Updated August 2019 **RESUME OF HENK F. ARNOLDUS**

Curriculum Vitae

Full name : Hendrik François Arnoldus
Date of Birth : November 7, 1955
Nationality : Dutch
Citizenship : U.S.A. and The Netherlands
Address : Department of Physics and Astronomy, Mississippi State University, P.O. Drawer 5167, Mississippi State, MS 39762-5167, USA
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Bachelor's in Physics (summa cum laude): Eindhoven University of Technology, The Netherlands, May 7, 1980

Master's in Physics (summa cum laude): Eindhoven University of Technology, The Netherlands, October 21, 1981
Thesis: *Electric multipole matrix elements for heavy ion collisions*, Supervisor: Dr. B. J. Verhaar

PhD in Mathematics and Natural Sciences: Utrecht University, The Netherlands, November 6, 1985
Dissertation: *Stochastic processes in atomic fluorescence*, Supervisor: Dr. Gerard Nienhuis

Research Assistant
Solid state physics, Eindhoven University of Technology, The Netherlands, 1980
Nuclear physics, Eindhoven University of Technology, The Netherlands, 1981
Experimental perception research, Institute for Perception Research, Eindhoven, The Netherlands, 1981

Teaching Assistant
Utrecht University, The Netherlands, Physics Department, 1981-1985, both graduate and undergraduate courses

Post-doc
State University of New York at Buffalo, Department of Physics and Astronomy, 1985-1988
Supervisor: Dr. Thomas F. George

Faculty
Assistant Professor, Villanova University, Department of Physics, 1988-1994
Assistant Professor, Mississippi State University, Department of Physics and Astronomy, 1994-1997
Associate Professor, Mississippi State University, Department of Physics and Astronomy, 1997-2011
Tenure received: August 1999
Professor, Mississippi State University, Department of Physics and Astronomy, 2011-present

Editor: *International Journal of Theoretical Physics, Group Theory and Nonlinear Optics*, 1999-2010

Senior Member: Optical Society of America, 2010 - present

Graduate Coordinator for Physics: January 2015 - present

Advising

Students graduated

1. Xin Li, Master's in Physics, non-thesis option, December 2008

2. Jie Shu, Master's in Physics, non-thesis option, May 2009

3. Ruiyuan Mu, Master's in Physics, non-thesis option, December 2009

4. Xin Li, PhD in Engineering/Applied Physics, December 2010
   Dissertation: *Vortices in the near field of optical dipole radiation*

5. Shokir A. Pardaev, Master's in Physics, non-thesis option, December 2011

6. Talant A. Ruzmetov, Master's in Physics, non-thesis option, May 2012

7. Azmi A. Al-Masalha, Master's in Physics, non-thesis option, May 2012

Thesis supervised

Xin Li, Master's in Physics, Department of Physics, Beijing Institute of Technology, June 2008
Thesis: *Nanoscale structure of the energy flow lines for dipole radiation*

Advisor

1. Torsten Andersen, visiting PhD student from Aalborg University, Denmark, August 1996 - January 1997

2. Sungho Kim, PhD student, July 1998 - March 2002

3. Qiuhan Xue, PhD student, August 1998 - August 1999

4. Yu Lin, PhD student, August 2001 - July 2002

5. Renat R. Letfullin, visiting post-doc from the Lebedev Physics Institute of the Russian Academy of Sciences, Samara branch, Russia, July 2002 - December 2004

6. Jie Shu, MS student, August 2007 - May 2009

7. Xin Li, MS/PhD student, October 2007 - December 2010

8. Ruiyuan Mu, MS student, August 2009 - December 2009

9. Shokir A. Pardaev, MS student, December 2009 - December 2011

10. Talant A. Ruzmetov, MS student, January 2010 - May 2012

11. Azmi A. Al-Masalha, MS/PhD student, August 2010 - March 2012

12. Zhangjiu Xu, MS/PhD student, August 2014 - present

13. Herve Sanghapi, PhD-Eng student, January 2015 - May 2017, former student of Dave Monts

14. Abdullah Altayar, MS student, January 2015 - January 2016; signed with me for research since he did not have an advisor

15. Nur Azizah, MS student, January 2015 - May 2105, default advisor as graduate coordinator

16. Chet Bhatt, MS student with me (actually Jagdish P. Singh, but he retired; Chet still works with him), September 2015.

