Charlotte Froese Fischer

Date: 2016/12/11

619-3338 Wesbrook Mall, Vancouver, BC V6S 0A6, CANADA
Phone: 604-225-5087 Email: cff@cs.ubc.ca, fischer@nist.gov

Education

1952	BA	Honours, Mathematics and Chemisty, University of British Columbia, Vancouver, CA
1954	MA	Applied Mathematics, University of British Columbia, Vancouver, CA
1957	PhD	Computer Science and Applied Mathematics, Cambridge University, Cambridge, UK

Employment

Academic Positions

1957-59	Instructor	Mathematics, University of British Columbia, BC
1959-63	Assistant Professor	Mathematics, University of British Columbia, BC
1963-65	Associtate Professor	Mathematics, University of British Columbia, BC
1965-69	Professor	Mathematics and Computing, University of British Columbia, BC
1968-75	Professor	Applied Mathematics and Computer Science, University of Waterloo, ON
1974-79	Professor	Computer Science, Pennsylvania State University, PA
1980-96	Professor	Computer Science, Vanderbilt University, Nashville, TN
1996-	Professor Emerita	Computer Science, Vanderbilt University, Nashville, TN

Other Positions

Summer, 1958/59	Scientist, Pacific Oceanographic Group, Fisheries Res. Bd., Nanaimo
Summer, 1960	Research Engineer, Boeing Airplane Co., Renton, Washington, USA
1960 - 62	Consultant, Pacific Oceanographic Group, Fisheries Res. Bd., Nanaimo
Summer, 1962/62	Research Associate, Harvard College Observatory, Cambridge, Mass., USA
1963-64	Research Fellow, Harvard College Observatory,Cambridge, Mass., USA
1986	Visiting scientist, Physics Division, Argonne, National Laboratory, USA Lawrence Berkeley Laboratory (on leave of absence)
1998-99	Fulbright Research Fellow, Free University of Brussels, Belgium
2005-	Research Scientist, National Institute of Standards and Technology, USA

Awards/Honours

1964	First woman to receive an Alfred P. Sloan Fellowship (1964-67).
1978	Visiting Erskine Fellow, University of Canterbury, NZ. (July).
1991	Fellow, American Physical Society (Division of Atomic and Molecular Physics).
1995	Fellow, Royal Physiographical Society of Lund, Sweden.
1998	Fulbright Senior Research Fellow Award, Benelux Countries.
2005	Foreign Member, Lithuanian Academy of Science.
2015	Honorary Doctorate of Technology, Malmö University, Sweden.

Professional Activities

Computer Society Activities

1964-65	Organized the Vancouver Section of the Computer Society of Canada
1965-67	First Section President and Section Director
1972-74	Director, Computer Science Association, Waterloo
1972-76	Member, National Conference Committee, IFIP, Waterloo
1976-77	Member, Local Penn State Chapter of the ACM Nominating Committee

Editorships

1968-78 Numerical Analysis Section Editor, ACM, Computing Reviews
1968-2001 Atomic Structure Editor, Computer Physics Communications, Belfast, N. Ireland

Publications

Books

1. *Introduction to the Programming of the IBM 1620*, Addison-Wesley, Reading, Mass. (1964).
2. *The Hartree-Fock Method for Atoms – A numerical approach*, Wiley Interscience, New York (1977).
3. *Computational Atomic Structure – An MCHF approach*, (with T. Brage and P. Jönsson), Institute of Publishing, Bristol, UK (1997).
4. *Douglas Rayner Hartree – His Life in Science and Computing*, World Scientific Publishing Co., Singapore, (2003).

Chapters in Books

1. "Correlation effects and f-values in the sodium sequence" in *Beam Foil Spectroscopy.* Ed. by I. A. Sellin and D. J. Pegg, (New York: Plenum Press) Vol. 1 (1976).
2. "Multiconfiguration Hartree-Fock Calculations for complex atoms" in *Progress in Atomic Spectroscopy.* Ed. by H. J. Beyer and H. Kleinpoppen) (New York: Plenum Press) (1984).
3. "The challenge of theoretical predictions of oscillator strengths and lifetimes" in *Atomic Spectra and Oscillator Strengths fo Astrophysics and Fusion Research.* (Ed. by J. E. Hansen) (Amsterdam: North Holland) (1990).
4. "Non-variational Multiconfiguration Hartree-Fock Calculations for Continuum Wave Functions" in *Many-body Theory of Atomic Structure and Photoionization.* Ed. by T. N. Chang, Singapore: World Scientific) pp. 143-173, (1993).
5. "Atomic Structure: Multiconfiguration Hartree-Fock Theories" in *Springer Handbook of Atomic, Molecular, and Optical Physics.* Ed.by G. W. Drake, pp. 307-323, (2006)
6. "B-splines in variational atomic structure calculations" in *Advances In Atomic, Molecular, and Optical Physics.* Ed. Paul Berman, Ennio Arimondo and Chun Lin, **55**, 235-291 (2008).
7. "Relativistic Variational Calculations for Complex Atoms", in *Advances in the Theory of Atomic and Molecular Systems*, Progress in Theoretical Chemistry and Physics (Ed: P. Piecuch *et al.* (Springer: Netherlands), **19**, pp. 115–128, (2009).

Articles in Refereed Journals

1. C. Froese Fischer, I. P. Grant, G. Gaigalas, and P. Rynkun.
"Lifetimes of some $2s^2 2p\ ^2P_{3/2}$ states from variational theory".
In: *Physical Review A* 93.2 (2016), p. 022505.
2. O. Zatsarinny and C. Froese Fischer. "DBSR_HF: A B-spline Dirac–Hartree–Fock program".
In: *Computer Physics Communications* 202 (2016), pp. 287–303.
3. G. Gaigalas, P. Rynkun, and C. Froese Fischer. "Lifetimes of $4p^5 4d$ levels in highly ionized atoms".
In: *Phys. Rev. A* 91 (2015), p. 022509. DOI: 10.1103/PhysRevA.91.022509.
4. J. ieroń et al. "Ab initio MCDHF calculations of electron–nucleus interactions".
In: *Physica Scripta* 90.5 (2015), p. 054011.

5. J. Ekman et al. “Calculations with spectroscopic accuracy: Energies, transition rates, and Landé g_J-factors in the carbon isoelectronic sequence from Ar XIII to Zn XXV”.
In: *Astron. Astrophys.* 564 (2014), p. A24. DOI: 10.1051/0004-6361/201323163.

6. C. Froese Fischer.
“Evaluation and comparison of the configuration interaction calculations for complex atoms”.
In: *Atoms* 2 (2014), pp. 1–14. DOI: 10.3390/atoms2010001.

7. N. D. Guise, J. N. Tan, S. M. Brewer, C. F. Fischer, and P. Jönsson.
“Measurement of the Kr XVIII 3d $^2D_{5/2}$ lifetime at low energy in a unitary Penning trap”.
In: *Phys. Rev. A* 89 (2014), p. 040502. DOI: 10.1103/PhysRevA.89.040502.

8. P. Jönsson et al. “Relativistic CI calculations of spectroscopic data for the $2p^6$ and $2p^53l$ configurations in Ne-like ions between Mg III and Kr XXVII”.
In: *At. Data Nucl. Data Tables* 100 (2014), pp. 1–154. DOI: 10.1016/j.adt.2013.06.001.

9. P. Rynkun, P. Jönsson, G. Gaigalas, and C. Froese Fischer.
“Energies and E1, M1, E2, and M2 transition rates for states of the $2s^22p^3$, $2s2p^4$, and $2p^5$ configurations in nitrogen-like ions between F III and Kr XXX”.
In: *At. Data Nucl. Data Tables* 100 (2014), pp. 315–402. DOI: 10.1016/j.adt.2013.05.003.

10. C. Froese Fischer et al. “Doublet-quartet energy separation in boron: A partitioned-correlation-function-interaction method”. In: *Phys. Rev. A* 88.6 (2013), p. 062506.

11. P. Jönsson, G. Gaigalas, J. Bieroń, C. Froese Fischer, and I. P. Grant.
“New version: GRASP2K relativistic atomic structure package”.
In: *Comput. Phys. Commun.* 184 (2013), pp. 2197–2203. DOI: 10.1016/j.cpc.2013.02.016.

12. P. Jönsson et al.
“Energy levels and transition rates for the boron isoelectronic sequence: Si X, Ti XVIII – Cu XXV”.
In: *Astron. Astrophys.* 559 (2013), p. A100. DOI: 10.1051/0004-6361/201321893.

13. P. Rynkun, P. Jönsson, G. Gaigalas, and C. Froese Fischer.
“Energies and E1, M1, E2, and M2 transition rates for states of the $2s^22p^4$, $2s2p^5$, and $2p^6$ configurations in oxygen-like ions between F II and Kr XXIX”.
In: *Astron. Astrophys.* 557 (2013), p. A136. DOI: 10.1051/0004-6361/201321992.

14. S. Verdebout et al. “A partitioned correlation function interaction approach for describing electron correlation in atoms”. In: *J. Phys. B* 46 (2013), p. 085003. DOI: 10.1088/0953-4075/46/8/085003.

15. C. Froese Fischer and G. Gaigalas.
“Multiconfiguration Dirac-Hartree-Fock energy levels and transition probabilities for W XXXVIII”.
In: *Phys. Rev. A* 85 (2012), p. 042501. DOI: 10.1103/PhysRevA.85.042501.

16. P. Rynkun, P. Jönsson, G. Gaigalas, and C. Froese Fischer.
“Energies and E1, M1, E2, M2 transition rates for states of the $2s^22p$, $2s2p^2$, and $2p^3$ configurations in boron-like ions between N III and Zn XXVI”.
In: *At. Data Nucl. Data Tables* 98 (2012), pp. 481–556. DOI: 10.1016/j.adt.2011.08.004.

17. C. Froese Fischer. “A B-spline Hartree-Fock program”.
In: *Comput. Phys. Commun.* 182 (2011), pp. 1315–1326. DOI: 10.1016/j.cpc.2011.01.012.

18. C. Froese Fischer. “Correlation effects on transition probabilities in Mo VI”.
In: *J. Phys. B* 44 (2011), p. 125001. DOI: 10.1088/0953-4075/44/12/125001.

19. C. Froese Fischer, M. Godefroid, P. Jönsson, and G. Gaigalas. “Atomic Structure Calculations: Encapsulating knowledge in computer codes: LabTalk series Article 47035”.
In: *Journal of physics. B, Atomic molecular and optical physics* 44 (2011), p. 47035.

20. T. Carette andi C. Drag et al. “Isotope shift in the sulfur electron affinity: Observation and theory”.
In: *Phys. Rev. A* 81.4 (2010), p. 042522.

21. Th. Carette et al. “Isotope shift in the sulfur electron affinity: Observation and theory”.
In: *Phys. Rev. A* 81 (2010), p. 042522. DOI: 10.1103/PhysRevA.81.042522.

