiltonian dynamics and wave mechanics. *Physical Review*, 44(4):318, August 1933. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL <http://link.aps.org/doi/10.1103/PhysRev.44.313>. Abstract of talk.

Lanczos:1934:NTL

- [Lan34a] Corneli Lanczos. Eine neue Transformationstheorie linearer kanonischer Gleichungen. (German) [A new transformation theory of linear canonical equations]. *Annalen der Physik 5 (Berlin, Germany)*, 20(6):653–688, 1934. CODEN ANPYA2. ISSN 0003-3804 (print), 1521-3889 (electronic).

Lanczos:1934:NTT

- [Lan34b] Cornelius Lanczos. A new transformation theory of linear canonical equations. *Physical Review*, 45(8):560, April 1934. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL http://prola.aps.org/abstract/PR/v45/i8/p558_1. Abstract only.

Lanczos:1935:NAW

- [Lan35a] Corneli Lanczos. Ein neuer Aufbau der Weltgeometrie. (German) [A new formulation of world geometry]. *Zeitschrift für Physik*, 96(1–2):76–106, 1935. CODEN ZEPYAA. ISSN 0044-3328.

Lanczos:1935:NAM

- [Lan35b] Cornelius Lanczos. A new approximation method in solving linear differential equations with non-oscillating coefficients. *Bulletin of the American Mathematical Society*, 41(??):183–185, 1935. CODEN BAMOAD. ISSN 0002-9904 (print), 1936-881X (electronic).

Lanczos:1936:NAM

- [Lan36a] Cornelius Lanczos. A new approximation method in solving linear differential equations with rational coefficients. *Bulletin of the American Mathematical Society*, 42(??):30, 1936. CODEN BAMOAD. ISSN 0002-9904 (print), 1936-881X (electronic).

Lanczos:1936:SRM

- [Lan36b] Cornelius Lanczos. A simple recursion method for solving a set of linear equations. *Bulletin of the American Mathematical Society*,

42(??):325, ???? 1936. CODEN BAMOAD. ISSN 0002-9904 (print), 1936-881X (electronic).

Lanczos:1937:PAR

- [Lan37] Cornelius Lanczos. The philosophical aspects of Relativity. Two lectures delivered by invitation on March 2 and 4, 1937 in the course *Life Views of Great Men of Science*, Philosophy 143b at Indiana University, 1937. URL <http://catalog.hathitrust.org/Record/000483261>.

Lanczos:1938:SIM

- [Lan38a] C. Lanczos. A simple interpolation method for the representation of rugged curves. Abstract of contributed paper given at the November Meeting of the AMS in Cleveland, OH, November 25-26, 1938., November 1938.

Lanczos:1938:TIE

- [Lan38b] C. Lanczos. Trigonometric interpolation of empirical and analytical functions. *Journal of mathematics and physics / Massachusetts Institute of Technology*, 17(??):123–199, ???? 1938. CODEN JMPHA9. ISSN 0097-1421.

Lanczos:1938:RPR

- [Lan38c] Cornelius Lanczos. A remarkable property of the Riemann–Christoffel tensor in four dimensions. *Annals of Mathematics (2)*, 39(4):842–850, 1938. CODEN ANMAAH. ISSN 0003-486X (print), 1939-8980 (electronic).

Lanczos:1941:DPG

- [Lan41a] C. Lanczos. The dynamics of a particle in General Relativity. *Physical Review (2)*, 59(10):813–819, May 1941. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL <http://adsabs.harvard.edu/abs/1941PhRv..59..813L>; <http://link.aps.org/doi/10.1103/PhysRev.59.813>.

Lanczos:1941:TMP

- [Lan41b] Cornelius Lanczos. The total mass of a particle in General Relativity. *Physical Review (2)*, 59(9):708–716, May 1941. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL <http://link.aps.org/doi/10.1103/PhysRev.59.708>.

Lanczos:1942:DR

- [Lan42a] Cornelius Lanczos. Dynamic Relativity. *Main Currents in Modern Thought*, 3(??):4–7, ??? 1942. CODEN ??? ISSN 0025-0570.

Lanczos:1942:HMP

- [Lan42b] Cornelius Lanczos. The history of mathematics, part 1, prologue. Unpublished lecture notes, Purdue University Library, West Lafayette, IN, 47907, USA, and D. H. Hill Library, North Carolina State University, Raleigh, NC, 27695-8202, USA., 1942.

Lanczos:1942:MWE

- [Lan42c] Cornelius Lanczos. Matter waves and electricity. *Physical Review (2)*, 61(11–12):713–720, June 1942. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL <http://link.aps.org/doi/10.1103/PhysRev.61.713>.

Lanczos:1949:LMR

- [Lan49a] Cornelius Lanczos. Lagrangian multiplier and Riemannian spaces. *Reviews of Modern Physics*, 21(3):497–502, July 1949. CODEN RMPHAT. ISSN 0034-6861 (print), 1538-4527 (electronic), 1539-0756. URL <http://link.aps.org/doi/10.1103/RevModPhys.21.497>.

Lanczos:1949:VPM

- [Lan49b] Cornelius Lanczos. *The Variational Principles of Mechanics*, volume 4 of *Mathematical Expositions*. University of Toronto Press, Toronto, ON, Canada, 1949. xxv + 307 pp. LCCN A805 .L25 1949. URL <http://catalog.hathitrust.org/Record/000357344>.

Lanczos:1950:IMS

- [Lan50] Cornelius Lanczos. An iteration method for the solution of the eigenvalue problem of linear differential and integral operators. *Journal of Research of the National Bureau of Standards*, 45:255–282, 1950. ISSN 0160-1741.

Lanczos:1951:IMSa

- [Lan51a] Cornelius Lanczos. An iteration method for the solution of the eigenvalue problem of linear differential and integral operators. In *Proceedings of a Second Symposium on Large-Scale Digital Calculating Machinery, 1949*, pages 164–206. Harvard University Press, Cambridge, MA, USA, 1951.

Lanczos:1951:IMSb

- [Lan51b] Cornelius Lanczos. An iteration method for the solution of the eigenvalue problem of linear differential and integral operators. In *Proceedings of the Symposium on Spectral Theory and Differential Problems (June 20–July 12, 1950)*, pages 301–316. Oklahoma Agricultural and Mechanical College, Stillwater, OK, USA, 1951.

Lanczos:1952:APC

- [Lan52a] Cornelius Lanczos. Analytical and practical curve fitting of equidistant data. Report 1591, U.S. National Bureau of Standards, Gaithersburg, MD, USA, 1952. 1–102 pp.

Lanczos:1952:F

- [Lan52b] Cornelius Lanczos. Introduction. In Anonymous [Ano52], pages v–xxvi. LCCN ????. Foreword by J. C. P. Miller. Introduction by Cornelius Lanczos.

Lanczos:1952:SND

- [Lan52c] Cornelius Lanczos. Smoothing of noisy data by trigonometric truncation. Report 1582, U.S. National Bureau of Standards, Gaithersburg, MD, USA, April 9, 1952. 16 pp.

Lanczos:1952:SSL

- [Lan52d] Cornelius Lanczos. Solution of systems of linear equations by minimized-iterations. *Journal of Research of the National Bureau of Standards (1934)*, 49:33–53, 1952. ISSN 0091-0635. URL https://nvlpubs.nist.gov/nistpubs/jres/049/jresv49n1p33_A1b.pdf.

Lanczos:1953:CPS

- [Lan53] Cornelius Lanczos. Chebyshev polynomials in the solution of large-scale linear systems. In *Proceedings of the Association for Computing Machinery, Toronto, 1952*, pages 124–133. Sauls Lithograph Co. (for the Association for Computing Machinery), Washington, DC, USA, 1953.

Lanczos:1955:AET

- [Lan55a] C. Lanczos. Albert Einstein and the Theory of Relativity. *Il Nuovo Cimento (10)*, 2(Supplement 5):1193–1220, 1955. CODEN NUCIAD. ISSN 0029-6341 (print), 1827-6121 (electronic).

Lanczos:1955:IMS

- [Lan55b] C. Lanczos. An iteration method for the solution of the eigenvalue problem of linear differential and integral operators. In Anonymous [Ano55], pages 301–316. LCCN QA3 .O5 1951.

Lanczos:1955:SEA

- [Lan55c] C. Lanczos. Spectroscopic eigenvalue analysis. *Journal of the Washington Academy of Sciences*, 45(10):315–323, October 1955. CODEN JWASA3. ISSN 0043-0439. URL <http://www.jstor.org/stable/24533653>.

Lanczos:1955:SS

- [Lan55d] Cornelius Lanczos. Science and society. *Icarus (Trinity College, Dublin)*, 5(16):31–37, 1955.

Lanczos:1956:AA

- [Lan56] Cornelius Lanczos. *Applied Analysis*. Prentice-Hall, Upper Saddle River, NJ 07458, USA, 1956. ISBN 0-486-65656-X. xx + 539 pp. LCCN QA401 .L3 1988. URL <http://catalog.hathitrust.org/Record/000617776>; <http://hdl.handle.net/2027/mdp.39015016057468>. Dedicated to the memory of the six million who died for Kiddush Hashem. Reprinted by Dover, New York, 1988.

Lanczos:1957:EGR

- [Lan57] Cornelius Lanczos. Electricity and General Relativity. *Reviews of Modern Physics*, 29(3):337–350, July 1957. CODEN RMPHAT. ISSN 0034-6861 (print), 1538-4527 (electronic), 1539-0756. URL <http://link.aps.org/doi/10.1103/RevModPhys.29.337>.

Lanczos:1958:ISL

- [Lan58a] C. Lanczos. Iterative solution of large-scale linear systems. *Journal of the Society for Industrial and Applied Mathematics*, 6(1):91–109, March 1958. CODEN JSIMAV. ISSN 0368-4245 (print), 1095-712X (electronic). URL <http://www.jstor.org/stable/2098863>.

Lanczos:1958:LSS

- [Lan58b] C. Lanczos. Linear systems in self-adjoint form. *American Mathematical Monthly*, 65(9):665–679, November 1958. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic). URL <http://www.jstor.org/stable/2308707>.

Lanczos:1958:ERG

- [Lan58c] Cornelius Lanczos. Electricité de relativité générale. (French) [Electricity and General Relativity]. *Cahiers de Physique*, 95(?): 247–255, July 1958. CODEN CAPHAI. ISSN 0366-5291.

Lanczos:1958:RCC

- [Lan58d] Cornelius Lanczos. Remarks concerning the canonical formulation of field equations. Report, Faculté des Sciences de Paris, Séminaire Janet. Mécanique analytique et mécanique céleste, tome 1, Année 1957–1958, Paris, France, May 17, 1958. 1–14 pp. URL http://archive.numdam.org/ARCHIVE/SJ/SJ_1957-1958__1_/SJ_1957-1958__1__A8_0/SJ_1957-1958__1__A8_0.pdf.

Lanczos:1958:TC

- [Lan58e] Cornelius Lanczos. Tensor calculus. In E. U. Condon, editor, *Handbook of Physics*, pages I–140–I–151. McGraw-Hill, New York, NY, USA, 1958. LCCN ????. Part I, Chapter 10.

Lanczos:1959:AER

- [Lan59] Cornelius Lanczos. Albert Einstein and the role of theory in contemporary physics. *American Scientist*, 47(?):41–59, March 1959. CODEN AMSCAC. ISSN 0003-0996 (print), 1545-2786 (electronic).

Lanczos:1960:EBV

- [Lan60a] C. Lanczos. Extended boundary value problems. In *Proceedings of the International Congress of Mathematicians, Edinburgh (14–21 August, 1958)*, pages 154–181. Cambridge University Press, Cambridge, UK, 1960.

Lanczos:1960:SOD

- [Lan60b] C. Lanczos. Solution of ordinary differential equations by trigonometric interpolation. In *Symposium on the numerical treatment of ordinary differential equations, integral and integro-differential equations (Rome, 1960)*, pages 22–32. Birkhäuser Verlag, Basel, Switzerland, 1960.

Lanczos:1961:MLG

- [Lan61a] C. Lanczos. Méthodes locales et globales pour l'intégration des problèmes de trajectoires. In *Colloques sur l'analyse numérique*

(*Mons, 1961*), pages 37–49. Librairie Universitaire, Louvain, Belgium, 1961. Centre Belge de Recherches Mathématiques.

Lanczos:1961:AA

- [Lan61b] Cornelius Lanczos. *Applied Analysis*. Prentice-Hall, Upper Saddle River, NJ 07458, USA, 1961. xx + 539 pp. LCCN ????. URL <http://babel.hathitrust.org/cgi/pt?id=mdp.39015016057468>. Dedicated to the memory of the six million who died for Kiddush Hashem.

Lanczos:1961:LDO

- [Lan61c] Cornelius Lanczos. *Linear differential operators*. D. Van Nostrand Co. Ltd., London, UK / Toronto, ON, Canada / New York, NY, USA / Princeton, NJ, USA, 1961. xvi + 564 pp. URL <http://catalog.hathitrust.org/Record/000621357>.

Lanczos:1961:PMP

- [Lan61d] Cornelius Lanczos. *Praktičeskije metody prikladnogo analiza: Spravočnoje rukovodstvo. (Russian) [Practical Methods in Applied Analysis]*. Fizmatgiz, Moscow, USSR, 1961. 524 pp. LCCN ????. Translated from the English by M. Z. Kajnera, and edited by A. M. Lopšica.

Lanczos:1962:IAC

- [Lan62a] C. Lanczos. An integral approach to the calculus of variations. In Szegő et al. [S⁺62], pages 191–198. LCCN QA3 .S8525.

Lanczos:1962:TRQ

- [Lan62b] C. Lanczos. Le tenseur de Riemann à quatre dimensions. (With discussion). *Annales de la Faculté des Sciences de l'Université de Clermont-Ferrand*, 8(2):167–170, ????. 1962. URL http://www.numdam.org/item?id=ASCFM_1962__8_2_167_0.

Lanczos:1962:SPR

- [Lan62c] C. Lanczos. Some properties of the Riemann–Christoffel curvature tensor. In Anonymous [Ano62], pages 313–321. LCCN QC 6 .R295. URL <http://adsabs.harvard.edu/abs/1962rdgr.book..313L>. This book is dedicated to Leopold Infeld in connection with his 60th birthday.

Lanczos:1962:SRT

- [Lan62d] C. Lanczos. The splitting of the Riemann tensor. *Reviews of Modern Physics*, 34(3):379–389, July 1962. CODEN RMPHAT. ISSN

0034-6861 (print), 1538-4527 (electronic), 1539-0756. URL <http://adsabs.harvard.edu/abs/1962RvMP...34..379L>; <http://link.aps.org/doi/10.1103/RevModPhys.34.379>.

Lanczos:1962:IGF

- [Lan62e] Cornelius Lanczos. Intégration globale. (French) [Global integration]. *Annales de la Faculté des sciences de l'université de Clermont, Actes Coll. Math. Tricent. mort B. Pascal*, 2(??):97–107, ??? 1962. URL http://archive.numdam.org/ARCHIVE/ASCFM/ASCFM_1962__8_2/ASCFM_1962__8_2_97_0/ASCFM_1962__8_2_97_0.pdf.

Lanczos:1962:VPM

- [Lan62f] Cornelius Lanczos. *The variational principles of mechanics*, volume 4 of *Mathematical Expositions*. University of Toronto Press, Toronto, ON, Canada, second edition, 1962. xxv + 367 pp. LCCN QA805 .L25 1962. URL <http://catalog.hathitrust.org/Record/000357368>.

Lanczos:1963:URS

- [Lan63a] C. Lanczos. Undulatory Riemannian spaces. *Journal of Mathematical Physics*, 4(7):951–959, July 1963. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Lanczos:1963:MPP

- [Lan63b] Cornelius Lanczos. Modern physics in perspective. *Studies: An Irish Quarterly Review (Dublin)*, 52(207):283–293, Fall 1963. ISSN 0039-3495. URL <http://www.jstor.org/stable/30088788>.

Lanczos:1964:END

- [Lan64a] C. Lanczos. Evaluation of noisy data. *Journal of the Society for Industrial and Applied Mathematics: Series B, Numerical Analysis*, 1(??):76–85, ??? 1964. ISSN 0887-459X (print), 1095-7170 (electronic). URL <http://www.jstor.org/stable/2949766>.

Lanczos:1964:IGH

- [Lan64b] Cornelius Lanczos. The inspired guess in the history of physics. *Studies: An Irish Quarterly Review (Dublin)*, 53(212):398–412, Winter 1964. ISSN 0039-3495. URL <http://www.jstor.org/stable/30087796>.