17. Charles Ghany, PhD student with me (actually Jagdish P. Singh, but he retired; Charles still works with him), October 2015 - December 2016

18. Bader Alfarraj, PhD student with me (actually Jagdish P. Singh, but he retired; Bader still works with him), October 2015 - December 2017

19. Rommal Whitefoot, MS student, August 2014 - May 2016, default as graduate coordinator

20. Satam Alotibi, MS student with Matt Berg. He cannot be Major Professor, since he left. March 2017.

21. Chet Bhatt, PhD student with me (actually Jagdish P. Singh, but he retired; Chet still works with him), September 2015 - May 2018.

22. Supriya Nagpal, MS student (formerly of Gombojav), October 2018 - Present

Graduate Advisory Committee Member

1. Michel E. Okhuysen, PhD student, February 2002 - ?, left the program

2. Sungho Kim, PhD student of Seong-Gon Kim, April 2002 - July 2005

3. Armstrong E. Mbi, MS student, February 2006 - October 2007

4. Yanci Zhang, PhD student, March 2006 - February 2008

5. Sergey V. Ilyushkin, PhD student, February 2008 - May 2010

6. Jarrod C. Marsh, MS student of Wenchao Ma, March 2009 - May 2010

7. Peeyush Sahay, MS student of Chuji Wang, March 2010 - June 2010

8. Qurat-Ul Ann Ijaz, PhD student of Wenchao Ma, March 2010 - October 2011

9. Chamini S. Herath, MS student, October 2010

10. Jarrod C. Marsh, PhD student of Wenchao Ma, May 2010 - August 2013

11. Nimisha Srivastava, PhD student of Chuji Wang, May 2011 - October 2011

12. Mieko Kanai, MS student of Matthew Berg, August 2011 - December 2011

13. Nava R. Subedi, MS student of Matthew Berg, August 2011 - January 2014
14. Jehan Seneviratne, MS student, August 2011 - May 2013
15. Pavan Kumar Srungaram, MS student, January 2012 - October 2012
16. Charles Vaughan, MS student, March 2012 - May 2012
17. Wen Jing, MS student of Matthew Berg, March 2012 - October 2013
18. Alali Haifa, MS student of Chuji Wang, April 2012 - March 2014
19. Robertsen A. Riehle, MS student (in Mathematics Department) of John Woody, January 2012 - August 2013
20. Wei Wu, MS student of Chuji Wang, October 2012
21. Wei Wu, PhD student of Chuji Wang, October 2012 - March 2016
22. Malik Kaya, PhD student of Chuji Wang, January 2013 - June 2013
23. Peeyush Sahay, PhD student of Chuji Wang, January 2013 - October 2013
24. Jonathan Fili, MS student of Bohimir Jelinek, August 2014 - May 2015, left the program
25. Herve Sanghapi, MS student of Jaghdish Singh, August 2012 - September 2014
26. William Taylor Cordell, minor MS in Physics, November 2012 - ?
27. Maryam Rahmani, minor MS in Physics, September 2015 - December 2016
28. Yipeng Jiang, MS-thesis with Dutta, September 2015 - October 2015
29. Nava R. Subedi, PhD student of Matthew Berg, January 2014 - December 2016
30. John Madsen, undergraduate with Dutta, research thesis, February 2016 - April 2016
31. James Tracy, PhD student with Winger, February 2016 - December 2016
32. Jehan Seneviratne, PhD student with Matt Berg, February 2016 - present
33. Charles Ghany, PhD student of Singh, February 2016 - December 1016
34. Akshay Vaghani, PhD student of Rupak, March 2016 – August 2017
35. Che Fuh, MS student of Wang, July 2016 - March 2017
36. Durga Siwakoti, MS student of Winger, August 2016 - September 2016
37. Godfred Inkoom, MS student of Novotny, September 2016
38. Godfred Inkoom, PhD student of Novotny, March 2017 - December 2017
39. Adam Powers, MS student of Gombojav, April 2017 - May 2017