22. C. Froese Fischer. "Towards accurate transition data for $3p^2$, $3p^3$, $3p^4$ levels of Fe, Co and Ni ions". In: *J. Phys. B* 43 (2010), p. 074020. DOI: 10.1088/0953-4075/43/7/074020.

23. S. Verdebout, P. Jönsson, G. Gaigalas, M. Godefroid, and C. Froese Fischer. "Exploring biorthonormal transformations of pair-correlation functions in atomic structure variational calculations". In: *J. Phys. B* 43 (2010), p. 074017. DOI: 10.1088/0953-4075/43/7/074017.

24. J. Bieroń, C. Froese Fischer, P. Indelicato, P. Jönsson, and P. Pyykkö. "Complete-active-space multiconfiguration Dirac-Hartree-Fock calculations of hyperfine-structure constants of the gold atom". In: *Phys. Rev. A* 79 (2009), p. 052502. DOI: 10.1103/PhysRevA.79.052502.

25. C. Froese Fischer. "Evaluating the accuracy of theoretical transition data". In: *Phys. Scr.* T134 (2009), p. 014019. DOI: 10.1088/0031-8949/2009/T134/014019.

26. C. Froese Fischer. "Relativistic variational calculations for complex atoms". In: *Prog. Theor. Chem. Phys.* 19 (2009), pp. 115–128. DOI: 10.1007/978-90-481-2596-8_7.

27. C. Froese Fischer, G. Tachiev, R. H. Rubin, and M. Rodríguez. "Analysis of Breit-Pauli transition probabilities for lines in O III". In: *Astrophys. J.* 703 (2009), pp. 500–506. DOI: 10.1088/0004-637X/703/1/500.

28. C. Froese Fischer and O. Zatsarinny. "A B-spline Galerkin method for the Dirac equation". In: *Comput. Phys. Commun.* 180 (2009), pp. 879–886. DOI: 10.1016/j.cpc.2008.12.010.

29. O. Zatsarinny and C. Froese Fischer. "Atomic structure calculations using MCHF and BSR". In: *Comput. Phys. Commun.* 180 (2009), pp. 2041–2065. DOI: 10.1016/j.cpc.2009.06.007.

30. J. Bieroń, C. Froese Fischer, P. Jönsson, and P. Pyykkö. "Comment on the magnetic dipole hyperfine interaction in the gold atom ground state". In: *J. Phys. B* 41 (2008), p. 115002. DOI: 10.1088/0953-4075/41/11/115002.

31. C. Froese Fischer and Yu. Ralchenko. "Multiconfiguration Dirac-Hartree-Fock energies and transition probabilities for $2p^4(^3P)3d$–$2p^4(^3P)4f$ transitions in Ne II". In: *Int. J. Mass Spectrom.* 271 (2008), pp. 85–92. DOI: 10.1016/j.ijms.2007.09.003.

32. C. Froese Fischer, R. H. Rubin, and M. Rodríguez. "Multiconfiguration Dirac-Hartree-Fock energy levels and transition probabilities for $3d^5$ in Fe IV". In: *Mon. Not. R. Astron. Soc.* 391 (2008), pp. 1828–1837. DOI: 10.1111/j.1365-2966.2008.13997.x.

33. C. Froese Fischer, G. Tachiev, G. Gaigalas, and M. R. Godefroid. "An MCHF atomic-structure package for large-scale calculations". In: *Comput. Phys. Commun.* 176 (2007), pp. 559–579. DOI: 10.1016/j.cpc.2007.01.006.

34. C. Froese Fischer and O. Zatsarinny. "$4p^2$ resonances in photoionization from 4s4p levels in neutral zinc". In: *Theor. Chem. Accounts* 118 (2007), pp. 623–630. DOI: 10.1007/s00214-007-0348-9.

35. P. Jönsson, X. He, C. Froese Fischer, and I. P. Grant. "The GRASP2K relativistic atomic structure package". In: *Comput. Phys. Commun.* 177 (2007), pp. 597–622. DOI: 10.1016/j.cpc.2007.06.002.

36. N. Rehbein et al. "Optical quenching of metastable magnesium". In: *Phys. Rev. A* 76 (2007), p. 043406. DOI: 10.1103/PhysRevA.76.043406.

37. M. S. Safronova, C. Froese Fischer, and Yu. Ralchenko. "Relativistic all-order and multiconfiguration Hartree-Fock calculations of the 4d-4f energy separation in Li I". In: *Phys. Rev. A* 76 (2007), p. 054502. DOI: 10.1103/PhysRevA.76.054502.

38. L. Sturesson, P. Jönsson, and C. Froese Fischer. "JJGEN: A flexible program for generating lists of jj-coupled configuration state functions". In: *Comput. Phys. Commun.* 177 (2007), pp. 539–550. DOI: 10.1016/j.cpc.2007.05.013.

39. P. Andersson et al. “Radiative lifetimes of metastable states of negative ions”. In: *Phys. Rev. A* 73 (2006), p. 032705. DOI: 10.1103/PhysRevA.73.032705.

40. A. Dasgupta, J. P. Apruzese, O. Zatsarinny, K. Bartschat, and C. Froese Fischer. “Laser transition probabilities in Xe I”. In: *Phys. Rev. A* 74 (2006), p. 012509. DOI: 10.1103/PhysRevA.74.012509.

41. C. Froese Fischer. “Some improved transition probabilities for neutral carbon”. In: *J. Phys. B* 39 (2006), pp. 2159–2167. DOI: 10.1088/0953-4075/39/9/005.

42. C. Froese Fischer, G. Gaigalas, and Y. Ralchenko. “Some corrections to GRASP92”. In: *Comput. Phys. Commun.* 175 (2006), pp. 738–744. DOI: 10.1016/j.cpc.2006.07.023.

43. C. Froese Fischer, G. Tachiev, and A. Irimia. “Relativistic energy levels, lifetimes, and transition probabilities for the sodium-like to argon-like sequences”. In: *At. Data Nucl. Data Tables* 92 (2006), pp. 607–812. DOI: 10.1016/j.adt.2006.03.001.

44. C. Froese Fischer. “Breit-Pauli lifetimes and transition probabilities for Si I”. In: *Phys. Rev. A* 71 (2005), p. 042506. DOI: 10.1103/PhysRevA.71.042506.

45. C. Froese Fischer, G. Tachiev, and A. Irimia. “Theoretical transition probabilities and lifetimes”. In: *Phys. Scr.* T120 (2005), pp. 66–70. DOI: 10.1088/0031-8949/2005/T120/010.

46. A. Irimia and C. Froese Fischer. “Breit-Pauli oscillator strengths, lifetimes and Einstein A-coefficients in singly ionized sulphur”. In: *Phys. Scr.* 71 (2005), pp. 172–184. DOI: 10.1238/Physica.Regular.071a00172.

47. P. Palmeri, C. Froese Fischer, J.-F. Wyart, and M. R. Godefroid. “Oscillator strength calculations in neutral technetium”. In: *Mon. Not. R. Astron. Soc.* 363 (2005), pp. 452–458. DOI: 10.1111/j.1365-2966.2005.09410.x.

48. J. Bieroń, C. Froese Fischer, S. Fritzsche, and K. Pachucki. “Lifetime and hyperfine structure of the $^3D_2$ state of radium”. In: *J. Phys. B* 37 (2004), pp. L305–L311. DOI: 10.1088/0953-4075/37/17/l01.

49. A. Ellmann et al. “Radiative lifetime of a bound excited state of Te^-”. In: *Phys. Rev. Lett.* 92 (2004), p. 253002. DOI: 10.1103/PhysRevLett.92.253002.

50. C. Froese Fischer, P. Jönsson, and G. Tachiev. “The Landé g-factor in atomic spectroscopy”. In: *Mol. Phys.* 102 (2004), pp. 1177–1184. DOI: 10.1080/00268970410001728753.

51. C. Froese Fischer and R. H. Rubin. “Breit-Pauli energy levels, transition probabilities and lifetimes for $3d^5$ levels in Fe IV of astrophysical interest”. In: *Mon. Not. R. Astron. Soc.* 355 (2004), pp. 461–474. DOI: 10.1111/j.1365-2966.2004.08332.x.

52. C. Froese Fischer and G. Tachiev. “Breit-Pauli energy levels, lifetimes, and transition probabilities for the beryllium-like to neon-like sequences”. In: *At. Data Nucl. Data Tables* 87 (2004), pp. 1–184. DOI: 10.1016/j.adt.2004.02.001.

53. A. Irimia and C. Froese Fischer. “Breit-Pauli and Dirac-Hartree-Fock energy levels and transition probabilities in neutral argon”. In: *J. Phys. B* 37 (2004), pp. 1659–1672. DOI: 10.1088/0953-4075/37/8/008.

54. C. Froese Fischer and G. Tachiev. “Allowed and spin-forbidden electric dipole transitions in Ca I”. In: *Phys. Rev. A* 68 (2003), p. 012507. DOI: 10.1103/PhysRevA.68.012507.

55. J. Bieroń, C. Froese Fischer, and M. Godefroid. “Hyperfine-structure calculations of excited levels in neutral scandium”. In: *J. Phys. B* 35 (2002), pp. 3337–3345. DOI: 10.1088/0953-4075/35/15/308.

56. G. I. Tachiev and C. Froese Fischer. “Breit-Pauli energy levels and transition rates for nitrogen-like and oxygen-like sequences”. In: *Astron. Astrophys.* 385 (2002), pp. 716–723. DOI: 10.1051/0004-6361:20011816.

57. O. Zatsarinny and C. Froese Fischer. “Oscillator strengths for transitions to high-lying excited states of carbon”. In: *J. Phys. B* 35 (2002), pp. 4669–4683. DOI: 10.1088/0953-4075/35/22/309.

58. O. Zatsarinny, T. W. Gorczyca, and C. Froese Fischer.
"Photodetachment of He^- 1s2s2p $^4P^\circ$ in the region of the 1s threshold".
In: *J. Phys. B* 35 (2002), pp. 4161–4178. DOI: 10.1088/0953-4075/35/20/305.

59. Y. Zou and C. Froese Fischer.
"Resonance transition energies and oscillator strengths in lutetium and lawrencium".
In: *Phys. Rev. Lett.* 88 (2002), p. 183001. DOI: 10.1103/PhysRevLett.88.183001.

60. L. J. Curtis et al.
"Measurements and predictions of the 6s6p $^{1,3}P_1$ lifetimes in the Hg isoelectronic sequence".
In: *Phys. Rev. A* 63 (2001), p. 042502. DOI: 10.1103/PhysRevA.63.042502.