Lanczos:1964:I

- [Lan64c] Cornelius Lanczos. Introduction. *Journal of the Society for Industrial and Applied Mathematics: Series B, Numerical Analysis*, 1(??):1, ??? 1964. ISSN 0887-459X (print), 1095-7170 (electronic). URL <http://www.jstor.org/stable/2949759>.

Lanczos:1964:LDO

- [Lan64d] Cornelius Lanczos. *Linear Differential Operators*. Van Nostrand, London, UK, 1964. 564 pp. LCCN ????

Lanczos:1964:MPP

- [Lan64e] Cornelius Lanczos. Modern physics in perspective. *Studies: An Irish Quarterly Review (Dublin)*, 52(207):283–293, Autumn 1964. ISSN 0039-3495. URL <http://www.jstor.org/stable/30088788>.

Lanczos:1964:PAG

- [Lan64f] Cornelius Lanczos. A precision approximation of the gamma function. *Journal of the Society for Industrial and Applied Mathematics: Series B, Numerical Analysis*, 1(??):86–96, ??? 1964. ISSN 0887-459X (print), 1095-7170 (electronic). URL <http://www.jstor.org/stable/2949767>.

Lanczos:1964:SPP

- [Lan64g] Cornelius Lanczos. Signal propagation in a positive definite Riemannian space. *Physical Review (2)*, 134B(2):476–480, April 1964. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). URL <http://link.aps.org/doi/10.1103/PhysRev.134.B476>.

Lanczos:1964:VPM

- [Lan64h] Cornelius Lanczos. *The variational principles of mechanics*, volume 4 of *Mathematical Expositions*. University of Toronto Press, Toronto, ON, Canada, second edition, 1964. xxv + 367 pp. LCCN QA805 .L25 1964. URL <http://catalog.hathitrust.org/Record/000357368>.

Lanczos:1965:AEC

- [Lan65a] Cornelius Lanczos. *Albert Einstein and the cosmic world order: six lectures delivered at the University of Michigan in the Spring of 1962*. Interscience Publishers, New York, NY, USA, 1965. vi + 139 pp. LCCN QC 16 .E35 L252 1965. URL <http://catalog.hathitrust.org/Record/001477802>.

Lanczos:1965:VPM

- [Lan65b] Cornelius Lanczos. *Variacionnyje principy mehaniki. (Russian) [The variational principles of mechanics]*. Mir Publishers, Moscow, Russia, 1965. 408 pp. LCCN ????

Lanczos:1966:BVP

- [Lan66a] C. Lanczos. Boundary value problems and orthogonal expansions. *SIAM Journal on Applied Mathematics*, 14(4):831–863, July 1966. CODEN SMJMAP. ISSN 0036-1399 (print), 1095-712X (electronic). URL <http://www.jstor.org/stable/2946140>.

Lanczos:1966:MLP

- [Lan66b] C. Lanczos. Metrical lattice and the problem of electricity. *Journal of Mathematical Physics*, 7(2):316–324, February 1966. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Lanczos:1966:DFSa

- [Lan66c] Cornelius Lanczos. *Discourse on Fourier series*. University mathematical monographs. Oliver & Boyd, Edinburgh, UK / London, UK, 1966. viii + 255 pp. URL <http://catalog.hathitrust.org/Record/000620782>.

Lanczos:1966:DFSb

- [Lan66d] Cornelius Lanczos. *Discourse on Fourier series*. Hafner Publishing Co., New York, NY, USA, 1966. viii + 255 pp.

Lanczos:1966:TFD

- [Lan66e] Cornelius Lanczos. Tetraden-Formalismus und definite Raum-Zeit-Struktur. (German) [Tetrad formalism and definite space-time structure]. In Treder [Tre66], pages 38–56. LCCN ????

Lanczos:1966:VPM

- [Lan66f] Cornelius Lanczos. *The variational principles of mechanics*. Mathematical Expositions, No. 4. University of Toronto Press, Toronto, ON, Canada, third edition, 1966. xxv + 375 pp. LCCN QA805 .L278 1966. URL <http://catalog.hathitrust.org/Record/004452275>.

Lanczos:1967:AES

- [Lan67a] Cornelius Lanczos. *Albert Einstein i stroenie kosmosa: Shest lektsii, Prochitannykh vesnoi 1962 G. v Michiganskom universitete. (Russian) [Albert Einstein and the cosmic world order: six*

lectures delivered at the University of Michigan in the Spring of 1962]. Nauka, Moscow, Russia, 1967. 156 pp. LCCN ????. Translated from English to Russian by V. A. Ugarova.

Lanczos:1967:AEP

- [Lan67b] Cornelius Lanczos. *Albert Einstein i porządek wszechświata*, volume 92 of *Omega: współczesna biblioteka naukowa*. Państwowe Wydawnictwo Naukowe, Warszawa, Poland, 1967. 146 + 4 pp. LCCN ????. Translated from English to Polish by Barbara Stanosz.

Lanczos:1967:BRM

- [Lan67c] Cornelius Lanczos. Book review: *The Mathematical Papers of Sir William Rowan Hamilton: Volume III, Algebra*, edited by H. Halberstam and R. E. Ingram, London: Cambridge University Press 1967. pp 672. *Studies: An Irish Quarterly Review (Dublin)*, 56(224):423–425, Winter 1967. ISSN 0039-3495. URL <http://www.jstor.org/stable/30087259>.

Lanczos:1967:CCV

- [Lan67d] Cornelius Lanczos. *Che cosa ha veramente detto Einstein?. (Italian) [What did Einstein really say?]*. Ubaldini, Rome, Italy, 1967. 154 pp. LCCN ????

Lanczos:1967:EEE

- [Lan67e] Cornelius Lanczos. Einstein equations and electromagnetism. *Journal of Mathematical Physics*, 8(4):829–836, April 1967. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Lanczos:1967:RPW

- [Lan67f] Cornelius Lanczos. Rationalism and the physical world. In Cohen and Wartofsky [CW67], pages 181–198. ISBN 90-277-0013-3, 94-010-3508-3. ISSN 0068-0346. LCCN Q175 .B731 v.3. URL <https://link.springer.com/book/10.1007/978-94-010-3508-8>.

Lanczos:1967:WM

- [Lan67g] Cornelius Lanczos. Why mathematics? *Irish Mathematical Teachers Association Newsletter*, 9(??):3–??, ????. 1967.

Lanczos:1967:WRHa

- [Lan67h] Cornelius Lanczos. William Rowan Hamilton, an appreciation. *American Scientist*, 55(??):129–143, ????. 1967. CODEN AMSCAC. ISSN 0003-0996 (print), 1545-2786 (electronic).

Lanczos:1967:WRHb

- [Lan67i] Cornelius Lanczos. William Rowan Hamilton, an appreciation. *University Review*, 4(2):151–166, Summer 1967. CODEN ????? ISSN 0566-2478. URL <http://www.jstor.org/stable/25504779>.

Lanczos:1968:BVP

- [Lan68a] C. Lanczos. Boundary value problems and the algebraic method. In *Programmation en Mathématiques Numériques (Actes Colloq. Internat. C.N.R.S. No. 165, Besançon, 1966)*, pages 205–215. Éditions Centre Nat. Recherche Sci., Paris, 1968.

Lanczos:1968:NE

- [Lan68b] Cornelius Lanczos. *Numbers without end*, volume 22 of *Contemporary science paperbacks*. Oliver and Boyd, Edinburgh, Scotland, 1968. x + 164 pp. LCCN QA9 L35; 1875. URL <http://catalog.hathitrust.org/Record/009325177>.

Lanczos:1968:QRI

- [Lan68c] Cornelius Lanczos. Quelques remarques en introduction. (French) [Some introductory remarks]. In *Coll. Inter. Centre Nat. Rech. Sci., No. 165: Programmation en mathématique numérique, Besançon (7–14 septembre, 1966)*, pages 21–23. Éditions du Centre National de la Recherche, Paris, France, 1968. LCCN ?????

Lanczos:1969:QAP

- [Lan69a] C. Lanczos. Quadratic action principle of relativity. *Journal of Mathematical Physics*, 10(6):1057–1064, June 1969. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Lanczos:1969:VP

- [Lan69b] Cornelius Lanczos. Variational principles. In Clark and Derrick [CD69], pages 1–45. LCCN QC176.A1 S36 1967.

Lanczos:1970:JS

- [Lan70a] Cornelius Lanczos. *Judaism and science*, volume 11 of *Selig Brodetsky memorial lecture*. Leeds University Press, Leeds, UK, 1970. ISBN 0-85316-021-X. ii + 23 pp. LCCN BM 538 .S3 L25. URL <http://catalog.hathitrust.org/Record/001402814>.

Lanczos:1970:STA

- [Lan70b] Cornelius Lanczos. *Space through the ages: the evolution of geometrical ideas from Pythagoras to Hilbert and Einstein*. Academic Press, New York, USA, 1970. x + 320 pp. URL <http://catalog.hathitrust.org/Record/000164850>.

Lanczos:1970:TO

- [Lan70c] Cornelius Lanczos. *Tal i oändlighet*. Gleerups, Lund, Sweden, 1970. 192 pp. LCCN ???? Translation of *Numbers without end* to Swedish by Einar Fredriksson.

Lanczos:1970:VPM

- [Lan70d] Cornelius Lanczos. *The variational principles of mechanics*. Mathematical Expositions, No. 4. University of Toronto Press, Toronto, ON, Canada, fourth edition, 1970. xxix + 418 pp. LCCN QA805 .L25 1970. URL <http://catalog.hathitrust.org/Record/000001426>.

Lanczos:1971:LND

- [Lan71] Cornelius Lanczos. *L'univers des nombres: à la découverte des mathématiques*. (French) [*The universe of numbers: the discovery of mathematics*], volume 43 of *Science-poche*. Dunod, Paris, France, 1971. xii + 188 pp. LCCN ???? Translation of *Numbers without end* to French by René Marchand.

Lanczos:1972:EPS

- [Lan72a] C. Lanczos. Einstein's path from Special to General Relativity. In Synge and O'Raiheartaigh, ed [SO72], pages 5–19. ISBN 0-19-851126-4. LCCN QC6 .G358. URL <http://adsabs.harvard.edu/abs/1972grec.conf...5L>. Edited for the Royal Irish Academy by L. O'Raiheartaigh.

Lanczos:1972:VPQ

- [Lan72b] C. Lanczos. Vector potential and quadratic action. *Foundations of Physics*, 2(4):271–285, ???? 1972. CODEN FNDPA4. ISSN 0015-9018 (print), 1572-9516 (electronic).

Lanczos:1972:PB

- [Lan72c] Cornelius Lanczos. The Poisson bracket. In Salam and Wigner [SW72], pages 169–178. ISBN 0-521-08600-0. LCCN QC174.1

.A85 1972. URL http://hooke.lib.cam.ac.uk/cgi-bin/bib_seek.cgi?cat=ul&bib=1733506; <http://www.loc.gov/catdir/enhancements/fy1001/72075298-d.html>; <http://www.loc.gov/catdir/enhancements/fy1001/72075298-t.html>.

Lanczos:1972:SMH

[Lán72d] Lánzos Kornél. *Számok mindenütt. (Hungarian) [Numbers without end]*. Gondolat, Budapest, Hungary, 1972. 202 pp. LCCN ????

Lanczos:1973:CTA

[Lan73a] C. Lanczos. Computing through the ages. In Miller [Mil73], pages 1–12. ISBN 0-12-496950-X. LCCN QA297 .R691 1972.

Lanczos:1973:ENC

[Lan73b] C. Lanczos. Emmy Noether and the calculus of variations. *Bulletin of the Institute of Mathematics and its Applications*, 9(8): 253–258, 1973. CODEN IMTABW. ISSN 0950-5628.

Lanczos:1973:LVC

[Lan73c] C. Lanczos. Legendre versus Chebyshev polynomials. In Miller [Mil73], pages 191–201. ISBN 0-12-496950-X. LCCN QA297 .R691 1972.

Lanczos:1973:TMM

[Lán73d] Lánzos Kornél. A tudomány mint a művészet egyik formája. (Hungarian) [Science as a kind of art]. *Fizikai Szemle (Budapest)*, 23(8):225–231, August 1973. CODEN FISZA6. ISSN 0015-3257 (print), 1588-0540 (electronic).

Lanczos:1974:VPR

[Lan74a] C. Lanczos. Vector potential and Riemannian space. *Foundations of Physics*, 4(1):137–147, 1974. CODEN FNDPA4. ISSN 0015-9018 (print), 1572-9516 (electronic).

Lanczos:1974:EDa

[Lan74b] Cornelius Lanczos. *The Einstein decade (1905–1915)*. Histories of science series. Elek Science, London, UK, 1974. ISBN 0-236-17632-3. xiv + 230 pp. LCCN QC16.E5 L33 1974b. URL <http://catalog.hathitrust.org/api/volumes/oclc/1113008.html>; <http://catalog.hathitrust.org/Record/000033210>.

Lanczos:1974:EDb

- [Lan74c] Cornelius Lanczos. *The Einstein decade, 1905–1915*. Academic Press, New York, USA, 1974. ISBN 0-12-435840-3. xiv + 230 pp. LCCN QC16.E5 L33 1974. URL <http://catalog.hathitrust.org/api/volumes/oclc/1113008.html>; <http://catalog.hathitrust.org/Record/000033210>.

Lanczos:1974:SPG

- [Lan74d] Cornelius Lanczos. Symmetry and the principles of geometry. In Glockner and Singh [GS74], pages 3–21. LCCN QA805.C65x 1974.

Lanczos:1974:EJE

- [Lán74e] Lánzos Kornél. Einstein és a Jövő [Einstein and the future]. *Fizikai Szemle (Budapest)*, 24(6):161–167, 1974. CODEN FISZA6. ISSN 0015-3257 (print), 1588-0540 (electronic). Lecture was given by Lanczos in Hungarian on the occasion when he was elected as an honorary member of the Roland Eötvös Physical Society in Budapest, 1973.

Lanczos:1974:EJH

- [Lán74f] Lánzos Kornél. Einstein és a jövő. (Hungarian) [Einstein and the future]. *Fizikai Szemle (Budapest)*, 24(6):166–??, June 1974. CODEN FISZA6. ISSN 0015-3257 (print), 1588-0540 (electronic).

Lanczos:1975:GRS

- [Lan75] C. Lanczos. Gravitation and Riemannian space. *Foundations of Physics*, 5(1):9–18, 1975. CODEN FNDPA4. ISSN 0015-9018 (print), 1572-9516 (electronic).

Lanczos:1976:GTF

- [Lán76] Lánzos Kornél. *A Geometriai Tértfogalom Fejlődése: A geometriai fogalmak fejlődése Püthagoraszról Hilbertig és Einsteinig [The geometric concept of space development: The development of geometric concepts from Pythagoras to Hilbert and Einstein]*. Gondolat, Budapest, Hungary, 1976. ISBN 963-280-206-3. 323 pp. LCCN MC 71.363. Translation to Hungarian by József Merza of *Space Through the Ages*, Academic Press (1970).

Lanczos:1977:VPM

- [Lan77] Cornelius Lanczos. *The variational principles of mechanics*, volume 4 of *Mathematical expositions*. University of Toronto Press,

Toronto, ON, Canada, fourth edition, 1977. ISBN 0-8020-1743-6. xxix + 418 pp. LCCN QA805 .L278 1970.

Lanczos:1978:LSS

- [Lan78a] Cornelius Lanczos. Linear systems in self-adjoint form. In Abbott [Abb78], page ?? ISBN 0-88385-425-2 (vol. 1), 0-08-835427-9 (vol. 2). LCCN QA7 .C43 1978. Two volumes.

Lanczos:1978:EEH

- [Lán78b] Lánzos Kornél. *Einstein évtizede (1905–1915). (Hungarian) [The Einstein decade (1905–1915)]*. Magvető, Budapest, Hungary, 1978. ISBN 963-270-754-0. 233 pp. LCCN ????? Translated from English to Hungarian by Stephen Terts. Preface by Anthony Muller. Commentary by Imre Kondor.

Lanczos:1986:VPM

- [Lan86] Cornelius Lanczos. *The variational principles of mechanics*. Dover books on physics and chemistry. Dover Publications, Inc., New York, NY, USA, fourth edition, 1986. ISBN 0-486-65067-7 (paperback). xxix + 418 pp. LCCN QA805 .L278 1986. US\$10.00. URL <http://www.loc.gov/catdir/description/dover032/85029168.html>; <http://www.loc.gov/catdir/toc/dover031/85029168.html>.