40. Maheshwar Ghimire, PhD student of Wang, July 2017 - March 2018

41. Prakash Adhikari, MS non-thesis, PhD student of Gombojav, September 2017

42. Che Fuh, PhD student of Wang, September 2017 - March 2018

43. Pubuduni Ekanayaka, MS non-thesis, PhD students of Wang, January 2018 - March 2018

44. Dinesh Thapa, MS non-thesis, PhD student of Kim, February 2018

45. Sylvester Agbemava, MS non-thesis, PhD student of Afanasjev, February 2017

46. Fatemah Alharthi, MS-thesis, student of Gombojav, July 2018 - March 2019

47. Supriya Nagpal, MS-thesis, student of Gombojav, August 2018 - March 2019

48. Zhiyong Gong, PhD student of Wang, September 2018 - present

49. Pradeepa Premarathna, PhD student of Rupak, October 2018 - present

50. Shirsendu Nanda, MS non-thesis, student of Dutta, January 2019 - March 2019

51. Dipayan Roy, MS non-thesis, PhD student of Clay, February 2019 - March 2019

52. Bipin Lamichhane, MS non-thesis, PhD student of Kim, February 2019 - October 2019

53. Ahmad Taninah, MS non-thesis, PhD student of Afanasjev, Fall 2019

54. Bhavika Bhalgamiya, MS non-thesis, PhD student of Novotny, Fall 2019

Miscellaneous

Sigma-Xi Scientific Research Society, Outstanding Graduate Student Performance, Master of Science Program. Co-winners: Jie Shu and Xin Li, April 9, 2009

Publications

Pdf's of most publications can be found at http://hfa1.physics.msstate.edu

1. H. F. Arnoldus and G. Nienhuis, Journal of Physics B: Atomic and Molecular Physics **16** (1983) 2325-2337, *Collisional redistribution of intense phase-fluctuating radiation*

2. H. F. Arnoldus and G. Nienhuis, Optica Acta **30** (1983) 1573-1585, *Conditions for sub-poissonian photon statistics and squeezed states in resonance fluorescence*

3. H. F. Arnoldus and G. Nienhuis, Optics Communications **48** (1984) 322-326, *Correlated statistics of photons in the components of the fluorescence triplet*

4. H. F. Arnoldus. Computer Physics Communications **32** (1984) 421-437, *Radial electric multipole matrix elements for inelastic collisions in atomic and nuclear physics*

5. H. F. Arnoldus, CPC Program Library (1984), Queen's University of Belfast, N. Ireland, Catalogue number: ACCM, *Subroutine CLMINT*

6. H. F. Arnoldus, Computer Physics Communications **33** (1984) 347-352, *Numerical stabilization of recurrence relations with the vanishing solutions*

7. D. Dieks, H. F. Arnoldus and G. Nienhuis, Physics Letters **103A** (1984) 27-31, *Sub-poissonian statistics as an experimental test for the contextuality of quantum theory*

8. H. F. Arnoldus and G. Nienhuis, Journal of Physics B: Atomic and Molecular Physics **17** (1984) 963-977, *Photon correlations between the lines in the spectrum of resonance fluorescence*

9. H. F. Arnoldus and G. Nienhuis, Journal of Physics B: Atomic and Molecular Physics **18** (1985) 1109-1124, *Effects of an arbitrary laser lineshape on fluorescence radiation, redistributed by collisions*

10. H. F. Arnoldus and G. Nienhuis, Optics Communications **54** (1985) 95-99, *Photon statistics of atomic fluorescence, induced by a gaussian laser field*

11. H. F. Arnoldus and G. Nienhuis, Journal of Physics A: Mathematical and General **19** (1986) 1629-1643, *Initial correlations of the multiplicative process, driven by random jumps*