61. C. F. Fischer and P. Jönsson. "Landé g factors for $2p^4(^3P)3p$ and $2p^4(^3P)3d$ states of Ne II".
In: *J. Mol. Struct. (Theochem)* 537 (2001), pp. 55–62. DOI: 10.1016/S0166-1280(00)00460-7.

62. C. Froese Fischer and S. Fritzsche. "Magnetic-dipole transitions between the lowest $3d^4$ J=2-3 transitions in highly charged titanium-like ions". In: *J. Phys. B* 34 (2001), p. L767.
DOI: 10.1088/0953-4075/34/24/102.

63. M. Godefroid, C. Froese Fischer, and P. Jönsson.
"Non-relativistic variational calculations of atomic properties in Li-like ions: Li I to O VI".
In: *J. Phys. B* 34 (2001), p. 1079. DOI: 10.1088/0953-4075/34/6/308.

64. G. Tachiev and C. Froese Fischer.
"Breit-Pauli energy levels and transition rates for the carbonlike sequence".
In: *Can. J. Phys.* 79 (2001), pp. 955–976. DOI: 10.1139/p01-059.

65. Y. Zou and C. Froese Fischer. "Multiconfiguration Dirac-Hartree-Fock calculations of the forbidden transitions between $3s^2\ ^1S_0$, $3s3p\ ^3P_{0,1,2}$, $^1P_1$ states for Mg-like ions".
In: *J. Phys. B* 34 (2001), pp. 915–931. DOI: 10.1088/0953-4075/34/5/317.

66. E. Biémont, C. Froese Fischer, M. R. Godefroid, P. Palmeri, and P. Quinet.
"Core-polarization effects in the cadmium isoelectronic sequence".
In: *Phys. Rev. A* 62 (2000), p. 032512. DOI: 10.1103/PhysRevA.62.032512.

67. L. J. Curtis, R. Matulioniene, D. G. Ellis, and C. Froese Fischer.
"Predictive data-based exposition of 5s5p $^{1,3}P_1$ lifetimes in the Cd isoelectronic sequence".
In: *Phys. Rev. A* 62 (2000), p. 052513. DOI: 10.1103/PhysRevA.62.052513.

68. C. Froese Fischer. "Correlation and Relativistic Effects in Light Atoms".
In: *Condensed Matter Theories* 14 (2000), pp. 223–230.

69. C. Froese Fischer.
"Multiconfiguration Dirac-Hartree-Fock calculations for Be-like intercombination lines revisited".
In: *Phys. Scr.* 62 (2000), pp. 458–462. DOI: 10.1238/physica.regular.062a00000.

70. S. Fritzsche, C. Froese Fischer, and C. Z. Dong. "REOS99: A revised program for transition probability calculations including relativistic, correlation, and relaxation effects".
In: *Computer physics communications* 124.2 (2000), pp. 340–352.

71. G. Tachiev and C. Froese Fischer.
"Breit-Pauli energy levels, lifetimes and transition data: Boron-like spectra".
In: *J. Phys. B* 33 (2000), pp. 2419–2435. DOI: 10.1088/0953-4075/33/13/304.

72. O. Zatsarinny and C. Froese Fischer. "A general program for computing angular integrals of the Breit-Pauli Hamiltonian with non-orthogonal orbitals".
In: *Comput. Phys. Commun.* 124 (2000), pp. 247–289. DOI: 10.1016/S0010-4655(99)00441-5.

73. O. Zatsarinny and C. Froese Fischer. "The use of basis splines and non-orthogonal orbitals in R-matrix calculations: Application to Li photoionization". In: *J. Phys. B* 33 (2000), pp. 313–341.
DOI: 10.1088/0953-4075/33/3/303.

74. Y. Zou and C. Froese Fischer. "Multiconfiguration Dirac-Hartree-Fock optimization strategies for $3s^2\ ^1S_0$-$3s3p\ ^3P_1$ transition rates for Al^+ - S^{4+}". In: *Phys. Rev. A* 62 (2000), p. 062505.
DOI: 10.1103/PhysRevA.62.062505.

75. J. Bieroń, C. Froese Fischer, and I. P. Grant.
"Large-scale multiconfigurational Dirac-Fock calculations of the hyperfine-structure constants and determination of the nuclear quadrupole moment of ^{49}Ti".
In: *Phys. Rev. A* 59 (1999), pp. 4295–4299. DOI: 10.1103/PhysRevA.59.4295.

76. J. Bieroń, P. Jönsson, and C. Froese Fischer. "Effects of electron correlation, relativity, and nuclear structure on hyperfine constants of Be^+ and F^{6+}". In: *Phys. Rev. A* 60 (1999), pp. 3547–3555. DOI: 10.1103/PhysRevA.60.3547.

77. C. Froese Fischer. "Correlation and relativistic effects on transitions in lighter atoms".
In: *Phys. Scr.* T83 (1999), pp. 49–60. DOI: 10.1238/Physica.Topical.083a00049.

78. C. Froese Fischer and X.-H. He.
"Transition energies and transition rates for the $2p^4(^3P)3p$ - $2p^4(^3P)3d$ transitions in Ne II".
In: *Can. J. Phys.* 77 (1999), pp. 177–195. DOI: 10.1139/p99-013.

79. M. Godefroid and C. Froese Fischer.
"The Mg^+ 3s $^2S_{1/2}$ - 4p $^2P^o_{3/2,1/2}$ weak transition probabilities revisited".
In: *J. Phys. B* 32 (1999), pp. 4467–4483. DOI: 10.1088/0953-4075/32/18/307.

80. P. Jönsson, C. Froese Fischer, and M. R. Godefroid.
"MCHF calculations of isotope shifts and oscillator strengths for transitions between low-lying states in Be-like systems and neutral magnesium". In: *J. Phys. B* 32 (1999), pp. 1233–1245.
DOI: 10.1088/0953-4075/32/5/015.

81. Y. Qiu and C. Froese Fischer. "Integration by cell algorithm for Slater integrals in a spline basis".
In: *Journal of Computational Physics* 156.2 (1999), pp. 257–271.

82. M. R. Godefroid R and C. Froese Fischer. "Isotope shift in the oxygen electron affinity".
In: *Phys. Rev. A* 60.4 (1999), R2637.

83. G. Tachiev and C. Froese Fischer.
"Breit-Pauli energy levels, lifetimes, and transition data: Beryllium-like spectra".
In: *J. Phys. B* 32 (1999), pp. 5805–5823. DOI: 10.1088/0953-4075/32/24/315.

84. J. Xi and C. Froese Fischer.
"Cross section and angular distribution for the photodetachment of (12s2P)".
In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 32.2 (1999), p. 387.

85. J. Xi and C. Froese Fischer.
"Photodetachment cross section of He^- $(1s2s2p\ ^4P^o)$ in the region of the $1s$ detachment threshold".
In: *Phys. Rev. A* 59.1 (1999), p. 307.

86. J. Bieroń, I. P. Grant, and C. Froese Fischer. "Multiconfiguration Dirac-Fock calculations of the hyperfine structure constants and determination of the nuclear quadrupole moment of yttrium 90".
In: *Phys. Rev. A* 58 (1998), pp. 4401–4405. DOI: 10.1103/PhysRevA.58.4401.

87. T. Brage et al. "Hyperfine induced transitions as diagnostics of isotopic composition and densities of low-density plasmas". In: *Astrophys. J.* 500 (1998), pp. 507–521. DOI: 10.1086/305690.

88. C. Froese Fischer, X. He, and P. Jönsson.
"The $2p^4\ ^3P_{1,2}$-$2p^3 3s\ ^5S^o_2$ and $2p^4\ ^3P_{1,2}$-$2s2p^5\ ^3P^o_2$ transitions in the oxygen isoelectronic sequence".
In: *Eur. Phys. J. D* 4 (1998), pp. 285–289. DOI: 10.1007/s100530050211.

89. C. Froese Fischer, P. Jönsson, and M. Godefroid. "Some two-electron properties of sodium".
In: *Phys. Rev. A* 57 (1998), pp. 1753–1758. DOI: 10.1103/PhysRevA.57.1753.

90. C. Froese Fischer and R. H. Rubin. "Transition rates for some forbidden lines in Fe IV".
In: *J. Phys. B* 31 (1998), pp. 1657–1669. DOI: 10.1088/0953-4075/31/8/016.

91. C. Froese Fischer, M. Saparov, G. Gaigalas, and M. Godefroid. "Breit-Pauli energies, transition probabilities, and lifetimes for 2s, 2p, 3s, 3p, 3d, 4s ^{2}L levels of the lithium sequence, Z = 3-8".
In: *At. Data Nucl. Data Tables* 70 (1998), pp. 119–134. DOI: 10.1006/adnd.1998.0788.

92. S. Fritzsche, C. Froese Fischer, and B. Fricke. "Calculated level energies, transition probabilities, and lifetimes for phosphorus-like ions of the iron group in the $3s3p^4$ and $3s^23p^23d$ configurations". In: *At. Data Nucl. Data Tables* 68 (1998), pp. 149–179. DOI: 10.1006/adnd.1997.0759.

93. G. Gaigalas, A. Bernotas, Z. Rudzikas, and C. Froese Fischer. "Spin-other-orbit operator in the tensorial form of second quantization". In: *Physica Scripta* 57.2 (1998), p. 207.

94. G. Gaigalas, Z. Rudzikas, and C. Froese Fischer. "Reduced coefficients (subcoefficients) of fractional parentage for p-, d-, and f-shells". In: *At. Data Nucl. Data Tables* 70 (1998), pp. 1–39. DOI: 10.1006/adnd.1998.0782.

95. M. R. Godefroid, P. Jönsson, and C. Froese Fischer. "Atomic structure variational calculations in spectroscopy". In: *Phys. Scr.* T78 (1998), pp. 33–46. DOI: 10.1238/Physica.Topical.078a00033.

96. M. R. Godefroid, P. Jönsson, and C. Froese Fischer. "Atomic structure variational calculations in spectroscopy". In: *Physica scripta* 1998.T78 (1998), p. 33.

97. P. Jönsson and C. Froese Fischer. "Multiconfiguration Dirac-Fock calculations of the $2s^2\ {}^1S_0$ - $2s2p\ {}^3P_1$ intercombination transition in C III". In: *Phys. Rev. A* 57 (1998), pp. 4967–4970. DOI: 10.1103/PhysRevA.57.4967.

98. P. Jönsson, C. Froese Fischer, and E. Träbert. "On the status and perspectives of MCDF calculations and measurements of transition data in the Be isoelectronic sequence". In: *J. Phys. B* 31 (1998), pp. 3497–3511. DOI: 10.1088/0953-4075/31/16/005.

99. J. Bieroń, I. P. Grant, and C. Froese Fischer. "Nuclear quadrupole moment of scandium". In: *Phys. Rev. A* 56 (1997), pp. 316–321. DOI: 10.1103/PhysRevA.56.316.