Lanczos:1988:AA

- [Lan88] Cornelius Lanczos. *Applied analysis*. Dover Books on Advanced Mathematics. Dover Publications, Inc., New York, NY, USA, 1988. ISBN 0-486-65656-X. xx + 539 pp. URL <http://www.loc.gov/catdir/description/dover032/88003961.html>. Reprint of the 1956 original.

Lanczos:1996:LDO

- [Lan96] Cornelius Lanczos. *Linear differential operators*, volume 18 of *Classics in Applied Mathematics*. SIAM Press, Philadelphia, PA, USA, 1996. ISBN 0-89871-370-6 (paperback), 1-61197-118-7 (e-book). xviii + 564 pp. LCCN QA432 .L3 1996. Corrected reprint of the 1961 original.

Lanczos:1997:LDO

- [Lan97a] Cornelius Lanczos. *Linear differential operators*. Dover Publications, Inc., New York, NY, USA, 1997. ISBN 0-486-68035-5. xvi

+ 564 pp. LCCN QA432 .L3 1997. URL <http://www.loc.gov/catdir/description/dover031/97026069.html>. Reprint of the 1961 original.

Lanczos:1997:SCS

- [Lan97b] Cornelius Lanczos. On a stationary cosmology in the sense of Einstein's Theory of Gravitation. *General relativity and gravitation*, 29(3):363–399, 1997. CODEN GRGVA8. ISSN 0001-7701 (print), 1572-9532 (electronic). URL <http://adsabs.harvard.edu/abs/1997GRGr...29..361L>. Translation by C. Hoenselaers of original German version [Lan24b].

Lanczos:2004:RHM

- [Lan04] C. Lanczos. The relations of the homogeneous Maxwell's equations to the theory of functions. *ArXiv Physics e-prints*, August 2004. CODEN APRHCB. URL <http://adsabs.harvard.edu/abs/2004physics...8079L>.

Lanczos:2005:CLF

- [Lan05a] C. Lanczos. The conservation laws in the field theoretical representation of Dirac's theory. *ArXiv Physics e-prints*, August 2005. CODEN APRHCB. URL <http://adsabs.harvard.edu/abs/2005physics...8013L>.

Lanczos:2005:DWM

- [Lan05b] C. Lanczos. Dirac's wave mechanical theory of the electron and its field theoretical interpretation. *ArXiv Physics e-prints*, August 2005. CODEN APRHCB. URL <http://adsabs.harvard.edu/abs/2005physics...8009L>.

Lanczos:2005:CFD

- [Lan05c] C. Lanczos. On the covariant formulation of Dirac's equation. *ArXiv Physics e-prints*, August 2005. CODEN APRHCB. URL <http://adsabs.harvard.edu/abs/2005physics...8012L>.

Lanczos:2005:TAR

- [Lan05d] C. Lanczos. The tensor analytical relationships of Dirac's equation. *ArXiv Physics e-prints*, August 2005. CODEN APRHCB. URL <http://adsabs.harvard.edu/abs/2005physics...8002L>.

Li:1998:MOB

- [LAW98] Henian Li, Peter Aitchison, and Allan Woodbury. Methods for overcoming breakdown problems in the Unsymmetric Lanczos Reduction method. *International Journal for Numerical Methods in Engineering*, 42(3):389–408, June 15, 1998. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Lax:1994:CLH

- [Lax94] Peter D. Lax. Cornelius Lanczos (1893–1974), and the Hungarian phenomenon in science and mathematics. In Brown et al. [BCEP94], pages xlix–lii. ISBN 0-89871-339-0. LCCN QC19.2.C67 1993.

Lanczos:1939:ATI

- [LD39] C. Lanczos and G. C. Danielson. Application of trigonometric interpolation to X-ray analysis. *Physical Review*, 55(2):242, January 1939. CODEN PHRVAO. ISSN 0031-899X (print), 1536-6065 (electronic). Abstract of talk.

Lehoucq:1995:AIIB

- [Leh95a] R. B. Lehoucq. Analysis and implementation of an implicitly restarted Arnoldi iteration. Technical report, Defense Technical Information Center, Ft. Belvoir, VA, USA, October 1995. 145 pp. URL <http://handle.dtic.mil/100.2/ADA445625>.

Lehoucq:1995:AIIB

- [Leh95b] Richard Bruno Lehoucq. *Analysis and implementation of an implicitly restarted Arnoldi iteration*. PhD thesis, Rice University, Houston, TX, USA, 1995. 193 pp. URL <http://hdl.handle.net/1911/16844>; <http://scholarship.rice.edu/bitstream/handle/1911/16844/9610667.PDF>.

Lehoucq:1999:CIR

- [Leh99] Richard B. Lehoucq. On the convergence of an implicitly restarted Arnoldi method. Report SAND99-1756j, United States Department of Energy, Washington, DC, USA, 1999. 13 pp. URL <http://www.osti.gov/servlets/purl/9021-L2vVMI/webviewable/>.

Leung:1990:LSM

- [Leu90] A. Y. T. Leung. A Lanczos-subspace method for generalized eigenproblems. *Computer-Aided Civil and Infrastructure Engineering*, 5(2):129–138, June 1990. CODEN CCIEFR. ISSN 1093-9687 (print), 1467-8667 (electronic).

Lewis:1951:BRC

- [Lew51] D. C. Lewis. Book review: Cornelius Lanczos, *The variational principles of mechanics*, (Mathematical Expositions, no. 4.) Toronto, University of Toronto Press, 1949. xxv + 307 pp. *Bulletin of the American Mathematical Society*, 57(1 (part 1)):88–91, ??? 1951. CODEN BAMOAD. ISSN 0002-9904 (print), 1936-881X (electronic). URL <http://projecteuclid.org/euclid.bams/1183515808>.

Lewandowski:1994:DGT

- [Lew94] Jerzy Lewandowski. Differential geometry for the space of connections modulo gauge transformations. In Brown et al. [BCEP94], pages 573–575. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Lanczos:1975:FAR

- [LG75] Cornelius Lanczos and Barbara Gellai. Fourier analysis of random sequences. *Computers and Mathematics with Applications*, 1(3–4):269–276, ??? 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0898122175900255>.

Lawson:1990:LAP

- [LG90] Charles L. Lawson and Kajal K. Gupta. The Lanczos algorithm for a pure imaginary Hermitian matrix. In Cox and Hammarling [CH90], pages 25–34. ISBN 0-19-853564-3. LCCN QA297 .R435 1990. US\$75.00. Based on papers from a conference in honour of the late James Hardy Wilkinson (died Sunday 5th October 1986) held at National Physical Laboratory, Teddington, Middlesex, UK, 8th–10th July 1987.

Lewis:1994:PSO

- [LG94] John G. Lewis and Roger G. Grimes. Preserving semi-orthogonality in practice. In Brown et al. [BCEP94], pages 319–321. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Lin:1993:EDM

- [LGGT93] H. Q. Lin, J. E. Gubernatis, Harvey Gould, and Jan Tobochnik. Exact diagonalization methods for quantum systems. *Computers in Physics*, 7(4):400–??, July 1993. CODEN CPHYE2. ISSN 0894-1866 (print), 1558-4208 (electronic). URL <https://aip.scitation.org/doi/10.1063/1.4823192>. See [Dav93].

Li:2010:SRC

- [Li10] Ren-Cang Li. Sharpness in rates of convergence for the symmetric Lanczos method. *Mathematics of Computation*, 79(269): 419–435, January 2010. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic). URL <http://www.ams.org/journals/mcom/2010-79-269/S0025-5718-09-02258-3/home.html>; <http://www.ams.org/journals/mcom/2010-79-269/S0025-5718-09-02258-3/S0025-5718-09-02258-3.pdf>.

Lee:1994:HSM

- [LL94] L. C. Lee and Y. Lin. A hybrid simulation of magnetopause. In Brown et al. [BCEP94], pages 467–469. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Louko:1994:GSW

- [LM94] Jorma Louko and Donald Marolf. Global structure of Witten's 2+1 gravity on $\mathbf{R} \times T^2$. In Brown et al. [BCEP94], pages 579–581. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Leyk:1996:ILM

- [LO96] Z. Leyk and M. R. Osborne. Implementation of the Lanczos method for solving eigenproblems on the VPP500 supercomputer. In May and Easton [ME96], pages 487–494. ISBN 981-02-2820-1. LCCN QA299.6 .I56 1995.

Loh:1984:CFL

- [Loh84] Chee Hoong Loh. Chebyshev filtering Lanczos' process in the subspace iteration method. *International Journal for Numerical Methods in Engineering*, 20(1):182–186, January 1984. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Liu:1999:ASS

- [LP99] K. M. Liu and C. K. Pan. The automatic solution to systems of ordinary differential equations by the tau method. *Computers and Mathematics with Applications*, 38(9–10):197–210, November 1999. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0898122199002758>.

Liew:2010:MPL

- [LP10] Haw-Ling Liew and Peter M. Pinsky. Matrix-Padé via Lanczos solutions for vibrations of fluid-structure interaction. *International Journal for Numerical Methods in Engineering*, 84(10):

1183–1204, December 3, 2010. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Lehoucq:1997:IRA

- [LS97] R. B. Lehoucq and J. A. Scott. Implicitly restarted Arnoldi methods and eigenvalues of the discretized Navier–Stokes equations. Report RAL-TR-97-058, Council for the Central Laboratory of the Research Councils, Chilton, UK, 1997. 41 pp. URL <http://epubs.cclrc.ac.uk/bitstream/1345/RAL-TR-97-058.pdf>; <http://epubs.cclrc.ac.uk/work-details?w=26902>.

Leyk:1998:ELE

- [LW98] Zbigniew Leyk and Henryk Woźniakowski. Estimating a largest eigenvector by Lanczos and polynomial algorithms with a random start. *Numerical Linear Algebra with Applications*, 5(3):147–164, May/June 1998. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract?ID=61002412>; <http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=61002412&PLACEBO=IE.pdf>.

Li:1998:ETM

- [LWA98] Henian Li, Allan Woodbury, and Peter Aitchison. Eigenvalue translation method for stabilizing an unsymmetric Lanczos reduction process. *International Journal for Numerical Methods in Engineering*, 43(2):221–239, September 30, 1998. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Li:1999:AUL

- [LWA99] Henian Li, Allan Woodbury, and Peter Aitchison. Application of the unsymmetric Lanczos method to radionuclide decay-chain transport in porous media. *International Journal for Numerical Methods in Engineering*, 44(3):355–372, January 30, 1999. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Lancaster:1993:RRL

- [LY93] Peter Lancaster and Qiang Ye. Rayleigh–Ritz and Lanczos methods for symmetric matrix pencils. *Linear Algebra and its Applications*, 185:173–201, May 1993. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Lyness:1974:CTB

- [Lyn74] J. N. Lyness. Computational techniques based on the Lanczos representation. *Mathematics of Computation*, 28(125):81–123, January 1974. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Lehoucq:1998:AUG

- [LYS98] Richard B. Lehoucq, Chao-Chih Yang, and Danny C. Sorensen. *ARPACK users' guide: solution of large-scale eigenvalue problems with implicitly restarted Arnoldi methods*. SIAM Press, Philadelphia, PA, USA, 1998. ISBN 0-89871-407-9. xv + 142 pp. LCCN QA193.L44 1998.

Madore:1985:KKT

- [Mad85] J. Madore. Kaluza–Klein theory with the Lanczos Lagrangian. *Physics Letters A*, 110(6):289–292, August 5, 1985. CODEN PY-LAAG. ISSN 0375-9601 (print), 1873-2429 (electronic).

Mai:1993:MLM

- [Mai93] Tsun-Zee Mai. Modified Lanczos method for solving large sparse linear systems. *Communications in Numerical Methods in Engineering*, 9(1):67–79, January 1993. ISSN 1069-8299 (print), 1099-0887 (electronic).

Malamud:1965:BRA

- [Mal65] Herbert Malamud. Book review: *Albert Einstein and the cosmic world order*, by Cornelius Lanczos, Interscience Publishers, vi + 139 pp. *Physics Today*, 18(6):54, June 1965. CODEN PHTOAD. ISSN 0031-9228 (print), 1945-0699 (electronic).

Mann:1994:CQP

- [Man94] R. B. Mann. Classical and quantum properties of Liouville black holes. In Brown et al. [BCEP94], pages 545–547. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Marx:1993:LK

- [Mar93] Marx György. *Lánczos Kornél: 1893/1993*, volume 15 of *Fejér Megyei Levéltár közleményei*. Fejér Megyei Levéltár, Székesfehérvár, Hungary, 1993. ISBN 963-7233-17-2. 122 pp. LCCN QA29 .L36 1995.

Marx:1994:RCL

- [Mar94] George Marx. The roots of Cornelius Lanczos. In Brown et al. [BCEP94], pages liii–lvii. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Marx:1996:MMG

- [Mar96] George Marx. The myth of the Martians and the golden age of Hungarian science. *Science & Education (Springer)*, 5(3):225–234, July 1996. CODEN SCEDE9. ISSN 0926-7220 (print), 1573-1901 (electronic). URL <http://adsabs.harvard.edu/abs/1996Sc%26Ed...5..225M>.

Masson:1994:EST

- [Mas94] David R. Masson. Explicit spectral theory: From Chebyshev to Askey–Wilson. In Brown et al. [BCEP94], pages 359–364. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Meerbergen:2010:LMP

- [MB10] Karl Meerbergen and Zhaojun Bai. The Lanczos method for parameterized symmetric linear systems with multiple right-hand sides. *SIAM Journal on Matrix Analysis and Applications*, 31(4):1642–1662, 2010. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Medeiros:1992:NSA

- [MC92] Djalma Medeiros and G. G. Cabrera. Numerical study of antiferromagnetic Heisenberg chains for spin $S = 1/2$, using the Lanczos method. *Journal of Magnetism and Magnetic Materials*, 104–107 (part 2):799–800, February 2, 1992. CODEN JMMMDK. ISSN 0304-8853 (print), 1873-4766 (electronic). Proceedings of the International Conference on Magnetism, Part II.

McConnell:1975:CLD

- [McC75] J. R. McConnell. Cornelius Lanczos in Dublin (1953–1974). *Computers and Mathematics with Applications*, 1(??):263–264, 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic).

Murphy:1996:CPE

- [MCSW96] K. Murphy, M. Clint, M. Szularz, and J. Weston. The computation of partial eigensolutions on a distributed memory machine using a modified Lanczos method. *Lecture Notes in Computer*

Science, 1124:22–??, 1996. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Murphy:1997:PCP

- [MCSW97] K. Murphy, M. Clint, M. Szularz, and J. Weston. The parallel computation of partial eigensolutions using a modified Lanczos method. *Parallel Algorithms and Applications*, 11(3–4):299–323, 1997. CODEN PAAPEC. ISSN 1063-7192. URL <http://www.informaworld.com/smpp/content~content=a772742296>.

Moonen:1995:SSP

- [MdM95] Marc S. Moonen and Bart L. R. de Moor, editors. *SVD and signal processing III: algorithms, architectures, and applications*. Elsevier, Amsterdam, The Netherlands, 1995. ISBN 0-444-82107-4. LCCN TK5102.9 .S83 1995.

May:1996:CTA

- [ME96] R. L. May and A. K. Easton, editors. *Computational techniques and applications, CTAC 95: proceedings of the Seventh Biennial Conference, Swinburne University of Technology, Melbourne, Australia, 3-5 July, 1995*, COMPUTATIONAL TECHNIQUES AND APPLICATIONS 1995; 7th. World Scientific Publishing Co. Pte. Ltd., P. O. Box 128, Farrer Road, Singapore 9128, 1996. ISBN 981-02-2820-1. LCCN QA299.6 .I56 1995.

Meerbergen:1998:TCB

- [Mee98] Karl Meerbergen. A theoretical comparison between inner products in the shift-invert Arnoldi method and the spectral transformation Lanczos method. *Electronic Transactions on Numerical Analysis*, 7:90–103, 1998. CODEN 1998-0000 ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.7.1998/pp90-103.dir/pp90-103.pdf>. Large scale eigenvalue problems (Argonne, IL, 1997).

Meerbergen:2001:CPR

- [Mee01a] K. Meerbergen. Changing poles in the rational Lanczos method for the Hermitian eigenvalue problem. *Numerical Linear Algebra with Applications*, 8(1):33–52, January/February 2001. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract/76501452/START>; <http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=76501452&PLACEBO=IE.pdf>.