100. R. D. Cowan, C. Froese Fischer, J. E. Hansen, and V. Kempter. "Excited states of the negative nitrogen ion: energies and lifetimes". In: *J. Phys. B* 30 (1997), p. 1457. DOI: 10.1088/0953-4075/30/6/014.

101. C. Froese Fischer and G. Gaigalas. "Note on the $2s^2\ {}^1S_0$ - $2s2p\ {}^3P_1$ intercombination line of B II and C III". In: *Phys. Scr.* 56 (1997), p. 436. DOI: 10.1088/0031-8949/56/5/006.

102. C. Froese Fischer, G. Gaigalas, and M. Godefroid. "The $2s^2\ {}^1S_0$-$2s3p\ {}^3P^\circ_1$ intercombination line in the Be-like sequence". In: *J. Phys. B* 30 (1997), pp. 3333–3342. DOI: 10.1088/0953-4075/30/15/006.

103. C. Froese Fischer, M. Godefroid, and J. Olsen. "Systematic studies of the $2s^2\ {}^1S_0$-$2s3p\ {}^1P^\circ_1$ transition in the Be-like sequence". In: *J. Phys. B* 30 (1997), pp. 1163–1172. DOI: 10.1088/0953-4075/30/5/011.

104. S. Fritzsche and C. Froese Fischer. "REOS - A program for relaxed-orbital oscillator strength calculations". In: *Comput. Phys. Commun.* 99 (1997), pp. 323–334. DOI: 10.1016/S0010-4655(96)00116-6.

105. G. Gaigalas, Z. Rudzikas, and C. Froese Fischer. "An efficient approach for spin-angular integrations in atomic structure calculations". In: *J. Phys. B* 30 (1997), pp. 3747–3771. DOI: 10.1088/0953-4075/30/17/006.

106. M. R. Godefroid, G. Van Meulebeke, P. Jönsson, and C. Froese Fischer. "Large-scale MCHF calculations of hyperfine structures in nitrogen and oxygen". In: *Zeitschrift für Physik D Atoms, Molecules and Clusters* 42.3 (1997), pp. 193–201.

107. P. Jönsson and C. Froese Fischer. "Accurate multiconfiguration Dirac-Fock calculations of transition probabilities in the Mg isoelectronic sequence". In: *J. Phys. B* 30 (1997), p. 5861. DOI: 10.1088/0953-4075/30/24/021.

108. P. Jönsson and C. Froese Fischer. "SMS92: A program for relativistic isotope shift calculations". In: *Comput. Phys. Commun.* 100 (1997), pp. 81–92. DOI: 10.1016/S0010-4655(96)00118-X.

109. J. Bieroń, P. Jönsson, and C. Froese Fischer. "Large-scale multiconfiguration Dirac-Fock calculations of the hyperfine-structure constants of the 2s $^2S_{1/2}$, 2p $^2P_{1/2}$, and 2p $^2P_{3/2}$ states of lithium". In: *Phys. Rev. A* 53 (1996), pp. 2181–2188. DOI: 10.1103/PhysRevA.53.2181.

110. T. Brage, D. S. Leckrone, and C. Froese Fischer. "Core-valence and core-core correlation effects on hyperfine-structure parameters and oscillator strengths in Tl II and Tl III". In: *Phys. Rev. A* 53 (1996), p. 192. DOI: 10.1103/PhysRevA.53.192.

111. C. Froese Fischer and G. Gaigalas. "The electron affinity of $2s2p^2\ ^4P$ in boron". In: *Journal of Physics B: Atomic, Molecular and Optical Physics* 29.6 (1996), p. 1169.

112. J. Fleming et al. "The 2s^2 ^{1}S-2s2p ^{1}P° resonance line in neutral beryllium". In: *J. Phys. B* 29 (1996), p. 4347. DOI: 10.1088/0953-4075/29/19/009.

113. G. Gaigalas and C. Froese Fischer. "Extension of the HF program to partially filled f-subshells". In: *Comput. Phys. Commun.* 98 (1996), pp. 255–264. DOI: 10.1016/0010-4655(96)00092-6.

114. M. R. Godefroid, C. Froese Fischer, and P. Jönsson. "Multiconfiguration Hartree-Fock calculations of atomic properties in light atoms". In: *Phys. Scr.* T65 (1996), p. 70. DOI: 10.1088/0031-8949/1996/T65/010.

115. P. Jönsson, C. Froese Fischer, and M. R. Godefroid. "Accurate calculations of transition probabilities, isotope shifts and hyperfine structures for some allowed 2s^{2}2p^n-2s2p^{n+1} transitions in B I, C II and C I". In: *J. Phys. B* 29 (1996), p. 2393. DOI: 10.1088/0953-4075/29/12/007.

116. P. Jönsson, F. A. Parpia, and C. Froese Fischer. "HFS92: A program for relativistic atomic hyperfine structure calculations". In: *Comput. Phys. Commun.* 96 (1996), pp. 301–310. DOI: 10.1016/0010-4655(96)00057-4.

117. P. Jönsson, A. Ynnerman, C. Froese Fischer, M. R. Godefroid, and J. Olsen. "Large-scale multiconfiguration Hartree-Fock and configuration-interaction calculations of the transition probability and hyperfine structures in the sodium resonance transition". In: *Phys. Rev. A* 53 (1996), p. 4021. DOI: 10.1103/PhysRevA.53.4021.

118. F. A. Parpia, C. Froese Fischer, and I. P. Grant. "GRASP92: A package for large-scale relativistic atomic structure calculations". In: *Comput. Phys. Commun.* 94 (1996), pp. 249–271. DOI: 10.1016/0010-4655(95)00136-0.

119. A. Stathopoulos, A. B. Ynnerman, and C. Froese Fischer. "A PVM implementation of the MCHF atomic structure package". In: *Int. J. High Performance Computing Applications* 10.1 (1996), pp. 41–61.

120. J. Xi and C. Froese Fischer. "Cross section and angular distribution for the photodetachment of He$^-$(1s2s2p ^{4}P°) below the He(n=4) threshold". In: *Phys. Rev. A* 53 (1996), pp. 3169–3177. DOI: 10.1103/PhysRevA.53.3169.

121. A. Aboussaid, M. R. Godefroid, P. Jönsson, and C. Froese Fischer. "Multiconfigurational Hartree-Fock calculations of hyperfine-induced transitions in heliumlike ions". In: *Phys. Rev. A* 51 (1995), pp. 2031–2039. DOI: 10.1103/PhysRevA.51.2031.

122. J. Bieroń, F. A. Parpia, C. Froese Fischer, and P. Jönsson. "Large-scale multiconfiguration Dirac-Fock calculations of hyperfine interaction constants for nd 2 levels of Sc+ and Y+". In: *Phys. Rev. A* 51.6 (1995), p. 4603.

123. T. Brage, C. Froese Fischer, and P. G. Judge. "Transition probabilities for the UV0.01 multiplet in N III". In: *Astrophys. J.* 445 (1995), pp. 457–464. DOI: 10.1086/175710.

124. J. Carlsson, P. Jönsson, M. R. Godefroid, and C. Froese Fischer. "Accurate multiconfiguration Hartree-Fock calculations of isotope shifts in C I and C IV". In: *J. Phys. B* 28 (1995), pp. 3729–3740. DOI: 10.1088/0953-4075/28/17/012.

125. C. Froese Fischer, J. E. Hansen, and H. W. van der Hart. "Ab initio studies of the 4s4p^2 ^{4}P state in Ca$^-$". In: *Phys. Rev. A* 51 (1995), pp. 1999–2004. DOI: 10.1103/PhysRevA.51.1999.

126. C. Froese Fischer, A. Ynnerman, and G. Gaigalas.
"Multiconfiguration-Hartree-Fock calculations for the electron affinity of boron".
In: *Phys. Rev. A* 51.6 (1995), p. 4611.

127. J. Fleming et al. "Systematic studies of N IV transitions of astrophysical importance".
In: *Astrophys. J.* 455 (1995), pp. 758–768. DOI: 10.1086/176621.

128. M. Godefroid, J. Olsen, P. Jönsson, and C. Froese Fischer. "Accurate multiconfiguration Hartree-Fock calculations of oscillator strengths in light atoms: The boron (B II) line at 1362 Å".
In: *Astrophys. J.* 450 (1995), pp. 473–476. DOI: 10.1086/176157.

129. P. Jönsson, C. Froese Fischer, and J. Bieroń.
"Multiconfiguration Hartree-Fock calculations of low-lying excited 2 S states in lithium".
In: *Phys. Rev. A* 52.5 (1995), p. 4262.

130. J. Olsen, M. R. Godefroid, P. Jönsson, P. Å. Malmqvist, and C. Froese Fischer.
"Transition probability calculations for atoms using nonorthogonal orbitals".
In: *Phys. Rev. E* 52 (1995), pp. 4499–4508. DOI: 10.1103/PhysRevE.52.4499.

131. J. Olsen, M. R. Godefroid, P. Jönsson, PÅke P. Malmqvist, and C. Froese Fischer.
"Transition probability calculations for atoms using nonorthogonal orbitals".
In: *Phys. Rev. E* 52.4 (1995), p. 4499.

132. A. Stathopoulos, Y. Saad, and C. Froese Fischer.
"Robust preconditioning of large, sparse, symmetric eigenvalue problems".
In: *Journal of Computational and Applied Mathematics* 64.3 (1995), pp. 197–215.

133. A. Ynnerman and C. Froese Fischer. "Allowed transitions and intercombination lines in B II".
In: *Z. Phys. D* 34 (1995), pp. 1–8. DOI: 10.1007/BF01443731.

134. A. Ynnerman and C. Froese Fischer. "Allowed transitions and intercombination lines in B II".
In: *Zeitschrift für Physik D Atoms, Molecules and Clusters* 34.1 (1995), pp. 1–8.

135. A. Ynnerman and C. Froese Fischer. "Multiconfigurational Dirac-Fock calculation of the $2s^2\ {}^1S_0$ - $2s2p\ {}^3P_1$ spin-forbidden transition for the Be-like isoelectronic sequence".
In: *Phys. Rev. A* 51 (1995), pp. 2020–2030. DOI: 10.1103/PhysRevA.51.2020.

136. J. Bieroń, C. Froese Fischer, and A. Ynnerman.
"Note on MCDF correlation calculations for high-Z ions". In: *J. Phys. B* 27 (1994), pp. 4829–4834.
DOI: 10.1088/0953-4075/27/20/004.

137. T. Brage and C. Froese Fischer. "Spline-Galerkin calculations for Rydberg series of calcium".
In: *Phys. Scr.* 49 (1994), pp. 651–660. DOI: 10.1088/0031-8949/49/6/003.

138. T. Brage and C. Froese Fischer.
"Spline-Galerkin methods applied to Rydberg series between the 4s ^{2}S and 3d ^{2}D limits of calcium".
In: *Phys. Rev. A* 50 (1994), pp. 2937–2947. DOI: 10.1103/PhysRevA.50.2937.

139. T. Brage and C. Froese Fischer.
"Spline-Galerkin methods for Rydberg series, including Breit-Pauli effects".
In: *J. Phys. B* 27 (1994), pp. 5467–5484. DOI: 10.1088/0953-4075/27/22/007.

140. T. Brage, C. Froese Fischer, and P. Jönsson. "Effects of core-valence and core-core correlation on the line strength of the resonance lines in Li I and Na I". In: *Phys. Rev. A* 49 (1994), pp. 2181–2184.
DOI: 10.1103/PhysRevA.49.2181.

141. J. Carlsson, P. Jönsson, L. Sturesson, and C. Froese Fischer. "Lifetimes and transition probabilities of the boron atom calculated with the active-space multiconfiguration Hartree-Fock method".
In: *Phys. Rev. A* 49 (1994), pp. 3426–3431. DOI: 10.1103/PhysRevA.49.3426.

142. C. Froese Fischer. "Allowed transitions and intercombination lines in C III and C II".
In: *Phys. Scr.* 49 (1994), pp. 323–330. DOI: 10.1088/0031-8949/49/3/011.

143. C. Froese Fischer. "Lifetime of $2s2p^23s\ {}^3P$ in N II and other allowed triplet transitions".
In: *Z. Phys. D* 32 (1994), pp. 21–25. DOI: 10.1007/BF01425918.

144. C. Froese Fischer. "Transition probabilities in O III". In: *Phys. Scr.* 49 (1994), pp. 51–61. DOI: 10.1088/0031-8949/49/1/008.

145. C. Froese Fischer and P. Jönsson. "MCHF calculations for atomic properties". In: *Comput. Phys. Commun.* 84 (1994), pp. 37–58. DOI: 10.1016/0010-4655(94)90202-X.

146. C. Froese Fischer, M. Tong, M. Bentley, Z.-C. Shen, and C. Ravimohan. "A distributed-memory implementation of the MCHF atomic structure package". In: *J. Supercomputing* 8 (1994), pp. 117–134. DOI: 10.1007/BF01204658.

147. C.Froese Fischer. "Lifetime of $2s2p^2 3s\ ^3P$ in N II and other allowed". In: *Zeitschrift für Physik D-Atoms Molecules and Clusters* 32.1 (1994), pp. 21–26.

148. P. Jönsson and C. Froese Fischer. "Large-scale multiconfiguration Hartree-Fock and configuration-interaction calculations of isotope shifts and hyperfine structures in boron". In: *Phys. Rev. A* 50 (1994), pp. 3080–3088. DOI: 10.1103/PhysRevA.50.3080.

149. P. Jönsson, S. G. Johansson, and C. Froese Fischer. "Accurate calculation of the isotope shift and hyperfine structure in the boron (B II) line at 1362 Å". In: *Astrophys. J.* 429 (1994), pp. L45–L48. DOI: 10.1086/187409.

150. A. Stathopoulos and C. Froese Fischer. "A Davidson program for finding a few selected extreme eigenpairs of a large, sparse, real, symmetric matrix". In: *Computer Physics Communications* 79.2 (1994), pp. 268–290.

151. M. Tong, C. Froese Fischer, and L. Sturesson. "Systematic transition probability studies for neutral nitrogen". In: *J. Phys. B* 27 (1994), pp. 4819–4828. DOI: 10.1088/0953-4075/27/20/003.

152. T. Brage and C. Froese Fischer. "Systematic calculations of correlation in complex ions". In: *Phys. Scr.* T47 (1993), pp. 18–28. DOI: 10.1088/0031-8949/1993/T47/002.

153. T. Brage, C. Froese Fischer, and N. Vaeck. "MCHF calculations of autoionization widths in two- and three-electron systems". In: *J. Phys. B* 26 (1993), pp. 621–640. DOI: 10.1088/0953-4075/26/4/006.

154. T. Brage, C. Froese Fischer, N. Vaeck, M. Godefroid, and A. Hibbert. "Core polarization in Ca I and Ca II". In: *Phys. Scr.* 48 (1993), pp. 533–545. DOI: 10.1088/0031-8949/48/5/006.

155. T. Brage, G. Merkelis, and C. Froese Fischer. "Ab initio calculations for intercombination and resonance lines in P II". In: *Phys. Lett. A* 174 (1993), pp. 111–115. DOI: 10.1016/0375-9601(93)90551-A.

156. S. J. Chakravorty, S. R. Gwaltney, E. R. Davidson, F. A. Parpia, and C. Froese Fischer. "Ground-state correlation energies for atomic ions with 3 to 18 electrons". In: *Phys. Rev. A* 47.5 (1993), p. 3649.

157. C. Froese Fischer. "Convergence studies of MCHF calculations for Be and Li^-". In: *J. Phys. B* 26 (1993), pp. 855–861. DOI: 10.1088/0953-4075/26/5/009.

158. C. Froese Fischer and T. Brage. "A program for computing autoionization properties". In: *Comput. Phys. Commun.* 74 (1993), pp. 381–398. DOI: 10.1016/0010-4655(93)90021-4.

159. C. Froese Fischer and F. A. Parpia. "Accurate spline solutions of the radial Dirac equation". In: *Physics Letters A* 179.3 (1993), pp. 198–204.

160. C. Froese Fischer, L. Smentek-Mielczarek, N. Vaeck, and G. Miecznik. "A program to compute isotope shifts in atomic spectra". In: *Comput. Phys. Commun.* 74 (1993), pp. 415–431. DOI: 10.1016/0010-4655(93)90023-6.

161. P. Jönsson, C.-G. Wahlström, and C. Froese Fischer. "A program for computing magnetic dipole and electric quadrupole hyperfine constants from MCHF wavefunctions". In: *Comput. Phys. Commun.* 74 (1993), pp. 399–414. DOI: 10.1016/0010-4655(93)90022-5.

162. G. Miecznik, T. Brage, and C. Froese Fischer.
"Autoionization studies of the 1s2s2p $^4P_{5/2}$ levels in He^-, Li I, and Be II".
In: *Phys. Rev. A* 47 (1993), pp. 3718–3723. DOI: 10.1103/PhysRevA.47.3718.

163. G. Miecznik, T. Brages, and C. Froese Fischer.
"Autoionization studies of the $1s2s2p\ ^4P_{5/2}$ levels in He^-, Li I, and Be II".
In: *Phys. Rev. A* 47.5 (1993), p. 3718.

164. A. Stathopoulos and C. Froese Fischer. "Reducing synchronization on the parallel Davidson method for the large, sparse, eigenvalue problem". In: *Supercomputing'93. Proceedings*. IEEE. 1993, pp. 172–180.

165. L. Sturesson and C. Froese Fischer.
"LSGEN - a program to generate configuration-state lists of LS-coupled basis functions".
In: *Comput. Phys. Commun.* 74 (1993), pp. 432–440. DOI: 10.1016/0010-4655(93)90024-7.

166. M. Tong, P. Jönsson, and C. Froese Fischer. "Convergence studies of atomic properties from variational methods: total energy, ionization energy, specific mass shift, and hyperfine parameters".
In: *Phys. Scr.* 48 (1993), pp. 446–453. DOI: 10.1088/0031-8949/48/4/009.

167. H. A.Schuessler et al. "Isotope shifts and hyperfine-structure-splitting constants of the 4d-5p transition of Kr i i at λ= 729 nm". In: *Phys. Rev. A* 45.9 (1992), p. 6459.

168. M. Bentley and C. Froese Fischer.
"Hypercube conversion of serial codes for atomic structure calculations".
In: *Parallel Computing* 18.9 (1992), pp. 1023–1031.

169. T. Brage and C. Froese Fischer. "Core polarization effects on oscillator strengths in neutral zinc".
In: *Phys. Scr.* 45 (1992), pp. 43–48. DOI: 10.1088/0031-8949/45/1/007.

170. T. Brage, C. Froese Fischer, and G. Miecznik.
"Non-variational, spline-Galerkin calculations of resonance positions and widths, and photodetachment and photo-ionization cross sections for H^- and He".
In: *J. Phys. B* 25 (1992), pp. 5289–5314. DOI: 10.1088/0953-4075/25/24/010.

171. Z. Cai, V. M. Umar, and C. Froese Fischer.
"Large-scale relativistic correlation calculations: Levels of Pr^{+3}".
In: *Physical review letters* 68.3 (1992), p. 297.

172. J. Carlsson, P. Jönsson, and C. Froese Fischer. "Large multiconfigurational Hartree-Fock calculations on the hyperfine-structure constants of the ^{7}Li $2s\ ^2S$ and $2p\ ^2P$ states".
In: *Phys. Rev. A* 46.5 (1992), p. 2420.

173. J. Carlsson, P. Jönsson, L. Sturesson, and C. Froese Fischer.
"Time-Resolved laser spectroscopy studies of hyperfine structure constants in sodium".
In: *Phys. Scr.* 46 (1992), pp. 394–398. DOI: 10.1088/0031-8949/46/5/003.

174. D. A. Church et al. "Collision spectroscopy of low-energy-beam U^{5+} ions".
In: *JOSA B* 9.12 (1992), pp. 2159–2162.

175. C. Froese Fischer and T. Brage. "Contributions to the electron affinity of calcium and scandium".
In: *Can. J. Phys.* 70 (1992), pp. 1283–1290. DOI: 10.1139/p92-209.

176. C. Froese Fischer, W. Guo, and Z. Shen.
"Spline methods for multiconfiguration Hartree-Fock calculations".
In: *Int. J. Quantum Chem.* 42 (1992), pp. 849–867. DOI: 10.1002/qua.560420422.

177. G. Miecznik, T. Brage, and C. Froese Fischer.
"Autodetachment of the nsnp^2 $^4P_{1/2}$ states in negative ions".
In: *J. Phys. B* 25 (1992), pp. 4217–4228. DOI: 10.1088/0953-4075/25/20/017.

178. G. Miecznik, T. Brage, and C. Froese Fischer. "Transition energies and probabilities in high-spin states of the boron sequence and an electron affinity for negative beryllium".
In: *Phys. Scr.* 45 (1992), pp. 436–444. DOI: 10.1088/0031-8949/45/5/005.

179. F. A. Parpia, M. Tong, and C. Froese Fischer.
"Relativistic calculations of nuclear motional effects in many-electron atoms".
In: *Phys. Rev. A* 46.7 (1992), p. 3717.

180. N. Vaeck, M. Godefroid, and C. Froese Fischer.
"Core-Valence correlation effects on E1 and E2 decay rates in Ca^+".
In: *Phys. Rev. A* 46 (1992), pp. 3704–3716. DOI: 10.1103/PhysRevA.46.3704.