Meerbergen:2001:LMS

- [Mee01b] Karl Meerbergen. The Lanczos method with semi-definite inner product. *BIT Numerical Mathematics*, 41(5):1069–1078, December 2001. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&iissn=0006-3835&volume=41&issue=5&spage=1069>.

Meerbergen:2005:BRL

- [Mee05] Karl Meerbergen. Book review: *The Lanczos method: evolution and application*. *Mathematics of Computation*, 74(250):??, April 2005. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic). URL <http://www.ams.org/mcom/2005-74-250/S0025-5718-04-01757-0/home.html>; <http://www.ams.org/mcom/2005-74-250/S0025-5718-04-01757-0/S0025-5718-04-01757-0.dvi>; <http://www.ams.org/mcom/2005-74-250/S0025-5718-04-01757-0/S0025-5718-04-01757-0.pdf>; <http://www.ams.org/mcom/2005-74-250/S0025-5718-04-01757-0/S0025-5718-04-01757-0.ps>; <http://www.ams.org/mcom/2005-74-250/S0025-5718-04-01757-0/S0025-5718-04-01757-0.tex>.

Meurant:2006:LCGb

- [Meu06] Gérard A. Meurant. *The Lanczos and conjugate gradient algorithms: from theory to finite precision computations*. Software, environments, tools. SIAM Press, Philadelphia, PA, USA, 2006. ISBN 0-89871-616-0. xv + 365 pp. LCCN QA218 .M48 2006. URL <http://www.loc.gov/catdir/enhancements/fy0710/2006044391-d.html>; <http://www.loc.gov/catdir/enhancements/fy0733/2006044391-b.html>; <http://www.loc.gov/catdir/toc/fy0707/2006044391.html>.

Moro:1986:LAM

- [MF86] Giorgio Moro and Jack H. Freed. The Lanczos algorithm in molecular dynamics: Calculation of spectral densities. In Jane Cullum and Ralph A. Willoughby, editors, *Large scale eigenvalue problems: proceedings of the IBM Europe Institute Workshop on Large Scale Eigenvalue Problems held in Oberlech, Austria, July 8–12, 1985*, volume 127 of *North-Holland Mathematics Studies*, pages 143–161. North-Holland, Amsterdam, The Netherlands, 1986. ISBN 0-444-70074-9 (paperback), 0-08-087238-7 (e-book). ISSN 0304-0208. LCCN QA193 .I26 1985. Large Scale

Eigenvalue Problems, Proceedings of the IBM Europe Institute Workshop on Large Scale Eigenvalue Problems.

Baris:2011:TCS

- [MGRB11] Osman Barış and Malcıoğlu, Ralph Gebauer, Dario Rocca, and Stefano Baronia. turboTDDFT — A code for the simulation of molecular spectra using the Liouville–Lanczos approach to time-dependent density-functional perturbation theory. *Computer Physics Communications*, 182(8):1744–1754, August 2011. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic).

Miller:1973:TNA

- [Mil73] John J. H. Miller, editor. *Topics in numerical analysis: Proceedings of the Royal Irish Academy Conference on Numerical Analysis, Dublin, 14–18 August, 1972*. Academic Press, New York, USA, 1973. ISBN 0-12-496950-X. LCCN QA297 .R691 1972.

Minhinnick:1956:TDN

- [Min56] I. T. Minhinnick. The theoretical determination of normal modes and frequencies of vibration. A.R.C. Technical Reports and Memoranda 3039, Aeronautical Research Council, Ministry of Supply, Bedford, UK, 1956. i + 31 pp. URL <http://aerade.cranfield.ac.uk/ara/arc/rm/3039.pdf>.

Murga:2001:NAC

- [MO01] Leonel F. Murga and Mary Jo Ondrechen. Numerical aspects of the calculation of second hyperpolarizabilities using the finite field method coupled with a simple Lanczos algorithm. *Journal of Computational Chemistry*, 22(4):468–474, March 2001. CODEN JCCHDD. ISSN 0192-8651 (print), 1096-987X (electronic).

Montgomery:1995:BLA

- [Mon95] Peter L. Montgomery. A block Lanczos algorithm for finding dependencies over $GF(2)$. *Lecture Notes in Computer Science*, 921:106–??, 1995. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic). URL <http://link.springer-ny.com/link/service/series/0558/bibs/0921/09210106.htm>; <http://link.springer-ny.com/link/service/series/0558/papers/0921/09210106.pdf>.

Moon:1971:BRN

- [Moo71] Parry Moon. Book review: *Numbers without end*, by Cornelius Lanczos. 164 pages. Edinburgh, Oliver & Boyd, 1968. *Journal of The Franklin Institute*, 292(5):387–388, November 1971. CODEN JFINAB. ISSN 0016-0032 (print), 1879-2693 (electronic).

Maslen:2004:CIP

- [MOR04] David K. Maslen, Michael E. Orrison, and Daniel N. Rockmore. Computing isotypic projections with the Lanczos iteration. *SIAM Journal on Matrix Analysis and Applications*, 25(3):784–803, 2004. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/39977>.

Moret:2009:RLA

- [Mor09] Igor Moret. Rational Lanczos approximations to the matrix square root and related functions. *Numerical Linear Algebra with Applications*, 16(6):431–445, June 2009. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Morgan:1986:GDM

- [MS86] Ronald B. Morgan and David S. Scott. Generalizations of Davidson’s method for computing eigenvalues of sparse symmetric matrices. *SIAM Journal on Scientific and Statistical Computing*, 7(3):817–825, July 1986. CODEN SIJCD4. ISSN 0196-5204. See [Dav75].

Morgan:1993:PLA

- [MS93] Ronald B. Morgan and David S. Scott. Preconditioning the Lanczos algorithm for sparse symmetric eigenvalue problems. *SIAM Journal on Scientific Computing*, 14(3):585–593, May 1993. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic).

Morigi:2001:RCL

- [MS01] S. Morigi and F. Sgallari. A regularizing L -curve Lanczos method for underdetermined linear systems. *Applied Mathematics and Computation*, 121(1):55–73, May 25, 2001. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic). URL <http://www.elsevier.nl/gej-ng/10/9/12/105/21/25/abstract.html>; <http://www.elsevier.nl/gej-ng/10/9/12/105/21/25/article.pdf>.

Malyshev:2003:CNL

- [MS03] A. Malyshev and M. Sadkane. Condition numbers for Lanczos bidiagonalization with complete reorthogonalization. *Linear Algebra and its Applications*, 371(1):315–331, September 15, 2003. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Meurant:2006:LCGa

- [MS06] Gérard Meurant and Zdeněk Strakoš. The Lanczos and conjugate gradient algorithms in finite precision arithmetic. *Acta Numerica*, 15:471–542, 2006. CODEN ANUMFU. ISBN 0-521-86815-7. ISSN 0962-4929 (print), 1474-0508 (electronic).

Miller:1987:TSI

- [MSW87] H. G. Miller, M. C. Steenkamp, and C. J. Wright. A two-step iterative block Lanczos algorithm for a dominant eigenspan. *Journal of Computational Physics*, 72(2):383–392, October 1987. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0021999187900891>.

Matsumoto:1994:CMJ

- [MSY94] R. Matsumoto, K. Shibata, and T. Yokoyama. Computational magnetohydrodynamics of jets, loops, and flares in astrophysics. In Brown et al. [BCEP94], pages 443–445. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Marques:1994:SPC

- [MT94] Osni A. Marques and Vincent Toumazou. Spectral portrait computation by a Lanczos method (normal equation version). Technical Report TR/PA/95/02, CERFACS, Toulouse, France, December 1994. ???? pp.

Marques:1995:SPC

- [MT95] Osni A. Marques and Vincent Toumazou. Spectral portrait computation by a Lanczos method (augmented matrix version). Technical Report TR/PA/95/05, CERFACS, Toulouse, France, February 1995. ???? pp.

McCartney:2003:PIP

- [MW03] Mark McCartney and Andrew Whitaker, editors. *Physicists of Ireland: passion and precision*. Institute of Physics Publishers,

Bristol and Philadelphia, 2003. ISBN 0-7503-0866-4 (hardback). xiv + 298 pp. LCCN QC15 .P47 2003. URL <http://www.loc.gov/catdir/enhancements/fy0806/2007298520-d.html>; <http://www.loc.gov/catdir/toc/fy0802/2007298520.html>.

Nagy:1994:IIR

[Nag94] James G. Nagy. Iterative image restoration using FFT-based preconditioners. In Brown et al. [BCEP94], pages 401–403. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Nash:1984:NTM

[Nas84] Stephen G. Nash. Newton-type minimization via the Lanczos method. *SIAM Journal on Numerical Analysis*, 21(4):770–788, August 1984. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Nash:1990:HSC

[Nas90] Stephen G. Nash, editor. *A History of Scientific Computing*, ACM Press history series. Addison-Wesley and ACM Press, Addison-Wesley and New York, NY 10036, USA, 1990. ISBN 0-201-50814-1. LCCN QA76.17 .H59 1990.

Nesbet:1965:ADL

[Nes65] R. K. Nesbet. Algorithm for diagonalization of large matrices. *Journal of Chemical Physics*, 43(1):311–312, 1965. CODEN JCPA6. ISSN 0021-9606 (print), 1089-7690 (electronic). See modification [Sha70].

Nex:1989:BLA

[Nex89] C. M. M. Nex. The block Lanczos algorithm and the calculation of matrix resolvents. *Computer Physics Communications*, 53(1–3):141–146, May 1989. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic).

Neymeyr:2009:PEI

[Ney09] Klaus Neymeyr. On preconditioned eigensolvers and Invert–Lanczos processes. *Linear Algebra and its Applications*, 430(4):1039–1056, February 1, 2009. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Ng:1994:FFB

[Ng94] Michael Kwok-Po Ng. Fast FFT-based conjugate gradient algorithm for the applications in signal processing. In Brown et al.

[BCEP94], pages 404–406. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ng:2000:PLM

- [Ng00] Michael K. Ng. Preconditioned Lanczos methods for the minimum eigenvalue of a symmetric positive definite Toeplitz matrix. *SIAM Journal on Scientific Computing*, 21(6):1973–1986, November 2000. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/33016>.

Natori:1993:PPS

- [NN93] Makoto Natori and T. Nodera, editors. *Parallel processing for scientific computing (Yokohama, 1993)*, volume 9 of *Advances in numerical methods for large sparse sets of linear equations*. Keio University, Yokohama, Japan, 1993. LCCN ????

Nour-Omid:1987:LMH

- [NO87] Bahram Nour-Omid. Lanczos method for heat conduction analysis. *International Journal for Numerical Methods in Engineering*, 24(1):251–262, January 1987. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Nour-Omid:1989:ALM

- [NO89] B. Nour-Omid. Applications of the Lanczos method. *Computer Physics Communications*, 53(1–3):157–168, May 1989. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic).

Namasivayam:1993:EAT

- [NO93] S. Namasivayam and E. L. Ortiz. Error analysis of the Tau Method: dependence of the approximation error on the choice of perturbation term. *Computers and Mathematics with Applications*, 25(1):89–104, January 1993. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/089812219390215H>.

Nour-Omid:1984:DAS

- [NOC84] Bahram Nour-Omid and Ray W. Clough. Dynamic analysis of structures using Lanczos co-ordinates. *Earthquake engineering & structural dynamics*, 12(4):565–577, 1984. CODEN IJEEBG. ISSN 0098-8847 (print), 1096-9845 (electronic).

Nour-Omid:1985:SCB

- [NOC85] Bahram Nour-Omid and Ray W. Clough. Short communication: Block Lanczos method for dynamic analysis of structures. *Earthquake engineering & structural dynamics*, 13(2):271–275, March 1985. CODEN IJEEBG. ISSN 0098-8847 (print), 1096-9845 (electronic).

Nour-Omid:1988:CLC

- [NOPR88] B. Nour-Omid, B. Parlett, and A. Raefsky. Comparison of Lanczos with conjugate gradient using element preconditioning. In Glowinski et al. [GGMP88], pages 250–260. ISBN 0-89871-220-3. LCCN QA402.2 .I571 1987. URL <http://www.math.utah.edu/pub/tex/bib/ovr.bib>.

Nour-Omid:1983:LVS

- [NOPT83a] Bahram Nour-Omid, Beresford N. Parlett, and Robert L. Taylor. Lanczos versus subspace iteration for solution of eigenvalue problems. *International Journal for Numerical Methods in Engineering*, 19(6):859–871, June 1983. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Nour-Omid:1983:NLM

- [NOPT83b] Bahram Nour-Omid, Beresford N. Parlett, and Robert L. Taylor. A Newton–Lanczos method for solution of nonlinear finite element equations. *Computers and Structures*, 16(??):241–252, 1983. CODEN CMSTCJ. ISSN 0045-7949 (print), 1879-2243 (electronic).

Nour-Omid:1989:LMD

- [NOR89] B. Nour-Omid and M. E. Regelbrugge. Lanczos method for dynamic analysis of damped structural systems. *Earthquake engineering & structural dynamics*, 18(8):1091–1104, November 1989. CODEN IJEEBG. ISSN 0098-8847 (print), 1096-9845 (electronic).

Nowack:1994:DFA

- [Now94] Robert Nowack. Development of the FFT and applications in geophysics. In Brown et al. [BCEP94], pages 395–397. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. URL <http://web.ics.purdue.edu/~nowack/nowackpubs-dir/Lanczos-nowackfft1994.pdf>.

Najafi:2007:NRM

- [NR07] H. Saberi Najafi and A. Refahi. A new restarting method in the Lanczos algorithm for generalized eigenvalue problem. *Applied Mathematics and Computation*, 184(2):421–428, January 15, 2007. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Numrich:1985:SA

- [Num85] Robert W. Numrich, editor. *Supercomputer applications*. Plenum Press, New York, NY, USA; London, UK, 1985. ISBN 0-306-42013-9. LCCN QA76.5.S8944 1984a. Proceedings of the Supercomputer Applications Symposium cosponsored by the Purdue University Computing Center, the Purdue Center for Parallel and Vector Computing, and Control Data, held October 31–November 1, 1984, in West Lafayette, Indiana.

Odekunle:2002:SBV

- [Ode02] M. R. Odekunle. Solution of boundary value problems by Lanczos–Legendre reduction method. *Applied Mathematics and Computation*, 131(2–3):321–327, September 25, 2002. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Odekunle:2003:SLC

- [Ode03] M. R. Odekunle. Segmented Lanczos–Chebyshev reduction method for convection dominated flows. *Applied Mathematics Letters*, 16(5):777–784, 2003. CODEN AMLEEL. ISSN 0893-9659 (print), 1873-5452 (electronic).

Odekunle:2003:PEE

- [OIO03] M. R. Odekunle, M. A. Ibiejugba, and P. Onumanyi. A posteriori error estimator for Lanczos–Chebyshev reduction method. *Applied Mathematics and Computation*, 137(2–3):245–252, May 25, 2003. CODEN AMHCBQ. ISSN 0096-3003 (print), 1873-5649 (electronic).

Ojalvo:1985:PUL

- [Oja85] I. U. Ojalvo. Proper use of Lanczos vectors for large eigenvalue problems. *Computers and Structures*, 20(1–3):115–120, 1985. CODEN CMSTCJ. ISSN 0045-7949 (print), 1879-2243 (electronic).

Olver:2010:NHM

- [OLBC10] Frank W. J. Olver, Daniel W. Lozier, Ronald F. Boisvert, and Charles W. Clark, editors. *NIST Handbook of Mathematical Functions*. Cambridge University Press, Cambridge, UK, 2010. ISBN 0-521-19225-0. xv + 951 pp. LCCN QA331 .N57 2010. US\$99.00. URL <http://dlmf.nist.gov/>; <http://www.cambridge.org/catalogue/catalogue.asp?isbn=9780521192255>.

Opfer:1994:NID

- [Opf94] G. Opfer. On the number of integer dilation matrices used in wavelet theory. In Brown et al. [BCEP94], pages 426–428. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ortiz:1997:PCP

- [OR97a] E. L. Ortiz and T. J. Rivlin. Preface: a collection of papers to commemorate the Cornelius Lanczos centennial. *Computers and Mathematics with Applications*, 33(1–2):xiii–xiv, January 1997. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0898122196002143>.

Ortiz:1997:ATA

- [OR97b] Eduardo L. Ortiz and T. J. Rivlin. Approximation theory and applications. Preface: a collection of papers to commemorate the Cornelius Lanczos centennial. *Computers and Mathematics with Applications*, 33(1–2):xiii–xiv, January 1997. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). Dedicated to Cornelius Lanczos (1893–1974).