181. T. Andersen, T. Brage, C. Froese Fischer, and L. Eg. Sørensen.
"Core-excited quintet states in Mg I". In: *J. Phys. B* 24 (1991), p. 905.
DOI: 10.1088/0953-4075/24/5/014.

182. T. Brage and C. Froese Fischer. "Autodetachment of negative ions".
In: *Phys. Rev. A* 44 (1991), pp. 72–79. DOI: 10.1103/PhysRevA.44.72.

183. E. R. Davidson, S. A. Hagstrom, S. J. Chakravorty, V. M. Umar, and C. Froese Fischer.
"Ground-state correlation energies for two- to ten-electron atomic ions".
In: *Phys. Rev. A* 44.11 (1991), p. 7071.

184. C. Froese Fischer. "A configuration interaction program".
In: *Comput. Phys. Commun.* 64 (1991), pp. 473–485. DOI: 10.1016/0010-4655(91)90139-C.

185. C. Froese Fischer. "Concurrent vector algorithms for spline solutions of the helium pair equation".
In: *Int. J. High Performance Computing Applications* 5.1 (1991), pp. 5–20.

186. C. Froese Fischer. "MCHF atomic-structure package: Support libraries and utilities".
In: *Comput. Phys. Commun.* 64 (1991), pp. 399–405. DOI: 10.1016/0010-4655(91)90134-7.

187. C. Froese Fischer. "The MCHF atomic-structure package".
In: *Comput. Phys. Commun.* 64 (1991), pp. 369–398. DOI: 10.1016/0010-4655(91)90133-6.

188. C. Froese Fischer and M. R. Godefroid.
"Programs for computing LS and LSJ transitions from MCHF wave functions".
In: *Comput. Phys. Commun.* 64 (1991), pp. 501–519. DOI: 10.1016/0010-4655(91)90141-7.

189. C. Froese Fischer, M. R. Godefroid, and A. Hibbert.
"A program for performing angular integrations for transition operators".
In: *Comput. Phys. Commun.* 64 (1991), pp. 486–500. DOI: 10.1016/0010-4655(91)90140-G.

190. C. Froese Fischer and J. E. Hansen. "Photodetachment Cross-Section for Ca".
In: *Phys. Rev. A* 44 (1991), pp. 1559–1564.

191. C. Froese Fischer and B. Liu. "A program to generate configuration-state lists".
In: *Comput. Phys. Commun.* 64 (1991), pp. 406–416. DOI: 10.1016/0010-4655(91)90135-8.

192. A. Hibbert and C. Froese Fischer. "A general program for computing angular integrals of the non-relativistic Hamiltonian with non-orthogonal orbitals".
In: *Comput. Phys. Commun.* 64 (1991), pp. 417–420. DOI: 10.1016/0010-4655(91)90136-9.

193. A. Hibbert, R. Glass, and C. Froese Fischer.
"A general program for computing angular integrals of the Breit-Pauli Hamiltonian".
In: *Comput. Phys. Commun.* 64 (1991), pp. 455–472. DOI: 10.1016/0010-4655(91)90138-B.

194. C. Froese Fischer. "Multitasking the Davidson algorithm for the large, sparse eigenvalue problem".
In: *Int. J. Supercomputer Applications and High Performance Engineering* 3.4 (1990), pp. 28–53.

195. C. Froese Fischer. "Variational predictions of transition energies and electron affinities: He and Li ground states and Li, Be, and Mg core-excited states". In: *Phys. Rev. A* 41 (1990), pp. 3481–3488.
DOI: 10.1103/PhysRevA.41.3481.

196. C. Froese Fischer and W. Guo.
"Spline algorithms for the Hartree-Fock equation for the helium ground state".
In: *J. Comput. Phys.* 90 (1990), pp. 486–496. DOI: 10.1016/0021-9991(90)90176-2.

197. C. Froese Fischer and W. Guo.
"Spline algorithms for the Hartree-Fock equation for the helium ground state".
In: *Journal of Computational Physics* 90.2 (1990), pp. 486–496.

198. C. Froese Fischer and M. Idrees. "Spline methods for resonances in photoionisation cross sections". In: *J. Phys. B* 23 (1990), pp. 679–691. DOI: 10.1088/0953-4075/23/4/002.

199. J. O. Gaardsted, T. Brage, C. Froese Fischer, and D. Sonnek. "Experimental and theoretical study of core-excited states of Al III". In: *Phys. Scr.* 42 (1990), p. 543. DOI: 10.1088/0031-8949/42/5/007.

200. C. Froese Fischer. "Binding energies for p-electrons in negative alkaline-earth elements". In: *Phys. Rev. A* 39.3 (1989), p. 963.

201. C. Froese Fischer. "Correlation in negative ions". In: *Physica Scripta* 40.1 (1989), p. 25.

202. C. Froese Fischer and D. Chen. "Numerical multiconfiguration Hartree-Fock calculations for $nsnp$ ^3P states of Rb and Cs negative ions". In: *Journal of Molecular Structure: TheoChem* 199 (1989), pp. 61–73.

203. C. Froese Fischer and M. Idrees. "Autoionization rates for core excited ^5P states in Na^-". In: *Physica Scripta* 39.1 (1989), p. 70.

204. C. Froese Fischer and M. Idrees. "Spline algorithms for continuum functions". In: *Computers in Physics* 3.3 (1989), pp. 53–58.

205. V. M. Umar and C. Froese Fischer. "Multitasking the Davidson Algorithm for the Large, Sparse Eigenvalue Problem". In: *Int. J. High Perform Comp. Appl.* 3 (1989), pp. 28–53. DOI: 10.1177/109434208900300404.

206. C. Froese Fischer. "Accurate oscillator strengths". In: *Nucl. Instrum. Methods Phys. Res. B* 31 (1988), p. 265. DOI: 10.1016/0168-583X(88)90427-2.

207. C. Froese Fischer and J. E. Hansen andi B. R. Judd. "Interpretation by orthogonal operators of Hartree–Fock analyses for Fe VI $3d^24p$". In: *JOSA B* 5.12 (1988), pp. 2446–2451.

208. C. Froese Fischer, N. S. Scott, and J. Yoo. "Multitasking the calculation of angular integrals on the CRAY-2 and CRAY X-MP". In: *Parallel Computing* 8.1 (1988), pp. 385–390.

209. A. Hibbert, C. Froese Fischer, and M. R. Godefroid. "Non-orthogonal orbitals in MCHF or configuration interaction wave functions". In: *Computer physics communications* 51.3 (1988), pp. 285–293.

210. H. P. Saha, C. Froese Fischer, and P. W. Langhoff. "Numerical multiconfiguration Hartree-Fock studies of atomic photoionization cross sections: Dynamical core-polarization effects in atomic sodium". In: *Phys. Rev. A* 38.3 (1988), p. 1279.

211. T. Brage, C. Froese Fischer, J. Carlsson, and C.-G. Wahlström. "Lifetimes and oscillator strength trends for the $4s^2nd$ ^2D series of Ga I". In: *Phys. Rev. A* 35 (1987), pp. 1113–1118. DOI: 10.1103/PhysRevA.35.1113.

212. C. Froese Fischer. "Citation-Classic: A Multi-Configuration Hartree-Fock Program". In: *Current Contents: Physical Chemical& Earth Sciences* 13 (1987), pp. 14–14.

213. C. Froese Fischer. "General Hartree-Fock program". In: *Comput. Phys. Commun.* 43 (1987), pp. 355–365. DOI: 10.1016/0010-4655(87)90053-1.

214. C. Froese Fischer. "Perturbers in the $(^2D)nd$ $^3P^\circ$ Rydberg series of sulfur". In: *J. Phys. B* 20 (1987), pp. 4365–4374. DOI: 10.1088/0022-3700/20/17/016.

215. C. Froese Fischer. "The 2p-3s transitions in atomic oxygen". In: *J. Phys. B* 20 (1987), pp. 1193–1202. DOI: 10.1088/0022-3700/20/6/008.

216. C. Froese Fischer, J. B. Lagowski, and S. H. Vosko. "Ground states of Ca^- and Sc^- from two theoretical points of view". In: *Physical review letters* 59.20 (1987), p. 2263.

217. C. Froese Fischer and H. P. Saha. "Photoionization of magnesium". In: *Can. J. Phys.* 65 (1987), pp. 772–776. DOI: 10.1139/p87-113.

218. S. Mannervik, H. Cederquist, I. Martinson, T. Brage, and C. Froese Fischer. "1s2s2p^2 ^{5}P–1s2p^3 ^{5}S transition in B II". In: *Phys. Rev. A* 35 (1987), pp. 3136–3138. DOI: 10.1103/PhysRevA.35.3136.

219. J. C. Morrison and C. Froese Fischer. "Multiconfiguration Hartree-Fock method and many-body perturbation theory: A unified approach". In: *Phys. Rev. A* 35.6 (1987), p. 2429.

220. H. P. Saha and C. Froese Fischer. "Multiconfiguration Hartree-Fock calculations of the oscillator strength for the 2s2p ^{1}P° → 2p^2, 2snd ^{1}D (n=3-6) transitions in beryllium". In: *Phys. Rev. A* 35 (1987), pp. 5240–5243. DOI: 10.1103/PhysRevA.35.5240.

221. T. Brage, L. Engström, and C. Froese Fischer. "Correlation in the 2*snd* Rydberg series of F VI". In: *Phys. Rev. A* 34.5 (1986), p. 4399.

222. J. Carlsson et al. "Experimental and theoretical investigation of radiative lifetimes in neutral gallium". In: *Z. Phys. D* 3 (1986), pp. 345–351. DOI: 10.1007/BF01437190.

223. C. Froese Fischer. "Energy levels and lifetimes for some core-excited quartet states in Na I and Mg II". In: *Phys. Rev. A* 34 (1986), pp. 1667–1676. DOI: 10.1103/PhysRevA.34.1667.

224. C. Froese Fischer. "Self-Consistent-Field (SCF) and multiconfiguration (MC) Hartree-Fock (HF) methods in atomic calculations: Numerical integration approaches". In: *Comput. Phys. Reports* 3 (1986), pp. 274–325. DOI: 10.1016/0167-7977(86)90001-8.

225. C. Froese Fischer and M. Godefroid. "Multi-configuration Hartree-Fock plus Breit-Pauli results for some forbidden transitions". In: *J. Phys. B* 19 (1986), pp. 137–148. DOI: 10.1088/0022-3700/19/2/004.

226. C. Froese Fischer and B. Liu. "Energy levels, lifetimes, wavelengths, and transition probabilities of Fe XIV". In: *At. Data Nucl. Data Tables* 34 (1986), pp. 261–277. DOI: 10.1016/0092-640X(86)90004-5.

227. C. Froese Fischer and J. E. Hansen. "MCHF calculations for ^{1}S and ^{1}P Rydberg states in Ca I". In: *J. Phys. B* 18 (1985), pp. 4031–4046. DOI: 10.1088/0022-3700/18/20/007.