Ortiz:1969:TM

- [Ort69] Eduardo L. Ortiz. The tau method. *SIAM Journal on Numerical Analysis*, 6(3):480–492, September 1969. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Ortiz:1975:SST

- [Ort75a] E. L. Ortiz. Step by step Tau method. Part I. Piecewise polynomial approximations. *Computers and Mathematics with Applications*, 1(3–4):381–392, 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0898122175900401>.

Ortiz:1975:LIA

- [Ort75b] Eduardo L. Ortiz. Lanczos and the Institute for Advanced Studies in the early sixties. *Computers and Mathematics with Applications*, 1(??):266–??, ????. 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic).

Ortiz:1994:CP

- [Ort94a] Eduardo L. Ortiz. Chebyshev polynomials. In Brown et al. [BCEP94], pages 357–358. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ortiz:1994:TM

- [Ort94b] Eduardo L. Ortiz. Tau Method. In Brown et al. [BCEP94], pages 335–336. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ortiz:1994:TMN

- [Ort94c] Eduardo L. Ortiz. The Tau Method and the numerical solution of differential equations: Past and recent research. In Brown et al. [BCEP94], pages 77–81. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Paige:1970:PUS

- [Pai70] C. C. Paige. Practical use of the symmetric Lanczos process with re-orthogonalization. *BIT*, 10(2):183–195, June 1970. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=10&issue=2&spage=183>.

Paige:1972:CVL

- [Pai72] C. C. Paige. Computational variants of the Lanczos method for the eigenproblem. *Journal of the Institute of Mathematics and its Applications*, 10(??):373–381, 1972. CODEN JMATAA8. ISSN 0020-2932.

Paige:1976:EAL

- [Pai76] C. C. Paige. Error analysis of the Lanczos algorithm for tridiagonalizing a symmetric matrix. *Journal of the Institute of Mathematics and its Applications*, 18(??):341–349, ????. 1976. CODEN JMATAA8. ISSN 0020-2932.

Paige:1980:AEL

- [Pai80] C. C. Paige. Accuracy and effectiveness of the Lanczos algorithm for the symmetric eigenproblem. *Linear Algebra and its Appli-*

cations, 34:235–258, 1980. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Paige:1994:KSP

- [Pai94] C. C. Paige. Krylov subspace processes, Krylov subspace methods, and iteration polynomials. In Brown et al. [BCEP94], pages 83–92. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Paige:2010:ASR

- [Pai10] Christopher C. Paige. An augmented stability result for the Lanczos Hermitian matrix tridiagonalization process. *SIAM Journal on Matrix Analysis and Applications*, 31(5):2347–2359, 2010. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Paige:2019:ALP

- [Pai19] Christopher C. Paige. Accuracy of the Lanczos process for the eigenproblem and solution of equations. *SIAM Journal on Matrix Analysis and Applications*, 40(4):1371–1398, 2019. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Papadrakakis:1990:TNL

- [Pap90] M. Papadrakakis. A truncated Newton–Lanczos method for overcoming limit and bifurcation points. *International Journal for Numerical Methods in Engineering*, 29(5):1065–1077, April 1990. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Parlett:1980:NLL

- [Par80] B. N. Parlett. A new look at the Lanczos algorithm for solving symmetric systems of linear equations. *Linear Algebra and its Applications*, 29:323–346, 1980. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Parlett:1982:TMS

- [Par82] B. N. Parlett. Two monitoring schemes for the Lanczos algorithm. In Glowinski and Lions [GL82], pages x + 668. ISBN 0-444-86450-4. LCCN QA297 .E53 1981.

Parlett:1984:SSE

- [Par84] B. N. Parlett. The software scene in the extraction of eigenvalues from sparse matrices. *SIAM Journal on Scientific and Statisti-*

cal Computing, 5(3):590–604, September 1984. CODEN SIJCD4. ISSN 0196-5204.

Parlett:1987:MLA

- [Par87] Beresford N. Parlett. Misconvergence in the Lanczos algorithm. Technical Report PAM-404, Center for Pure and Applied Mathematics, University of California, Berkeley, Berkeley, CA, USA, December 1987.

Parlett:1990:MLA

- [Par90] Beresford N. Parlett. Misconvergence in the Lanczos algorithm. In Cox and Hammarling [CH90], pages 7–24. ISBN 0-19-853564-3. LCCN QA297 .R435 1990. US\$75.00. URL <http://www.math.utah.edu/pub/bibnet/subjects/acc-stab-num-alg.bib>; <http://www.math.utah.edu/pub/tex/bib/numana1990.bib>. Based on papers from a conference in honour of the late James Hardy Wilkinson (died Sunday 5th October 1986) held at National Physical Laboratory, Teddington, Middlesex, UK, 8th–10th July 1987.

Parlett:1992:RMS

- [Par92] Beresford N. Parlett. The rewards for maintaining semi-orthogonality among Lanczos vectors. *Journal of Numerical linear algebra with applications*, 1(2):243–267, 1992. CODEN NLAAEM. ISSN 0129-3281. URL <http://www.math.utah.edu/pub/tex/bib/numlinaa.bib>.

Parlett:1994:DWF

- [Par94] Beresford N. Parlett. Do we fully understand the symmetric Lanczos algorithm yet? In Brown et al. [BCEP94], pages 93–107. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993. URL <http://www.math.utah.edu/pub/bibnet/subjects/acc-stab-num-alg.bib>.

Payne:1987:LAS

- [Pay87] G. L. Payne. The Lanczos algorithm and spline expansions. *Nuclear Physics A*, 463(1–2):139–144, February 16, 1987. CODEN NUPABL. ISSN 0375-9474 (print), 1873-1554 (electronic).

Parlett:1990:LAI

- [PC90] B. N. Parlett and H. C. Chen. The Lanczos algorithm with indefinite inner product. In Kaashoek et al. [KvSR90], pages 393–400. ISBN 0-8176-3469-X (vol 1), 0-8176-3470-3 (vol. 2), 0-8176-3471-1 (vol. 3), 0-8176-3468-1 (set). LCCN QA402 .P766 1989.

Phatak:2002:ECB

- [PdH02] Alope Phatak and Frank de Hoog. Exploiting the connection between PLS, Lanczos methods and conjugate gradients: alternative proofs of some properties of PLS. *Journal of Chemometrics*, 16(7):361–367, July 2002. CODEN JOCHEU. ISSN 0886-9383 (print), 1099-128x (electronic).

Pearle:1994:PWC

- [Pea94] Philip Pearle. Putting wavefunction collapse “in the equations and not just the talk”. In Brown et al. [BCEP94], pages 594–596. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Perjes:2006:WKL

- [Per06] Zoltán Perjés. The works of Kornél Lanczos on the theory of relativity. *Bolyai Society mathematical studies*, ??(??):415–425, ????? 2006. ISBN 963-9453-04-8, 3-540-28945-3. ISSN 1217-4696.

Pini:1994:TFL

- [Pin94] G. Pini. Transpose-free Lanczos-type schemes on transputer network. *Parallel Algorithms and Applications*, 3(3–4):249–260, ??? 1994. CODEN PAAPEC. ISSN 1063-7192. URL <http://www.informaworld.com/smpp/content~content=a779167060>.

Piran:1994:RBN

- [Pir94] Tsvi Piran. γ -ray bursts and neutron star mergers. In Brown et al. [BCEP94], pages 187–199. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Plemmons:1994:FSP

- [Ple94] Robert J. Plemmons. The FFT in signal processing. In Brown et al. [BCEP94], pages 399–400. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Peterson:2008:LR

- [PM08] Michael Peterson and Chris Monico. \mathbf{F}_2 Lanczos revisited. *Linear Algebra and its Applications*, 428(4):1135–1150, February 1, 2008. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Parlett:1989:TBB

- [PNO89] Beresford N. Parlett and Bahram Nour-Omid. Towards a black box Lanczos program. *Computer Physics Communications*, 53

(1–3):169–179, May 1989. CODEN CPHCBZ. ISSN 0010-4655 (print), 1879-2944 (electronic). URL <http://www.math.utah.edu/pub/bibnet/subjects/acc-stab-num-alg.bib>.

Parlett:1985:ILA

- [PNOJ85] B. Parlett, B. Nour-Omid, and J. Jatvig. Implementation of Lanczos algorithms on vector computers. In Numrich [Num85], pages 1–18. ISBN 0-306-42013-9. LCCN QA76.5.S8944 1984a. URL <http://www.math.utah.edu/pub/tex/bib/ovr.bib>. Proceedings of the Supercomputer Applications Symposium cosponsored by the Purdue University Computing Center, the Purdue Center for Parallel and Vector Computing, and Control Data, held October 31–November 1, 1984, in West Lafayette, Indiana.

Parlett:1988:HMS

- [PNOL88] Beresford N. Parlett, B. Nour-Omid, and Zhishun A. Liu. How to maintain semi-orthogonality among Lanczos vectors. Technical Report PAM-420, Center for Pure and Applied Mathematics, University of California, Berkeley, Berkeley, CA, USA, July 1988.

Parlett:1987:CLC

- [PNOR87] Beresford N. Parlett, B. Nour-Omid, and A. Raefsky. Comparison of Lanczos with conjugate gradient using element preconditioning. Technical Report PAM-363, Center for Pure and Applied Mathematics, University of California, Berkeley, Berkeley, CA, USA, February 1987.

Pozza:2018:LAC

- [PPS18] Stefano Pozza, Miroslav S. Pranić, and Zdeněk Strakoš. The Lanczos algorithm and complex Gauss quadrature. *Electronic Transactions on Numerical Analysis*, 50:1–19, 2018. CODEN ????. ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.50.2018/pp1-19.dir/pp1-19.pdf>; <http://etna.mcs.kent.edu/volumes/2011-2020/vol50/abstract.php?vol=50&pages=1-19>.

Prestin:1994:DPT

- [PQ94] Jürgen Prestin and Ewald Quak. Decay properties of trigonometric wavelets. In Brown et al. [BCEP94], pages 413–415. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Parlett:1981:TPL

- [PR81] B. N. Parlett and J. K. Reid. Tracking the progress of the Lanczos algorithm for large symmetric eigenproblems. *IMA Journal of Numerical Analysis*, 1(2):135–155, 1981. CODEN IJNADH. ISSN 0272-4979 (print), 1464-3642 (electronic). URL <http://www.math.utah.edu/pub/bibnet/subjects/accstab-num-alg.bib>; <http://www.math.utah.edu/pub/tex/bib/gvl.bib>; <http://www.math.utah.edu/pub/tex/bib/imajnumeranal.bib>.

Parlett:1979:LAS

- [PS79] Beresford N. Parlett and David S. Scott. The Lanczos algorithm with selective orthogonalization. *Mathematics of Computation*, 33(145):217–238, January 1979. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Papadrakakis:1990:NIL

- [PS90] M. Papadrakakis and S. Smerou. A new implementation of the Lanczos method in linear problems. *International Journal for Numerical Methods in Engineering*, 29(1):141–159, January 1990. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Pang:2011:SIL

- [PS11] Hong-Kui Pang and Hai-Wei Sun. Shift-invert Lanczos method for the symmetric positive semidefinite Toeplitz matrix exponential. *Numerical Linear Algebra with Applications*, 18(3):603–614, May 2011. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Parlett:1982:ELE

- [PSS82] B. N. Parlett, H. Simon, and L. M. Stringer. On estimating the largest eigenvalue with the Lanczos algorithm. *Mathematics of Computation*, 38(157):153–165, January 1982. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic). URL <http://www.math.utah.edu/pub/bibnet/subjects/accstab-num-alg.bib>; <http://www.math.utah.edu/pub/tex/bib/gvl.bib>; <http://www.math.utah.edu/pub/tex/bib/mathcomp1980.bib>.

Parlett:1981:LAL

- [PT81] Beresford N. Parlett and D. Taylor. A look-ahead Lanczos algorithm for unsymmetric matrices. Technical Report PAM-43,

Center for Pure and Applied Mathematics, University of California, Berkeley, Berkeley, CA, USA, June 1981.

Petiot:1994:GIE

- [PT94] D. Petiot and Y. (Yasushi) Takahashi. Gauge invariant energy-momentum tensor in spinor electrodynamics. In Brown et al. [BCEP94], pages 173–186. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Parlett:1984:LAL

- [PTL84] B. N. Parlett, D. R. Taylor, and Z. S. Liu. The look ahead Lanczos algorithm for large unsymmetric eigenproblems. In Glowinski and Lions [GL84], pages 87–96. ISBN 0-444-87597-2. LCCN QA297 .I57 1983.

Parlett:1985:LAL

- [PTL85] Beresford N. Parlett, Derek R. Taylor, and Zhishun A. Liu. A look-ahead Lanczos algorithm for unsymmetric matrices. *Mathematics of Computation*, 44(169):105–124, January 1985. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic). URL <http://www.math.utah.edu/pub/tex/bib/mathcomp1980.bib>.

Pugh:2004:ALG

- [Pug04] Glendon Ralpa Pugh. *An Analysis of the Lanczos Gamma Approximation*. Ph.D. thesis, Department of Mathematics, University of British Columbia, Vancouver, BC, Canada, 2004. viii + 154 pp.

Paige:1999:SAL

- [PV99] Christopher C. Paige and Paul Van Dooren. Sensitivity analysis of the Lanczos reduction. *Numerical Linear Algebra with Applications*, 6(1):29–50, January/February 1999. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic). URL <http://www3.interscience.wiley.com/cgi-bin/abstract?ID=62002985>; <http://www3.interscience.wiley.com/cgi-bin/fulltext?ID=62002985&PLACEBO=IE.pdf>. Czech-US Workshop in Iterative Methods and Parallel Computing, Part I (Milovy, 1997).

Rajakumar:1993:ABE

- [RA93] C. Rajakumar and Ashraf Ali. Acoustic boundary element eigenproblem with sound absorption and its solution using Lanczos

algorithm. *International Journal for Numerical Methods in Engineering*, 36(23):3957–3972, December 15, 1993. CODEN IJN-MBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Radke:1996:MII

- [Rad96] Richard Joseph Radke. A Matlab implementation of the Implicitly Restarted Arnoldi Method for solving large-scale eigenvalue problems. Master’s thesis, Rice University, Houston, TX, USA, 1996. 94 pp. URL <http://hdl.handle.net/1911/14054>; <http://scholarship.rice.edu/bitstream/handle/1911/14054/1379511.PDF>.

Rappoport:1994:TMC

- [Rap94] Juri M. Rappoport. The Tau-Method and the computation of the Bessel functions of the complex order. In Brown et al. [BCEP94], pages 353–355. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ray:1978:VDB

- [Ray78] John R. Ray. A variational derivation of the Bach–Lanczos identity. *Journal of Mathematical Physics*, 19(1):100–102, January 1978. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Rodin:1975:MCL

- [RBE⁺75] Ervin Y. Rodin, R. Butler, A. Erdélyi, B. Gellai, J. R. McConnell, Eduardo L. Ortiz, and I. Rhodes. In memory of Cornelius Lánzos. *Computers and Mathematics with Applications*, 1(3–4):257–268, 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0898122175900243>.

Reichenbacher:1923:BAK

- [Rei23] Ernst Reichenbächer. Bemerkung zu der Arbeit von Kornel Lanczos: Zum Rotationsproblem der allgemeinen Relativitätstheorie. (German) [Remark on the work of Kornel Lanczos: *On the Rotation Problem in the Theory of General Relativity*]. *Zeitschrift für Physik*, 15(1):273–275, 1923. CODEN ZEPYAA. ISSN 0044-3328.

Rettrup:1982:IMC

- [Ret82] Sten Rettrup. An iterative method for calculating several of the extreme eigensolutions of large real non-symmetric matrices. *Journal of Computational Physics*, 45(1):100–107, January

1982. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0021999182901048>. See [Dav75].

Ressel:1998:QSL

- [RG98] Klaus J. Ressel and Martin H. Gutknecht. QMR smoothing for Lanczos-type product methods based on three-term recurrences. *SIAM Journal on Scientific Computing*, 19(1):55–73, January 1998. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/30481>.

Rollin:2002:VZL

- [RG02] Stefan Röllin and Martin H. Gutknecht. Variations of Zhang's Lanczos-type product method. *Applied Numerical Mathematics*, 41(1):119–133, April 2002. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic). URL <http://www.elsevier.com/gej-ng/10/10/28/86/27/35/abstract.html>.

Rezghi:2010:LBP

- [RH10] Mansoor Rezghi and S. M. Hosseini. Lanczos based preconditioner for discrete ill-posed problems. *Computing*, 88(1–2):79–96, June 2010. CODEN CMPTA2. ISSN 0010-485X (print), 1436-5057 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&iissn=0010-485X&volume=88&issue=1&spage=79>.

Rice:1977:MSI

- [Ric77] John R. Rice, editor. *Mathematical software III: Proceedings of a symposium conducted by the Mathematics Research Center, the University of Wisconsin–Madison, March 28–30, 1977*, number 39 in Publication of the Mathematics Research Center, the University of Wisconsin, Madison. Academic Press, New York, USA, 1977. ISBN 0-12-587260-7. LCCN QA3 .U45 no. 39; QA297 .M36 1977.

Rimini:1994:SLA

- [Rim94] Alberto Rimini. The spontaneous localization approach to quantum measurement. In Brown et al. [BCEP94], pages 591–593. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Rindler:2009:GEMa

- [Rin09] Wolfgang Rindler. Gödel, Einstein, Mach, Gamow, and Lanczos: Gödel's remarkable excursion into cosmology. *American*

Journal of Physics, 77(6):498–510, June 2009. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic). URL <http://adsabs.harvard.edu/abs/2009AmJPh..77..498R>; http://ajp.aapt.org/resource/1/ajpias/v77/i6/p498_s1. Reprinted in [BPP⁺11, Chapter 9].

Rindler:2011:GEMb

- [Rin11] Wolfgang Rindler. Gödel, Einstein, Mach, Gamow, and Lanczos: Gödel’s remarkable excursion into cosmology. In Baaz et al. [BPP⁺11], pages 185–212. ISBN 0-521-76144-1 (print), 0-511-97423-X (e-book). LCCN QA9.65 .K87 2011.

Rivlin:1974:CPC

- [Riv74] Theodore J. Rivlin. *The Chebyshev Polynomials*. Pure and applied mathematics. Wiley, New York, NY, USA, 1974. ISBN 0-471-72470-X. vi + 186 pp. LCCN QA404.5 .R58 1974.

Rivlin:1990:CPA

- [Riv90] Theodore J. Rivlin. *Chebyshev Polynomials: From Approximation Theory to Algebra and Number Theory*. Pure and applied mathematics. Wiley, New York, NY, USA, second edition, 1990. ISBN 0-471-62896-4. xiii + 249 pp. LCCN QA404.5 .R58 1990.

Rottner:1997:NSF

- [RLAS97] Th. Rottner, I. Lenhardt, G. Alefeld, and K. Schweizerhof. Non-linear structural finite element analysis using the preconditioned Lanczos method on serial and parallel computers. *BIT Numerical Mathematics*, 37(3):759–769, September 1997. CODEN BIT-TEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.mai.liu.se/BIT/contents/bit37.html>. Direct methods, linear algebra in optimization, iterative methods (Toulouse, 1995/1996).

Rosser:1951:SCE

- [RLHK51] J. B. Rosser, C. Lanczos, M. R. Hestenes, and W. Karush. Separation of close eigenvalues of a real symmetric matrix. *Journal of Research of the National Bureau of Standards (1934)*, 47:291–297, 1951. ISSN 0091-0635.

Radhakrishnan:1982:CBL

- [RN82] C. Radhakrishnan and S. C. K. Nair. A comparison between Lanczos and moment methods. *Physics Letters A*, 91(2):64–66,

August 1982. CODEN PYLAAG. ISSN 0375-9601 (print), 1873-2429 (electronic).

Rodin:1976:CMA

- [Rod76] Ervin Y. Rodin, editor. *Computers and mathematics with applications: in memory of Cornelius Lanczos*. Pergamon, New York, NY, USA, 1976. ISBN 0-08-020521-6. ix + 257–428 pp. LCCN QA76 .C576.

Rajakumar:1991:LAA

- [RR91] C. Rajakumar and C. R. Rogers. The Lanczos algorithm applied to unsymmetric generalized eigenvalue problem. *International Journal for Numerical Methods in Engineering*, 32(5):1009–1026, October 5, 1991. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Rao:1999:DSS

- [RR99] R. Venugopala Rao and N. S. V. Kameswara Rao. Dynamic soil–structure interaction analysis using Lanczos vectors with adaptive time integration technique. *International Journal for Numerical and Analytical Methods in Geomechanics*, 23(11):1141–1158, September 1999. CODEN IJNGDZ. ISSN 0363-9061 (print), 1096-9853 (electronic).

Rozsa:1994:GBM

- [RRB94] Pál Rózsa, Francesco Romani, and Roberto Bevilacqua. On generalized band matrices and their inverses. In Brown et al. [BCEP94], pages 109–121. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Ron:1994:FSB

- [RS94] Amos Ron and Zuowei Shen. Frames and stable bases for subspaces of $L_2(\mathbf{R}^d)$ the duality principle of Weyl–Heisenberg sets. In Brown et al. [BCEP94], pages 422–425. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Rudnicki:1994:GST

- [Rud94] Wiesław Rudnicki. Generic space-times, strong curvature singularities and cosmic censorship. In Brown et al. [BCEP94], pages 521–523. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Rutishauser:1953:BKB

- [Rut53] H. Rutishauser. Beitrage zur Kentniss des Biorthogonalisierungs-Algorithmus von Lanczos. (German) [Contributions to the understanding of the Lanczos biorthogonalization algorithm]. *Zeitschrift für Angewandte Mathematik und Physik = Journal of Applied Mathematics and Physics*, 4(??):35–56, ??? 1953. CODEN ZAMPDB. ISSN 0044-2275 (print), 1420-9039 (electronic).

Szego:1962:SMA

- [S⁺62] Gábor Szegő et al., editors. *Studies in mathematical analysis and related topics; essays in honor of George Pólya*, volume 4 of *Stanford studies in mathematics and statistics*. Stanford University Press, Stanford, CA, USA, 1962. xxi + 447 pp. LCCN QA3 .S8525.

Saad:1980:LBA

- [Saa80a] Y. Saad. The Lanczos biorthogonalization algorithm and other oblique projection methods for solving large unsymmetric systems. Report 1036, Department of Computer Science, University of Illinois at Urbana-Champaign, Urbana, IL, USA, 1980. 44 pp.

Saad:1980:RCL

- [Saa80b] Y. Saad. On the rates of convergence of the Lanczos and the block Lanczos methods. *SIAM Journal on Numerical Analysis*, 17(5):687–706, October 1980. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Saad:1982:LBA

- [Saa82] Y. Saad. The Lanczos biorthogonalization algorithm and other oblique projection methods for solving large unsymmetric systems. *SIAM Journal on Numerical Analysis*, 19(3):485–506, June 1982. CODEN SJNAAM. ISSN 0036-1429 (print), 1095-7170 (electronic).

Saad:1987:LMS

- [Saa87] Youcef Saad. On the Lanczos method for solving symmetric systems with several right-hand sides. *Mathematics of Computation*, 48(178):651–662, April 1987. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Saad:1992:NML

- [Saa92] Youcef Saad. *Numerical methods for large eigenvalue problems*. Algorithms and Architectures for Advanced Scientific Computing.

Halsted Press, New York, USA, 1992. ISBN 0-7190-3386-1 (UK), 0-470-21820-7 (US). xii + 346 pp. LCCN QA188 .S18 1992.

Saad:1994:TEBa

- [Saa94a] Y. Saad. Theoretical error bounds and general analysis of a few Lanczos-type algorithms. Technical Report UMSI 94-90, University of Minnesota Supercomputer Institute, Minneapolis, MN 55415, USA, 1994.

Saad:1994:TEBb

- [Saa94b] Yousef Saad. Theoretical error bounds and general analysis of a few Lanczos-type algorithms. In Brown et al. [BCEP94], pages 123–134. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Saad:2011:KSM

- [Saa11a] Youcef Saad. *Krylov Subspace Methods*, chapter 6, pages 125–162. Volume 66 of *Classics in applied mathematics* [Saa11b], second edition, 2011. ISBN 1-61197-072-5. LCCN QA188 .S18 2011. URL http://www.cs.umn.edu/~saad/eig_book_2ndEd.pdf.

Saad:2011:NML

- [Saa11b] Youcef Saad. *Numerical Methods for Large Eigenvalue Problems*, volume 66 of *Classics in applied mathematics*. SIAM Press, Philadelphia, PA, USA, second edition, 2011. ISBN 1-61197-072-5. xv + 276 pp. LCCN QA188 .S18 2011. URL http://www.cs.umn.edu/~saad/eig_book_2ndEd.pdf.

Sadkane:1989:ANM

- [Sad89] M. Sadkane. *Analyse numérique de la méthode de Davidson*. Ph.D. thesis, UER mathématiques et Informatique, l’université de Rennes, Rennes, France, 1989. See [Dav75].

Shavitt:1973:ICS

- [SBPH73] I. Shavitt, C. F. Bender, A. Pipano, and R. P. Hosteny. The iterative calculation of several of the lowest or highest eigenvalues and corresponding eigenvectors of very large symmetric matrices. *Journal of Computational Physics*, 11(1):90–108, January 1973. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0021999173901496>.

Springer:1994:BDC

- [SBS94] R. P. Springer, M. N. Butler, and M. J. Savage. The baryon decuplet in chiral perturbation theory. In Brown et al. [BCEP94], pages 611–614. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Scaife:1974:SNA

- [Sca74] B. K. P. (Brendan Kevin Patrick) Scaife, editor. *Studies in numerical analysis: papers in honour of Cornelius Lanczos*. Academic Press, New York, USA, 1974. ISBN 0-12-621150-7. xxii + 333 pp. LCCN QA297 .S86. URL <http://catalog.hathitrust.org/Record/000575557>. Published for the Royal Irish Academy.

Schwerdtfeger:1960:DPL

- [Sch60] H. Schwerdtfeger. Direct proof of Lanczos' decomposition theorem. *American Mathematical Monthly*, 67(9):855–860, November 1960. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic).

Schwarz:1981:SIG

- [Sch81] H. R. Schwarz. Simultane Iterationsverfahren für große allgemeine Eigenwertprobleme. (German) [Simultaneous iteration methods for large ordinary eigenvalue problems]. *Archive of Applied Mechanics = Ingenieur-Archiv*, 50(5):329–338, 1981. CODEN AAMEEA. ISSN 0939-1533 (print), 1432-0681 (electronic).

Schwarz:1982:SRQ

- [Sch82] H. R. Schwarz. Simultaneous Rayleigh-quotient iteration methods for large sparse generalized eigenvalue problems. In *Numerical Integration of Differential Equations and Large Linear Systems*, volume 968 of *Lecture Notes in Mathematics*, pages 384–398. Springer-Verlag, Berlin, Germany / Heidelberg, Germany / London, UK / etc., 1982.

Schuele:1996:PLA

- [Sch96a] J. Schuele. Parallel Lanczos algorithm on a CRAY-T3D combining PVM and SHMEM routines. *Lecture Notes in Computer Science*, 1156:158–??, 1996. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Schule:1996:PLA

- [Sch96b] J. Schule. Parallel Lanczos algorithm on a CRAY-T3D combining PVM and SHMEM routines. In Bode et al. [BDLS96], pages 158–

165. ISBN 3-540-61779-5. ISSN 0302-9743 (print), 1611-3349 (electronic). LCCN QA76.58 .E975 1996 Bar.

Scott:1979:HML

[Sco79] D. S. Scott. How to make the Lanczos algorithm converge slowly. *Mathematics of Computation*, 33(145):239–247, January 1979. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Seeger:1965:BRA

[See65] Raymond J. Seeger. Book review: *Albert Einstein and the cosmic world order*, by Cornelius Lanczos, Interscience Publishers, vi + 139 pp. *American Journal of Physics*, 33(11):972, November 1965. CODEN AJPIAS. ISSN 0002-9505 (print), 1943-2909 (electronic).

Sehmi:1986:LAA

[Seh86] N. S. Sehmi. The Lanczos algorithm applied to Kron's method. *International Journal for Numerical Methods in Engineering*, 23(10):1857–1872, October 1986. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Seidel:1994:SEE

[Sei94] Edward Seidel. Solving Einstein's equations on supercomputers. In Brown et al. [BCEP94], pages 529–531. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Sleijpen:1994:BES

[SFvdV94] G. L. G. Sleijpen, D. R. Fokkema, and H. A. van der Vorst. BiCGstab(ℓ): An efficient and surprisingly stable solver of non-symmetric linear equations. In Brown et al. [BCEP94], pages 291–293. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Stein:1994:MSP

[SGN94] R. F. Stein, Klaus Galsgaard, and Åke Nordlund. MHD simulations on parallel computers. In Brown et al. [BCEP94], pages 440–442. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Smith:1983:ULA

[SH83] I. M. Smith and E. E. Heshmati. Use of a Lanczos algorithm in dynamic analysis of structures. *Earthquake engineering & structural dynamics*, 11(4):585–588, July 1983. CODEN IJEEBG. ISSN 0098-8847 (print), 1096-9845 (electronic).

Shavitt:1970:MNA

- [Sha70] Isaiah Shavitt. Modification of Nesbet's algorithm for the iterative evaluation of eigenvalues and eigenvectors of large matrices. *Journal of Computational Physics*, 6(1):124–130, August 1970. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999170900100>. See [Nes65].

Sher:1994:SS

- [She94] Mark Sher. Supersymmetry at supercolliders. In Brown et al. [BCEP94], pages 629–631. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Shen:1999:NGL

- [She99] Jianhong Shen. Notes: On the generalized “Lanczos' generalized derivative”. *American Mathematical Monthly*, 106(8):766–767, October 1999. CODEN AMMYAE. ISSN 0002-9890 (print), 1930-0972 (electronic).

Schnack:2008:EIL

- [SHS08] Jürgen Schnack, Peter Hage, and Heinz-Jürgen Schmidt. Efficient implementation of the Lanczos method for magnetic systems. *Journal of Computational Physics*, 227(9):4512–4517, April 20, 2008. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999108000338>.

Sidi:1994:AVV

- [Sid94] Avram Sidi. Application of vector-valued rational approximations to the matrix eigenvalue problem and connections with Krylov subspace methods. In Brown et al. [BCEP94], pages 246–248. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Simon:1984:ASL

- [Sim84a] Horst D. Simon. Analysis of the symmetric Lanczos algorithm with reorthogonalization methods. *Linear Algebra and its Applications*, 61:101–131, 1984. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Simon:1984:LAP

- [Sim84b] Horst D. Simon. The Lanczos algorithm with partial reorthogonalization. *Mathematics of Computation*, 42(165):115–142, Jan-

uary 1984. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Simoncini:1998:MAA

- [Sim98] V. Simoncini. A matrix analysis of Arnoldi and Lanczos methods. *Numerische Mathematik*, 81(1):125–141, November 1998. CODEN NUMMA7. ISSN 0029-599X (print), 0945-3245 (electronic). URL <http://link.springer.de/link/service/journals/00211/bibs/8081001/80810125.htm>; <http://link.springer.de/link/service/journals/00211/papers/8081001/80810125.pdf>.

Simoncini:2003:AFS

- [Sim03] V. Simoncini. Algebraic formulations for the solution of the nullspace-free eigenvalue problem using the inexact Shift-and-Invert Lanczos method. *Numerical Linear Algebra with Applications*, 10(4):357–375, June 2003. CODEN NLAAEM. ISSN 1070-5325 (print), 1099-1506 (electronic).

Simos:2007:CMS

- [SM07] Theodore E. Simos and George Maroulis, editors. *Computation in Modern Science and Engineering: Proceedings of the [Fifth] International Conference on Computational Methods in Science and Engineering 2007 (ICCMSE 2007), Corfu, Greece, 25–30 September 2007*, volume 2A, 2B of *AIP Conference Proceedings (#963)*. American Institute of Physics, Woodbury, NY, USA, 2007. ISBN 0-7354-0476-3 (set), 0-7354-0477-1 (vol. 1), 0-7354-0478-X (vol. 2). ISSN 0094-243X (print), 1551-7616 (electronic), 1935-0465. LCCN Q183.9 .I524 2007. URL <http://www.springer.com/physics/atoms/book/978-0-7354-0478-6>.

Smithies:1963:BRL

- [Smi63] F. Smithies. Book review: *Linear Differential Operators*, by C. Lanczos. 580 pp. 1961 (Van Nostrand, London). *Mathematical Gazette*, 47(361):265–266, October 1963. CODEN MAGAAS. ISSN 0025-5572 (print), 2056-6328 (electronic). URL <http://www.jstor.org/stable/3613434>.