228. C. Froese Fischer and H. P. Saha. "Multiconfiguration Hartree-Fock results with Breit-Pauli corrections for transitions in the carbon sequence". In: *Phys. Scr.* 32 (1985), pp. 181–194. DOI: 10.1088/0031-8949/32/3/004.

229. M. Godefroid and C. Froese Fischer. "Relativistic and correlation effects on the lifetimes of 3s4p ^{3}P°$_J$ levels in Mg-like sulfur and chlorine". In: *Phys. Scr.* 31 (1985), pp. 237–245. DOI: 10.1088/0031-8949/31/4/004.

230. C. Froese Fischer and H. P. Saha. "MCHF+BP results for electric dipole transitions in the oxygen isoelectronic sequence". In: *J. Phys. B* 17 (1984), pp. 943–952. DOI: 10.1088/0022-3700/17/6/009.

231. M. Godefroid and C. Froese Fischer. "MCHF-BP fine-structure splittings and transition rates for the ground configuration in the nitrogen sequence". In: *J. Phys. B* 17 (1984), pp. 681–692. DOI: 10.1088/0022-3700/17/5/008.

232. M. Agentoft, T. Andersen, C. Froese Fischer, and L. Smentek-Mielczarek. "Photon emission from core-excited Be I and Be II states". In: *Phys. Scr.* 28 (1983), pp. 45–50. DOI: 10.1088/0031-8949/28/1/006.

233. K. T. Cheng and C. Froese Fischer. "Collapse of the 4f orbital for Xe-like ions". In: *Phys. Rev. A* 28 (1983), pp. 2811–2819. DOI: 10.1103/PhysRevA.28.2811.

234. C. Froese Fischer. "Multiconfiguration Hartree-Fock Breit-Pauli results for ^{2}P$_{1/2}$-^{2}P$_{3/2}$ transitions in the boron sequence". In: *J. Phys. B* 16 (1983), pp. 157–165. DOI: 10.1088/0022-3700/16/2/005.

235. C. Froese Fischer and H. P. Saha. "Multiconfiguration Hartree-Fock results with Breit-Pauli corrections for forbidden transitions in the $2p^4$ configuration".
In: *Phys. Rev. A* 28 (1983), pp. 3169–3178. DOI: 10.1103/PhysRevA.28.3169.

236. C. Froese Fischer and L. Smentek-Mielczarek. "MCHF evaluation of the specific mass shift".
In: *J. Phys. B* 16.19 (1983), p. 3479.

237. S. Chung, C. C. Lin, C. F. Fischer, and E. T. P. Lee.
"Transition probability of the $^1S_0$-$^1D_2$ emission of atomic oxygen".
In: *J. Chem. Phys.* 76 (1982), pp. 498–501. DOI: 10.1063/1.442751.

238. C. Froese Fischer. "Correlation and the $^5F - ^3F$ energy separation in Ti".
In: *The Journal of Chemical Physics* 76.4 (1982), pp. 1934–1937.

239. C. Froese Fischer. "Energy levels and lifetimes for some quartet states of Be II".
In: *Phys. Rev. A* 26 (1982), pp. 2627–2638. DOI: 10.1103/PhysRevA.26.2627.

240. C. Froese Fischer and K-T. Cheng.
"A note on estimating the $1s3d\ ^1D$ exact, non-relativistic total energy for helium".
In: *J. Phys. B* 15.3 (1982), p. 337.

241. C. Froese Fischer and M. Godefroid. "Lifetime trends for the n=3 singlet states in the Mg sequence".
In: *Nucl. Instrum. Methods Phys. Res.* 202 (1982), pp. 307–322.
DOI: 10.1016/0167-5087(82)90411-2.

242. C. Froese Fischer and M. R. Godefroid. "Short-range interactions involving plunging configurations of the $n = 3$ singlet complex in the Mg sequence". In: *Physica scripta* 25.2 (1982), p. 394.

243. C. Froese Fischer. "Lifetimes of low-lying $^2P^\circ$, ^2D, and $^2F^\circ$ states of the Al I isoelectronic sequence".
In: *Phys. Scr.* 23 (1981), p. 38. DOI: 10.1088/0031-8949/23/1/006.

244. C. Froese Fischer and J. E. Hansen. "Comparison of multichannel-quantum-defect theory and multi-configuration Hartree-Fock wave functions for alkaline-earth atoms".
In: *Phys. Rev. A* 24.1 (1981), p. 631.

245. C. Froese Fischer. "Oscillator-Strength trends in the presence of level crossings".
In: *Phys. Rev. A* 22 (1980), pp. 551–556. DOI: 10.1103/PhysRevA.22.551.

246. C. Froese Fischer. "Theoretical Energy Levels of $^3F^o$ Rydberg Series for Mg I, Al II, and Si III".
In: *Physica Scripta* 21.3-4 (1980), p. 466.

247. C. Froese Fischer and R. Glass.
"The effect of correlation in the $3d^n$ core on the resonance transition in Cu II".
In: *Phys. Scr.* 21 (1980), pp. 525–526. DOI: 10.1088/0031-8949/21/3-4/046.

248. C. Froese Fischer. "Oscillator strengths for some D-F transitions in the Mg sequence".
In: *J. Opt. Soc. Am.* 69 (1979), pp. 118–125. DOI: 10.1364/JOSA.69.000118.

249. C. Froese Fischer and J. E. Hansen. "$4s4d\ ^1D$-$4p^2\ ^1D$ interaction in the Zn I isoelectronic sequence".
In: *Phys. Rev. A* 19 (1979), p. 1819. DOI: 10.1103/PhysRevA.19.1819.

250. C. Froese Fischer. "A general multi-configuration Hartree-Fock program".
In: *Computer Physics Communications* 14.1 (1978), pp. 145–153.

251. C. Froese Fischer. *Energy levels and gf-values for Fe XIV*. Technical Report.
The Pennsylvania State University, Department of Computer Science, 1978.

252. C. Froese Fischer. "Numerical solution of general Hartree-Fock equations for atoms".
In: *Journal of Computational Physics* 27.2 (1978), pp. 221–240.

253. C. Froese Fischer. "The $4s\ ^2S$-$4p\ ^2P$ transition of the Al sequence".
In: *Can. J. Phys.* 56 (1978), pp. 983–988. DOI: 10.1139/p78-130.

254. C. Froese Fischer and J. E. Hansen.
"Theoretical oscillator strengths for the resonance transitions in the Zn I isoelectronic sequence".
In: *Phys. Rev. A* 17 (1978), p. 1956. DOI: 10.1103/PhysRevA.17.1956.

255. C. Froese Fischer and D. Ridder. "Levels of $2p^5 3p^5$ in Ar^{2+}". In: *J. Phys. B* 11.13 (1978), p. 2267.

256. C. Froese Fischer. "Oscillator strengths for ^{2}S-^{2}P transitions in the copper sequence". In: *J. Phys. B* 10 (1977), p. 1241. DOI: 10.1088/0022-3700/10/7/013.

257. R. J. S. Crossley, L. J. Curtis, and C. Froese Fischer. "Discrepancies between theoretical and experimental atomic oscillator strengths of the sodium isoelectronic sequence resonance transition". In: *Phys. Lett. A* 57 (1976), pp. 220–222. DOI: 10.1016/0375-9601(76)90042-6.

258. C. Froese Fischer. "A Z-dependent representation of the transition integral". In: *Phys. Scr.* 14 (1976), pp. 269–272. DOI: 10.1088/0031-8949/14/6/004.

259. C. Froese Fischer. "Oscillator strengths for the ^{2}P-^{2}D transitions of the Al I sequence". In: *Can. J. Phys.* 54 (1976), pp. 740–747. DOI: 10.1139/p76-084.

260. C. Froese Fischer. "Z-dependence of correlation effects and f-values in the sodium isoelectronic sequence". In: *Can. J. Phys.* 54 (1976), pp. 1465–1481. DOI: 10.1139/p76-174.

261. C. Froese Fischer, J. E. Hansen, and M. Barwell. "Ab initio results for V I and Cr I". In: *J. Phys. B* 9 (1976), p. 1841. DOI: 10.1088/0022-3700/9/11/010.

262. C. Froese Fischer. "A correlation study of Li ground state by the MCHF procedure". In: *Int. J. Quantum Chem.* 9.2 (1975), pp. 273–285.

263. C. Froese Fischer. "Theoretical oscillator strengths for $nP \rightarrow nD$ transitions in Mg". In: *Can. J. Phys.* 53 (1975), pp. 184–191. DOI: 10.1139/p75-026.

264. C. Froese Fischer. "Theoretical oscillator strengths for $nS \rightarrow mP$ transitions in Mg". In: *Can. J. Phys.* 53 (1975), pp. 338–342. DOI: 10.1139/p75-043.

265. C. Froese Fischer and K. M. S. Saxena. "A new version of AAKF (Reduced Tensor Matrix Elements) adapted to spectroscopic notation". In: *Computer Physics Communications* 9.6 (1975), pp. 370–380.

266. C. Froese Fischer and K. M. S. Saxena. "Correlation study of Be $1s^2 2s2p\ ^1P$ by a separated-pair numerical multi-configuration Hartree-Fock procedure". In: *Phys. Rev. A* 12.6 (1975), p. 2281.

267. C. Froese Fischer and K. M. S. Saxena. "Oscillator strengths from numerical MCHF radial functions". In: *Comput. Phys. Commun.* 9 (1975), pp. 381–391. DOI: 10.1016/0010-4655(75)90018-1.

268. C. Froese Fischer and K. M. S. Saxena. "Oscillator strengths from numerical MCHF radial functions". In: *Computer Physics Communications* 9.6 (1975), pp. 381–391.

269. W. S. Tan and C. Froese Fischer. "Monotone matrices arising from application of finite difference methods to boundary value problems not necessarily of class M". In: *Utilitas Mathematica* 7 (1975), pp. 59–72.

270. C. Froese Fischer. "A multiconfiguration Hartree-Fock approach to atomic structure calculations". In: *Int. J. Quantum Chem.* 8.S8 (1974), pp. 5–15. DOI: 10.1002/qua.560080804.

271. C. Froese Fischer. "Correlation effects important for accurate oscillator strengths". In: *J. Phys. B* 7 (1974), p. L91. DOI: 10.1088/0022-3700/7/4/002.

272. C. Froese Fischer. "The effect of correlation on excitation probability Kr $4p^6$ – Rb^+ $4p^5 5p$ following β-decay". In: *Zeitschrift für Physik* 266.3 (1974), pp. 161–165. DOI: 10.1007/BF01668834.

273. C. Froese Fischer and K. M. S. Saxena. "Correlation study of Be $1s^2 2s^2$ by a separated-pair numerical multiconfiguration Hartree-Fock procedure". In: *Phys. Rev. A* 9.4 (1974), pp. 1498–1506. ISSN: 1050-2947. DOI: 10.1103/PhysRevA.9.1498.

274. C. Froese Fischer. "A critical review of programs in atomic structure for bound states". In: *Computer Physics Communications* 5.2 (1973), pp. 147–152.

275. C. Froese Fischer. "Average-energy-of-configuration Hartree-Fock results for the atoms helium to radon". In: *Atomic Data and Nuclear Data Tables* 12.1 (1973), pp. 87–99.

276. C. Froese Fischer. "Brillouin's theorem for excited $(nl)^q(n'l)^{q'}$ configurations". In: *J. Phys. B* 6.10 (1973), p. 1933.

277. C. Froese Fischer. "Multi-Configuration Hartree-Fock Correlation Study of $1s2s\ ^1S$". In: *Canadian Journal of Physics* 51.11 (1973), pp. 1238–1243.

278. C. Froese Fischer. "Oscillator strengths for $3d^n4s \rightarrow 3d^n4p$ transitions in the iron series". In: *J. Quant. Spectrosc. Radiat. Transfer* 13 (1973), pp. 201–207. DOI: 10.1016/0022-4073(73)90134-9.

279. C. Froese Fischer. "The solution of Schrödinger's equation for two-electron systems by an MCHF procedure". In: *Journal of Computational Physics* 13.4 (1973), pp. 502–521.

280. C. Froese Fischer and D. W. B. Prentice. "Exact evaluation of Slater integrals using ALTRAN, a symbol manipulation language". In: *Computer Physics Communications* 6.4 (1973), pp. 157–164.

281. C. Froese Fischer. "A multi-configuration Hartree-Fock program with improved stability". In: *Computer Physics Communications* 4 (1972), pp. 107–116.

282. C. Froese Fischer. "Iterative solution of the Hartree-Fock equations with improved stability". In: *Journal of Computational Physics* 10.2 (1972), pp. 211–223.

283. C. Froese Fischer. "Term dependence of Hartree-Fock results for some $nln'l$ configurations". In: *J. Phys. B* 5.7 (1972), p. 1302.

284. C. Froese Fischer. "Some Hartree-Fock Results for $(3d + 4s)^{q+1}$ Configurations". In: *Canadian Journal of Physics* 49.9 (1971), pp. 1205–1210.

285. C. Froese Fischer. "Some Hartree-Fock results for $(3d + 4s)^{q+1}$ configurations". In: *Canadian Journal of Physics* 49.9 (1971), pp. 1205–1210. ISSN: 0008-4204.

286. C. Froese Fischer. "The deferred difference correction for the Numerov method". In: *Computer Physics Communications* 2.2 (1971), pp. 124–126.

287. C. Froese Fischer. "A comparison of multi-configuration Hartree-Fock and configuration interaction results for the ^1D series of Mg". In: *J. Phys. B* 3.6 (1970), p. 779.

288. C. Froese Fischer. "A Multiconfiguration Hartree-Fock program". In: *Computer Physics Communications* 1 (1969), pp. 151–166.

289. C. Froese Fischer and R. A. Usmani. "Properties of some tridiagonal matrices and their application to boundary value problems". In: *SIAM Journal of Numerical Analysis* 6.1 (1969), pp. 127–. ISSN: 0036-1429. DOI: 10.1137/0706014.

290. C. Froese Fischer. "Configuration mixing in the Al sequence". In: *J. Quant. Spectrosc. Radiat. Transfer* 8 (1968), p. 755. DOI: 10.1016/0022-4073(68)90187-8.

291. C. Froese Fischer. "Numerical Hartree-Fock results for atoms Helium to Radon". In: *Canadian Journal of Physics* 46.20 (1968), pp. 2336–. ISSN: 0008-4204.

292. C. Froese Fischer. "Orthogonality assumption in Hartree-Fock approximation for $2p^n3p$ configurations". In: *Canadian Journal of Physics* 46.21 (1968), pp. 2435–&. ISSN: 0008-4204.

293. C. Froese Fischer. "Superposition of configuration results for Si II". In: *Astrophys. J.* 151 (1968), p. 759. DOI: 10.1086/149474.

294. C. Froese. "A comparison of spin-orbit parameters". In: *Canadian Journal of Physics* 45.4 (1967), pp. 1501–1505.

295. C. Froese. "Some Hartree-Fock oscillator strengths for highly ionized Fe and Si". In: *Bull. Astron. Inst. Netherlands* 19.1 (1967), pp. 86–89.

296. C. Froese. "Some Hartree-Fock results for two- and four-electron atomic systems". In: *J. Chem. Phys.* 47 (1967), pp. 4010–4015. DOI: 10.1063/1.1701568.

297. C. Froese. “Superposition of configuration results for oxygen”.
In: *Proc. Phys. Soc. (London)* 90 (1967), pp. 39–42. DOI: 10.1088/0370-1328/90/1/305.

298. C. Froese. “The orthogonality assumption in the Hartree-Fock approximation”.
In: *Canadian Journal of Physics* 45.1 (1967), pp. 7–12.

299. G. Malli and C. Froese.
“Diamagnetic susceptibilities calculated from numerical hartree-fock wave functions”.
In: *Int. J. Quantum Chem.* 1.S1 (1967), pp. 99–101.

300. G. Malli and C. Froese.
“Fermi contact interaction constants calculated from numerical hartree-fock wave functions”.
In: *Int. J. Quantum Chem.* 1.S1 (1967), pp. 111–114.

301. C. Froese. “Hartree-Fock parameters for the $2p^2$ C I sequence”.
In: *Astrophys. J.* 145 (1966), pp. 932–935. DOI: 10.1086/148833.

302. C. Froese. “Hartree-Fock parameters for the atoms helium to radon”.
In: *The Journal of Chemical Physics* 45.5 (1966), pp. 1417–1420.

303. C. Froese. “Hartree-Fock procedure for some nsn′s ^{1}S configurations”.
In: *Phys. Rev.* 150 (1966), pp. 1–6. DOI: 10.1103/PhysRev.150.1.

304. C. Froese and A. B. Underhill. “gf-Values for lines of the Si II spectrum”.
In: *Astrophys. J.* 146 (1966), pp. 301–303. DOI: 10.1086/148885.

305. C. Froese. “Effect of configuration interaction on transition integral”.
In: *Astrophysical Journal* 141.3 (1965), pp. 1206–&. ISSN: 0004-637X. DOI: 10.1086/148208.

306. C. Froese. “Hartree-Fock results for some excited states of O^{+2}, O^+, and Ne^+”.
In: *Phys. Rev.* 137 (1965), p. A1644. DOI: 10.1103/PhysRev.137.A1644.

307. C. Froese. “Oscillator strengths for the $3s^23p\ ^2$P-$3s3p^2\ ^2$S transition in Al I”.
In: *Astrophys. J.* 141 (1965), pp. 1557–1559. DOI: 10.1086/148244.

308. C. Froese. “The effect of configuration interaction on the transition integral”.
In: *Astrophys. J.* 141 (1965), pp. 1206–1221. DOI: 10.1086/148208.

309. C. Froese.
“Z-dependent comparison of the unrestricted and conventional Hartree-Fock approximation”.
In: *Phys. Rev.* 140.5A (1965), A1489–A1494. DOI: 10.1103/PhysRev.140.A1489.

310. C. Froese. “Some multiplet strengths for transitions in Fe XVI and Fe XV”.
In: *Astrophys. J.* 140 (1964), p. 361. DOI: 10.1086/147924.

311. C. Froese. “Limiting Screening Numbers and Energy Parameters”.
In: *Canadian Journal of Physics* 41.1 (1963), pp. 50–56.

312. C. Froese. “Numerical solution of the Hartree-Fock equations”.
In: *Canadian Journal of Physics* 41.11 (1963), pp. 1895–1910.

313. C. Froese. “On Solving y”= fy+ g with a boundary condition at infinity”.
In: *Mathematics of Computation* 16.80 (1962), pp. 492–494.

314. P. A. D. de Maine, M. M. de Maine, and C. Froese.
“Iodine complexes in inert solvents: Part XIII. The system: Iodine-benzene-CCl4”.
In: *Journal of Molecular Spectroscopy* 8.1 (1962), pp. 373–382.

315. C Froese. “An evaluation of Runge-Kutt type methods for higher order differential equations”.
In: *Journal of the ACM* 8.4 (1961), pp. 637–&. ISSN: 0004-5411. DOI: 10.1145/321088.321101.

316. C. Froese.
“Initial Estimates for Self-Consistent Field Calculations for Atoms with Large Atomic Number”.
In: *Phys. Rev.* 116.4 (1959), p. 900.

317. C. Froese. “Limiting Behaviour of Atomic Wave Functions for Large Atomic Number. III”.
In: *Proc. Roy. Soc. (London) Series A.* 251.1267 (1959), pp. 534–535.

318. C. Froese. “On the calculation of the velocity of sound in sea water”.
In: *Canadian Journal of Physics* 37.6 (1959), pp. 775–779.

319. C. Froese. “The limiting behaviour of atomic wave functions for large atomic number. II”.
In: *Proc. Roy. Soc. (London) Series A.* 244.1238 (1958), pp. 390–397.

320. C. Froese. “The limiting behaviour of atomic wave functions for large atomic number”.
In: *Proc. Roy. Soc. (London) Series A.* 239.1218 (1957), pp. 311–319.

321. C. Froese. “The self-consistent field with exchange for some 10 and 12 electron systems”.
In: *Proc. Camb. Phil. Soc.* 53.01 (1957), pp. 206–213.

322. C. Froese.
“The Self-Consistent Field with Exchange for the Ground State and First Excited State of Fe+ 13”.
In: *Monthly Notices of the Royal Astro. Soc.* 117.6 (1957), pp. 615–621.

323. C. Froese.
“The self-consistent field with exchange for the ground state and first excited state of Fe^{+13}”.
In: *Mon. Not. R. Astron. Soc.* 117 (1957), p. 615.

324. C. Froese and DR Hartree. “Wave functions for the normal states of Ne^{+3} and Ne^{+4}”.
In: *Proc. Camb. Phil. Soc.* 53.03 (1957), pp. 663–668.

325. T. E. Hull and C Froese. “Asymptotic behaviour of the inverse of a Laplace transform.”
In: *Canadian Journal of Mathematics* 7 (1955), pp. 116–125.

326. J. R. Wait and C. Froese. “Reflection of a transient electromagnetic wave at a conducting surface”.
In: *Journal of Geophysical Research* 60.1 (1955), pp. 97–103.

327. C. Froese and J. R. Wait.
“Calculated Diffraction Patterns of Dielectric Rods at Centimetric Wavelengths”.
In: *Canadian Journal of Physics* 32.12 (1954), pp. 775–781.