Smolin:1994:NVL

- [Smo94] L. Smolin. New variables and loop quantization. In Brown et al. [BCEP94], pages 571–572. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Synge:1972:GRP

- [SO72] J. L. (John Lighton) Synge and L. (Lochlainn) O’Raifeartaigh, ed, editors. *General relativity; papers in honour of J. L. Synge*. Clarendon Press, New York, NY, USA, 1972. ISBN 0-19-851126-4. ix + 277 pp. LCCN QC6 .G358. Edited for the Royal Irish Academy by L. O’Raifeartaigh.

Sonneveld:1989:CFL

- [Son89] Peter Sonneveld. CGS, a fast Lanczos-type solver for nonsymmetric linear systems. *SIAM Journal on Scientific and Statistical Computing*, 10(1):36–52, January 1989. CODEN SIJCD4. ISSN 0196-5204.

Sorensen:1995:IRAb

- [Sor95a] D. C. Sorensen. Implicitly restarted Arnoldi/Lanczos methods and large scale SVD applications. In Moonen and de Moor [MdM95], pages 21–31. ISBN 0-444-82107-4. LCCN TK5102.9 .S83 1995.

Sorensen:1995:IRAA

- [Sor95b] Danny C. Sorensen. Implicitly restarted Arnoldi/Lanczos methods for large scale eigenvalue calculation. Report ??, Department of Computational and Applied Mathematics, Rice University, Houston, TX 77251-1829, October 25, 1995. URL http://people.sc.fsu.edu/~jburkardt/pdf/arpack_ref.pdf.

Sorensen:1996:IRAA

- [Sor96a] D. C. (Danny C.) Sorensen. Implicitly restarted Arnoldi/Lanczos methods for large scale eigenvalue calculations. Technical Report 198342 (NASA), 96-40 (ICASE), National Aeronautics and Space Administration, Langley Research Center, Hampton, VA, USA, 1996. ???? pp.

Sorensen:1996:IRAb

- [Sor96b] Danny C. Sorensen. Implicitly restarted Arnoldi. Technical report, Defense Technical Information Center, Ft. Belvoir, VA, USA, May 1996. 37 pp. URL <http://handle.dtic.mil/100.2/ADA313185>.

Santoro:1999:LCN

- [SP99] Fabrizio Santoro and Carlo Petrongolo. Lanczos calculation of the $\tilde{X}^2A_1/\tilde{A}^2B_2$ nonadiabatic Franck-Condon absorption spectrum of

NO₂. *Advances in quantum chemistry*, 36:323–340, 1999. CODEN AQCHA9. ISSN 0065-3276.

Sidi:1994:UBC

- [SS94] Avram Sidi and Yair Shapira. Upper bounds for convergence rates of vector extrapolation methods on linear systems with initial iterations. In Brown et al. [BCEP94], pages 285–287. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Smith:1993:LBT

- [SSS93] H. A. Smith, D. C. Sorensen, and R. K. Singh. A Lanczos-based technique for exact vibration analysis of skeletal structures. *International Journal for Numerical Methods in Engineering*, 36(12):1987–2000, June 30, 1993. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Smith:1994:DDK

- [SSS94] H. A. Smith, D. C. Sorensen, and R. K. Singh. To discussion by D. Kennedy and F. W. Williams on *A Lanczos-based technique for exact vibration analysis of skeletal structures*. *International Journal for Numerical Methods in Engineering*, 37(18):3199–3201, September 30, 1994. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Singh:1996:ASL

- [SSS96] R. K. Singh, H. A. Smith, and D. C. Sorensen. Application of k -step Lanczos method to extract the interior eigenvalues of skeletal systems. *International Journal for Numerical Methods in Engineering*, 39(4):705–716, February 28, 1996. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Stachel:1994:LEC

- [Sta94] John Stachel. Lanczos’s early contributions to Relativity and his relationship with Einstein. In Brown et al. [BCEP94], pages 201–221. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Stewart:1991:LLS

- [Ste91] G. W. Stewart. Lanczos and linear systems. Technical Report CS-TR 2641, Department of Computer Science, University of Maryland, College Park, MD, USA, 1991. ???? pp.

Stewart:1993:EHS

- [Ste93] G. W. Stewart. On the early history of the singular value decomposition. *SIAM Review*, 35(4):551–566, December 1993. CODEN SIREAD. ISSN 0036-1445 (print), 1095-7200 (electronic).

Stewart:1994:LLS

- [Ste94] G. W. Stewart. Lanczos and linear systems. In Brown et al. [BCEP94], pages 135–139. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Stewart:2002:ARQ

- [Ste02] G. W. Stewart. Adjusting the Rayleigh quotient in semiorthogonal Lanczos methods. *SIAM Journal on Scientific Computing*, 24(1):201–207, January 2002. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/38898>.

Stone:1994:CCM

- [Sto94] James M. Stone. The challenge of computational MHD in astrophysics. In Brown et al. [BCEP94], pages 433–435. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Sun:1999:AAL

- [Sun99] Din-Kow Sun. ALPS: An adaptive Lanczos–Padé spectral solution of mixed-potential integral equation. *Computer Methods in Applied Mechanics and Engineering*, 169(3–4):425–432, February 12, 1999. CODEN CMMECC. ISSN 0045-7825 (print), 1879-2138 (electronic).

Salam:1972:AQT

- [SW72] Abdus Salam and Eugene Paul Wigner, editors. *Aspects of quantum theory*. Cambridge University Press, Cambridge, UK, 1972. ISBN 0-521-08600-0. xvi + 268 pp. LCCN QC174.1 .A85 1972. URL http://hooke.lib.cam.ac.uk/cgi-bin/bib_seek.cgi?cat=ul&bib=1733506; <http://www.loc.gov/catdir/enhancements/fy1001/72075298-d.html>; <http://www.loc.gov/catdir/enhancements/fy1001/72075298-t.html>.

Scholer:1994:NSC

- [SW94] Manfred Scholer and Dan Winske. Numerical simulations of collisionless space plasmas. In Brown et al. [BCEP94], pages 453–454. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Szularz:1997:RPL

- [SWC97] M. Szularz, J. Weston, and M. Clint. Robust parallel Lanczos methods for clustered eigenvalues. *Lecture Notes in Computer Science*, 1300:710–??, 1997. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Szularz:1999:ERL

- [SWC99a] M. Szularz, J. Weston, and M. Clint. Explicitly restarted Lanczos algorithms in an MPP environment. *Parallel Computing*, 25(5):613–631, May 1, 1999. CODEN PACOEJ. ISSN 0167-8191 (print), 1872-7336 (electronic). URL <http://www.elsevier.com/cas/tree/store/parco/sub/1999/25/5/1397.pdf>.

Szularz:1999:RTL

- [SWC99b] M. Szularz, J. Weston, and M. Clint. Restarting techniques for the Lanczos algorithm and their implementation in parallel computing environments: Architectural influences. *Parallel Algorithms and Applications*, 14(1):57–77, 1999. CODEN PAAPEC. ISSN 1063-7192. URL <http://www.informaworld.com/smpp/content~content=a777980765>.

Szularz:1996:HPE

- [SWCM96] M. Szularz, J. Weston, M. Clint, and K. Murphy. A highly parallel explicitly restarted Lanczos algorithm. *Lecture Notes in Computer Science*, 1184:651–??, 1996. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Szularz:1995:MCL

- [SWMC95] M. Szularz, J. Weston, K. Murphy, and M. Clint. Monitoring the convergence of the Lanczos algorithm in parallel computing environments. *Parallel Algorithms and Applications*, 6(4):287–302, September 1995. CODEN PAAPEC. ISSN 1063-7192. URL <http://www.informaworld.com/smpp/content~content=a772403915>.

Simon:2000:LRM

- [SZ00] Horst D. Simon and Hongyuan Zha. Low-rank matrix approximation using the Lanczos bidiagonalization process with applications. *SIAM Journal on Scientific Computing*, 21(6):2257–2274, November 2000. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/32730>.

Szczepaniak:1994:HMF

- [Szc94] Adam Szczepaniak. Heavy meson form factor and constituent quark structure. In Brown et al. [BCEP94], pages 608–610. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Taub:1975:LSR

- [Tau75] A. H. Taub. Lanczos' splitting of the Riemann tensor. *Computers and Mathematics with Applications*, 1(3–4):377–380, 1975. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/0898122175900395>.

Taub:1994:LTG

- [Tau94] A. H. Taub. The Lanczos tensor in gauge theoretic form. In Brown et al. [BCEP94], pages 491–493. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Taasan:1994:MTL

- [TC94] Shlomo Ta'asan and Sorin Costiner. Multilevel techniques for large sparse eigenvalue problems. In Brown et al. [BCEP94], pages 261–263. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Tremblay:2007:RUL

- [TC08] Jean Christophe Tremblay and Tucker Carrington Jr. A refined unsymmetric Lanczos eigensolver for computing accurate eigentriples of a real unsymmetric matrix. *Electronic Transactions on Numerical Analysis*, 28:95–113, 2007/2008. CODEN ????? ISSN 1068-9613 (print), 1097-4067 (electronic). URL <http://etna.mcs.kent.edu/vol.28.2007-2008/pp95-113.dir/pp95-113.pdf>. Special volume for Gene Golub.

UC:2000:NSL

- [TCI⁺00] The UKQCD Collaboration, Eamonn Cahill, Alan Irving, Christopher Johnston, and James Sexton. Numerical stability of Lanczos methods. *Nuclear Physics B, Proceedings Supplements*, 83–84(??):825–827, April 2000. CODEN NPBSE7. ISSN 0920-5632 (print), 1873-3832 (electronic). Proceedings of the XVIIth International Symposium on Lattice Field Theory.

Teichmann:1957:BRA

- [Tei57] T. Teichmann. Book review: *Applied Analysis* by Cornelius Lanczos, 539 pp. Prentice-Hall, Inc., Englewood Cliffs, NJ, 1956.

Physics Today, 10(6):44, June 1957. CODEN PHTOAD. ISSN 0031-9228 (print), 1945-0699 (electronic).

Teitelboim:1994:TRB

- [Tei94] Claudio Teitelboim. Topological roots of black hole entropy. In Brown et al. [BCEP94], pages 223–230. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Teitelbaum:1998:EAL

- [Tei98] Jeremy Teitelbaum. Euclid’s algorithm and the Lanczos method over finite fields. *Mathematics of Computation*, 67(224):1665–1678, October 1998. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic). URL <http://www.ams.org/jourcgi/jour-pbprocess?fn=110&arg1=S0025-5718-98-00973-9&u=/mcom/1998-67-224/>.

Temme:2010:LTS

- [Tem10] N. M. Temme. Lanczos tridiagonalization of a symmetric matrix. In Olver et al. [OLBC10], page 75. ISBN 0-521-19225-0. LCCN QA331 .N57 2010. US\$99.00. URL <http://dlmf.nist.gov/>; <http://www.cambridge.org/catalogue/catalogue.asp?isbn=9780521192255>.

Thiemann:1994:CQM

- [Thi94] T. Thiemann. Canonical quantization of a minisuperspace model for gravity using self-dual variables. In Brown et al. [BCEP94], pages 585–587. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Tuck-Lee:2008:AFW

- [TLP08] James P. Tuck-Lee and Peter M. Pinsky. Adaptive frequency windowing for multifrequency solutions in structural acoustics based on the matrix Padé-via-Lanczos algorithm. *International Journal for Numerical Methods in Engineering*, 73(5):728–746, January 29, 2008. CODEN IJNMBH. ISSN 0029-5981 (print), 1097-0207 (electronic).

Tassone:1994:ASI

- [TMC94] F. Tassone, F. Mauri, and R. Car. Acceleration schemes for ab initio molecular-dynamics simulations and electronic-structure calculations. *Physical Review B: Condensed Matter and Materials Physics*, 50(15):10561–10573, ??? 1994. CODEN PRB-MDO. ISSN 1098-0121. URL <http://link.aps.org/doi/10.1103/PhysRevB.50.10561>.

Todd:1958:BRC

- [Tod58] John Todd. Book review: Cornelius Lanczos, *Applied analysis. Bulletin of the American Mathematical Society*, 64(4):210–211, 1958. CODEN BAMOAD. ISSN 0002-9904 (print), 1936-881X (electronic). URL <http://projecteuclid.org/euclid.bams/1183522571>.

Todd:1994:RCL

- [Tod94] John Todd. Reminiscences of Cornelius Lanczos. In Brown et al. [BCEP94], pages lviii–lix. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Tong:1992:CSP

- [Ton92] Charles H. Tong. A comparative study of preconditioned Lanczos methods for nonsymmetric linear systems. Report SAND91-8240, Sandia National Laboratories, Albuquerque, NM, USA, January 1992. ???? pp.

Torkoly:1974:LK

- [Tör74] Anna Törköly. Lánzos kornél. MTV Televideo Publishers, Budapest, Hungary, 1974. Video film about Cornelius Lanczos. Possibly reissued in 1993.

Torre:1994:PTO

- [Tor94] C. G. Torre. The problems of time and observables: Some recent mathematical results. In Brown et al. [BCEP94], pages 557–559. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

TorresdelCastillo:1995:LPS

- [Tor95] G. F. Torres del Castillo. Lanczos potential for some type D space-times. *Journal of Mathematical Physics*, 36(1):195–200, January 1995. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Treder:1966:ESE

- [Tre66] Hans-Jürgen Treder, editor. *Einstein-Symposium “Entstehung, Entwicklung und Perspektiven der Einsteinschen Gravitationstheorie”: vom 2.–5. November 1965 in Berlin aus Anlaß des 50. Jahrestages der Entdeckung der allgemeinen relativistischen Gravitationsgleichungen und ihrer Vorlage in der Gesamtsitzung der Berliner Akademie am 4. November 1915 durch Albert Einstein: Vorträge und Diskussionen*. Akademie-Verlag, Berlin, Germany, 1966. LCCN ????

Treumann:1994:WCW

- [Tre94] Rudolf Treumann. What can we learn from numerical simulations? In Brown et al. [BCEP94], pages 455–457. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Vaccaro:1991:SSP

- [Vac91] Richard J. Vaccaro, editor. *SVD and Signal Processing, II. Algorithms, Analysis and Applications*. Elsevier, Amsterdam, The Netherlands, 1991. ISBN 0-444-88896-9. LCCN TK5102.5.S93 1991.

VanIseghem:2002:VOL

- [Van02] Jeannette Van Iseghem. Vector-orthogonality and Lanczos-type methods. *Numerical Algorithms*, 29(1–3):267–279, March 2002. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp008.lwwonline.com/content/getfile/5058/38/15/abstract.htm>; <http://ipsapp008.lwwonline.com/content/getfile/5058/38/15/fulltext.pdf>.

vandenEshof:2005:PLA

- [vdEH05] Jasper van den Eshof and Marlis Hochbruck. Preconditioning Lanczos approximations to the matrix exponential. *SIAM Journal on Scientific Computing*, 27(4):1438–1457, July 2005. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL http://epubs.siam.org/volume-27/art_60546.html.

vanDorsselaer:2000:CPB

- [vDHvdV00] Jos L. M. van Dorsselaer, Michiel E. Hochstenbach, and Henk A. van der Vorst. Computing probabilistic bounds for extreme eigenvalues of symmetric matrices with the Lanczos method. *SIAM Journal on Matrix Analysis and Applications*, 22(3):837–852, 2000. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/36685>.

vanDorsselaer:2001:CPB

- [vDHvdV01] Jos L. M. van Dorsselaer, Michiel E. Hochstenbach, and Henk A. van der Vorst. Computing probabilistic bounds for extreme eigenvalues of symmetric matrices with the Lanczos method. *SIAM Journal on Matrix Analysis and Applications*, 22(3):837–852, July 2001. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/36685>.

vanderVorst:1982:GLS

- [vdV82] H. A. van der Vorst. A generalized Lanczos scheme. *Mathematics of Computation*, 39(160):559–561, October 1982. CODEN MCM-PAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

vanderVorst:1994:CBA

- [vdV94a] Henk A. van der Vorst. A comparison between ART, CG and SIRT. In Brown et al. [BCEP94], pages 302–304. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

vanderVorst:1994:IML

- [vdV94b] Henk A. van der Vorst. Iterative methods for linear systems. In Brown et al. [BCEP94], page 277. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

vanderVeen:1995:BLP

- [vdVV95] H. I. van der Veen and K. Vuik. Bi-Lanczos with partial orthogonalization. *Computers and Structures*, 56(4):605–613, August 17, 1995. CODEN CMSTCJ. ISSN 0045-7949 (print), 1879-2243 (electronic).

Voss:2000:SEL

- [Vos00] Heinrich Voss. A symmetry exploiting Lanczos method for symmetric Toeplitz matrices. *Numerical Algorithms*, 25(1–4):377–385, September 2000. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic). URL <http://ipsapp007.kluweronline.com/content/getfile/5058/3/10/abstract.htm>; <http://ipsapp007.kluweronline.com/content/getfile/5058/3/10/fulltext.pdf>. *Mathematical journey through analysis, matrix theory and scientific computation* (Kent, OH, 1999).

Voss:2001:VIL

- [Vos01] Heinrich Voss. A variant of the inverted Lanczos method. *BIT Numerical Mathematics*, 41(5):1111–1120, 2001. CODEN BIT-TEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic).

vanPutten:1994:FMC

- [vP94] Maurice H. P. M. van Putten. On the formation of magnetically collimated relativistic jets. In Brown et al. [BCEP94], pages 449–452. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Vuik:1994:GLM

- [Vui94] C. Vuik. GMRES-like methods with variable preconditioners. In Brown et al. [BCEP94], pages 282–284. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Vandebril:2006:NSC

- [VV06] Raf Vandebril and Marc Van Barel. Necessary and sufficient conditions for orthogonal similarity transformations to obtain the Arnoldi(Lanczos)–Ritz values. *Linear Algebra and its Applications*, 414(2–3):435–444, April 15, 2006. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Vidal:2007:PCA

- [VVBG07] A. M. Vidal, A. Vidal, V. E. Boria, and V. M. García. Parallel computation of arbitrarily shaped waveguide modes using BI-RME and Lanczos methods. *Communications in Numerical Methods in Engineering*, 23(4):273–284, April 2007. ISSN 1069-8299 (print), 1099-0887 (electronic).

Wald:1994:VPL

- [Wal94] Robert M. Wald. Variational principles, local symmetries, and black hole entropy. In Brown et al. [BCEP94], pages 231–237. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Wang:2001:IRA

- [Wan01] Xianyao Wang. The Implicitly Restarted Arnoldi (IRA) method for eigenanalysis of large power systems. Thesis (M.S.), University of Missouri–Rolla, Rolla, MO, USA, 2001. x + 91 pp.

Watkins:2004:HSL

- [Wat04] David S. Watkins. On Hamiltonian and symplectic Lanczos processes. *Linear Algebra and its Applications*, 385(1):23–45, July 1, 2004. CODEN LAAPAW. ISSN 0024-3795 (print), 1873-1856 (electronic).

Witte:1999:LAE

- [WB99] N. S. Witte and D. Bessis. The Lanczos algorithm for extensive many-body systems in the thermodynamic limit. *Journal of Mathematical Physics*, 40(10):4975–4994, October 1999. CODEN JMAPAQ. ISSN 0022-2488 (print), 1089-7658 (electronic), 1527-2427.

Wang:2004:USC

- [WC04] Xiao-Gang Wang and Tucker Carrington, Jr. Using simply contracted basis functions with the Lanczos algorithm to calculate vibrational spectra. *International Journal of Quantum Chemistry*, 99(4):556–566, September 15, 2004. CODEN IJQCB2. ISSN 0020-7608 (print), 1097-461X (electronic).

Weedon:1993:SHW

- [WCL⁺93] William H. Weedon, Weng Cho Chew, Jiun-Hwa Lin, Apo Sezginer, and Vladimir L. Druskin. A 2.5D scalar Helmholtz wave solution employing the Spectral Lanczos Decomposition Method (SLDM). *Microwave and Optical Technology Letters*, 6(10):587–592, August 1993. CODEN MOTLEO. ISSN 0895-2477 (print), 1098-2760 (electronic).

Wu:1998:NLM

- [WCS98] Kesheng Wu, A. Canning, and H. D. Simon. A new Lanczos method for electronic structure simulation. In ACM [ACM98], pages 35–40. ISBN ???? LCCN ???? URL http://www.supercomp.org/sc98/TechPapers/sc98_FullAbstracts/Wu1023/index.htm.

Wu:1999:TRL

- [WCSW99] K. Wu, A. Canning, H. D. Simon, and L.-W Wang. Thick-restart Lanczos method for electronic structure calculations. *Journal of Computational Physics*, 154(1):156–173, September 1, 1999. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999199963064>.

Weaire:2001:BRL

- [Wea01] Denis Weaire. Book review: *A life's work in exile Cornelius Lanczos: collected published papers with commentaries*. North Carolina State University, 1999 ISBN 0-929493-01-X. *Europhysics News*, 32(1):27, January/February 2001. CODEN EUPNAS. ISSN 0531-7479 (print), 1432-1092 (electronic). URL <https://www.europhysicsnews.org/articles/e pn/pdf/2001/01/e pn2001-32-1.pdf>.

Wells:1994:MAW

- [Wel94] R. O. Wells, Jr. Multiscale applications of wavelets to solutions of partial differential equations. In Brown et al. [BCEP94], pages 416–417. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Wickerhauser:1994:AWF

- [Wic94] Mladen Victor Wickerhauser. An adapted waveform functional calculus. In Brown et al. [BCEP94], pages 418–421. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Wilkinson:1957:CEC

- [Wil57] J. H. Wilkinson. The calculation of the eigenvectors of codiagonal matrices produced by the Givens and Lanczos processes. In *Conference Proceedings*, pages 112:1–112:15. Weapons Research Establishment, Salisbury, Australia, 1957.

Wilkinson:1958:CEM

- [Wil58] J. H. Wilkinson. The calculation of eigenvectors by the method of Lanczos. *The Computer Journal*, 1(3):148–152, October 1958. CODEN CMPJA6. ISSN 0010-4620 (print), 1460-2067 (electronic). URL http://www3.oup.co.uk/computer_journal/hdb/Volume_01/Issue_03/010148.sgm.abs.html; http://www3.oup.co.uk/computer_journal/hdb/Volume_01/Issue_03/tiff/148.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_01/Issue_03/tiff/149.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_01/Issue_03/tiff/150.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_01/Issue_03/tiff/151.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_01/Issue_03/tiff/152.tif.

Wilkinson:1965:AEP

- [Wil65] J. H. Wilkinson. *The Algebraic Eigenvalue Problem*. Oxford University Press, Walton Street, Oxford OX2 6DP, UK, 1965. ISBN 0-19-853403-5. xviii + 662 pp. LCCN QA218 .W686 1965.

Will:1994:DGR

- [Wil94] Clifford M. Will. Detection of gravitational radiation from astrophysical sources. In Brown et al. [BCEP94], pages 477–478. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Webster:1996:PBL

- [WL96] Frank Webster and Gen-Ching Lo. Projective block Lanczos algorithm for dense, Hermitian eigensystems. *Journal of Computational Physics*, 124(1):146–161, March 1, 1996. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0021999196900509>.

Wragg:1966:ULM

- [Wra66] A. Wragg. The use of Lanczos τ -methods in the numerical solution of a Stefan problem. *The Computer Journal*, 9(1):106–109, May 1966. CODEN CMPJA6. ISSN 0010-4620 (print), 1460-2067 (electronic). URL http://www3.oup.co.uk/computer_journal/hdb/Volume_09/Issue_01/090106.sgm.abs.html; http://www3.oup.co.uk/computer_journal/hdb/Volume_09/Issue_01/tiff/106.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_09/Issue_01/tiff/107.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_09/Issue_01/tiff/108.tif; http://www3.oup.co.uk/computer_journal/hdb/Volume_09/Issue_01/tiff/109.tif.

Wrede:1966:BRA

- [Wre66] R. C. Wrede. Book review: *Albert Einstein and the Cosmic World Order*, by Cornelius Lanczos. vi + 139 pp. 1956 (Wiley). *Mathematics Magazine*, 39(1):65, January 1966. CODEN MAMGA8. ISSN 0025-570X. URL <http://www.jstor.org/stable/2688999>.

Wright:1966:CEC

- [Wri66] K. Wright. Correspondence: On “Error curves for Lanczos ‘selected points’ method”. *The Computer Journal*, 9(1):115, May 1966. CODEN CMPJA6. ISSN 0010-4620 (print), 1460-2067 (electronic). URL http://www3.oup.co.uk/computer_journal/hdb/Volume_09/Issue_01/tiff/115.tif. See [Kiz66].

Wright:1970:SRB

- [Wri70] K. Wright. Some relationships between implicit Runge–Kutta, collocation and Lanczos τ methods, and their stability properties. *BIT*, 10(2):217–227, June 1970. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&issn=0006-3835&volume=10&issue=2&spage=217>.

Wu:1998:TRL

- [WS98] K. Wu and H. D. Simon. Thick-restart Lanczos method for symmetric eigenvalue problems. *Lecture Notes in Computer Science*, 1457:43–??, 1998. CODEN LNCS9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Wu:2000:TRL

- [WS00] Kesheng Wu and Horst Simon. Thick-restart Lanczos method for large symmetric eigenvalue problems. *SIAM Journal on Matrix Analysis and Applications*, 22(2):602–616, 2000. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/33460>.

Wassam:1987:DLTb

- [WTV87] W. A. Wassam, Jr. and Go. Torres-Vega. Dual Lanczos transformation theory: Closed set of algebraic equations connecting Lanczos parameters with moments in moment expansions of time-dependent quantities. *Chemical Physics Letters*, 134(4):355–360, 1987. CODEN CHPLBC. ISSN 0009-2614 (print), 1873-4448 (electronic).

Wassam:1987:DLTa

- [WTVNF87] W. A. Wassam, Jr., Go. Torres-Vega, and J. Neito-Frausto. Dual Lanczos transformation theory: Exact continued fraction expression for resonant γ -ray absorption spectrum of a harmonically bound atom executing classical motion described by Smoluchowski dynamics. *Chemical Physics Letters*, 136(1):26–30, 1987. CODEN CHPLBC. ISSN 0009-2614 (print), 1873-4448 (electronic).

Wulling:2005:SCC

- [Wül05a] Wolfgang Wüiling. On stabilization and convergence of clustered Ritz values in the Lanczos method. *SIAM Journal on Matrix Analysis and Applications*, 27(3):891–908, January 2005. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Wulling:2005:SWL

- [Wül05b] Wolfgang Wüiling. The stabilization of weights in the Lanczos and conjugate gradient method. *BIT Numerical Mathematics*, 45(2):395–414, June 2005. CODEN BITTEL, NBITAB. ISSN 0006-3835 (print), 1572-9125 (electronic). URL <http://www.springerlink.com/openurl.asp?genre=article&iissn=0006-3835&volume=45&issue=2&spage=395>.

Wang:1994:LSE

- [WZ94] Lin-Wang Wang and Alex Zunger. Large scale electronic structure calculations using the Lanczos method. *Computational Materials*

Science, 2(2):326–340, March 1994. CODEN CMMSEM. ISSN 0927-0256 (print), 1879-0801 (electronic).

Xu:1994:ALA

- [XCK94] Guanghan Xu, Young Man Cho, and Thomas Kailath. An application of the Lanczos algorithm in signal processing and system identification. In Brown et al. [BCEP94], pages 390–392. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Xu:1994:FEP

- [XK94] Guanghan Xu and Thomas Kailath. Fast estimation of principal eigenspace using Lanczos algorithm. *SIAM Journal on Matrix Analysis and Applications*, 15(3):974–994, July 1994. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/18384>.

Yamamoto:1968:LAT

- [Yam68] Tetsuro Yamamoto. On Lanczos' algorithm for tri-diagonalization. *J. Sci. Hiroshima Univ. Ser. A-I Math.*, 32(2):259–284, 1968. URL <http://projecteuclid.org/euclid.hmj/1206138652>.

Yang:1997:EI Ib

- [Yan97] T. Yang. Efficient implementation of the improved unsymmetric Lanczos process on massively distributed memory computers. *Lecture Notes in Computer Science*, 1277:145–??, 1997. CODEN LNCSD9. ISSN 0302-9743 (print), 1611-3349 (electronic).

Yamazaki:2010:APS

- [YBS⁺10] Ichitaro Yamazaki, Zhaojun Bai, Horst Simon, Lin-Wang Wang, and Kesheng Wu. Adaptive projection subspace dimension for the thick-restart Lanczos method. *ACM Transactions on Mathematical Software*, 37(3):27:1–27:18, 2010. CODEN ACMSCU. ISSN 0098-3500 (print), 1557-7295 (electronic).

Young:1994:LAB

- [YC94] David M. Young and Jen-Yuan Chen. LANGMRES: An alternative to the biconjugate gradient method for solving large sparse nonsymmetric linear systems. In Brown et al. [BCEP94], pages 279–281. ISBN 0-89871-339-0. LCCN QC19.2 .C67 1993.

Yeung:1999:MBV

- [YC99] Man-Chung Yeung and Tony F. Chan. $ML(k)$ BiCGSTAB: A BiCGSTAB variant based on multiple Lanczos starting vectors.

SIAM Journal on Scientific Computing, 21(4):1263–1290, July 1999. CODEN SJOCE3. ISSN 1064-8275 (print), 1095-7197 (electronic). URL <http://epubs.siam.org/sam-bin/dbq/article/32158>.

Ye:1991:CAN

- [Ye91] Qiang Ye. A convergence analysis for nonsymmetric Lanczos algorithms. *Mathematics of Computation*, 56(194):677–691, April 1991. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Ye:1994:BFV

- [Ye94] Qiang Ye. A breakdown-free variation of the nonsymmetric Lanczos algorithms. *Mathematics of Computation*, 62(205):179–207, January 1994. CODEN MCMPAF. ISSN 0025-5718 (paper), 1088-6842 (electronic).

Ye:1996:ABL

- [Ye96] Qiang Ye. An adaptive block Lanczos algorithm. *Numerical Algorithms*, 12(1–2):97–110, April 1996. CODEN NUALEG. ISSN 1017-1398 (print), 1572-9265 (electronic).

Yourgrau:1975:CL

- [You75] Wolfgang Yourgrau. Cornelius Lanczos (1893–1974). *Foundations of Physics*, 5(1):19–20, 1975. CODEN FNDPA4. ISSN 0015-9018 (print), 1572-9516 (electronic).

Yun:2009:CLT

- [YR09] Beong In Yun and Kyung Soo Rim. Construction of Lanczos type filters for the Fourier series approximation. *Applied Numerical Mathematics*, 59(2):280–300, February 2009. CODEN ANMAEL. ISSN 0168-9274 (print), 1873-5460 (electronic).

Yu:1998:ELG

- [YS98] Hua-Gen Yu and Sean C. Smith. The elimination of Lanczos ghosting effects by MINRES filter diagonalization. *Journal of Computational Physics*, 143(2):484–494, July 1, 1998. CODEN JCTPAH. ISSN 0021-9991 (print), 1090-2716 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S002199919895971X>.

Zhang:1995:TMAa

- [ZB95] J. Zhang and J. A. Belward. Tau-method approximations for the Bessel function $Y_0(z)$. *Computers and Mathemat-*

ics with Applications, 30(7):5–14, October 1995. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S089812219500120N>.

Zhang:1995:TMAb

- [Zha95] J. Zhang. Tau-method approximations for the Bessel function $Y_1(z)$. *Computers and Mathematics with Applications*, 30(7):15–19, October 1995. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S089812219500121E>.

Zhang:1996:NTM

- [Zha96] J. Zhang. A note on the tau-method approximations for the Bessel functions $Y_0(z)$ and $Y_1(z)$. *Computers and Mathematics with Applications*, 31(9):63–70, May 1996. CODEN CMAPDK. ISSN 0898-1221 (print), 1873-7668 (electronic). URL <http://www.sciencedirect.com/science/article/pii/S0898122196000430>.

Zhou:2007:CDA

- [ZS07] Yunkai Zhou and Yousef Saad. A Chebyshev–Davidson algorithm for large symmetric eigenproblems. *SIAM Journal on Matrix Analysis and Applications*, 29(3):954–971, 2007. CODEN SJMAEL. ISSN 0895-4798 (print), 1095-7162 (electronic).

Zhang:2007:EMR

- [ZT07] H. Zhang and C. H. Thurber. Estimating the model resolution matrix for large seismic tomography problems based on Lanczos bidiagonalization with partial reorthogonalization. *Geophysical journal international*, 170(1):337–345, July 2007. CODEN GJINEA. ISSN 0956-540x (print), 1365-246x (electronic).