12. H. F. Arnoldus and G. Nienhuis, Journal of Physics B: Atomic and Molecular Physics **19** (1986) 873-881, *Atomic response to the Lorentz wave*

13. H. F. Arnoldus and G. Nienhuis, Optica Acta **33** (1986) 691-702, *Photon statistics of fluorescence radiation*

14. H. F. Arnoldus and G. Nienhuis, Journal of Physics B: Atomic and Molecular Physics **19** (1986) 2421-2433, *Atomic fluorescence in a mode-hopping laser field*

15. Henk F. Arnoldus, Sander van Smaalen and Thomas F. George, Physical Review B **34** (1986) 6902-6911, *Thermal relaxation of adsorbed atoms in an intense laser field*

16. Sander van Smaalen, Henk F. Arnoldus and Thomas F. George, Physical Review B **35** (1987) 1142-1146, *Laser-heating of a transparent crystal via adsorbed atoms*

17. Henk F. Arnoldus and Thomas F. George, Journal of the Optical Society of America B **4** (1987) 195-200, *Laser-linewidth effects on the photon-phonon conversion rate at a gas-solid interface*

18. Henk F. Arnoldus and Thomas F. George, Journal of Mathematical Physics **28** (1987) 340-346, *Multiplicative stochastic processes involving the time derivative of a Markov process*

19. Henk F. Arnoldus and Thomas F. George, Physical Review A **35** (1987) 2080-2088, *Probe absorption by an atom in a strong finite-linewidth laser field*

20. Sander van Smaalen, Andre Peremans, Henk F. Arnoldus and Thomas F. George, Spectrochimica Acta **43A** (1987) 201-205, *Dynamics of a laser-irradiated adatom*

21. Henk F. Arnoldus and Thomas F. George, Physical Review B **35** (1987) 5955-5963, *Role of coherences in the relaxation of adsorbates*

22. Henk F. Arnoldus, Daniel Jelski and Thomas F. George, Journal of Mathematical Physics **28** (1987) 1069-1074, *Confinement and redistribution of charges and currents on a surface by external fields*

23. Henk F. Arnoldus and Thomas F. George, Journal of Physics B: Atomic and Molecular Physics **20** (1987) 2203-2216, *Collisional redistribution beyond the medium-coupling limit*

24. Henk F. Arnoldus and Thomas F. George, Physical Review B **36** (1987) 2987-2995, *Non-Markovian line shapes of physisorbed atoms on a crystal*

25. Henk F. Arnoldus and Thomas F. George, Journal of Chemical Physics **87** (1987) 4263-4272, *Quantum theory of atomic fluorescence near a metal surface*

26. Henk F. Arnoldus and Thomas F. George, Journal of Mathematical Physics **28** (1987) 2731-2738, *Correlation functions in finite memory-time reservoir theory*

27. Henk F. Arnoldus and Thomas F. George, Physical Review A **37** (1988) 761-769, *Spontaneous decay and atomic fluorescence near a metal surface or an absorbing dielectric*

28. Henk F. Arnoldus and Thomas F. George, Physical Review A **37** (1988) 770-779, *Correlations between photons in resonance fluorescence, emitted by an atom near a metal surface*

29. Henk F. Arnoldus and Thomas F. George, Journal of Physics B: Atomic, Molecular and Optical Physics **21** (1988) 431-446, *Surface-enhanced correlations between polarised photons in resonance fluorescence*

30. Henk F. Arnoldus and Thomas F. George, Physical Review Letters **60** (1988) 1487-1489, *Memory-induced extra resonances of adsorbates*

31. Henk F. Arnoldus and Thomas F. George, Physical Review B **38** (1988) 978-986, *Line shape of an atom-crystal bond*

32. Henk F. Arnoldus, P. T. Leung and Thomas F. George, Kvantovaya Elektronika **15** (1988) 1161-1167, *Приповерхностная флуоресценция* (in Russian), Translated into English in: Soviet Journal of Quantum Electronics **18** (1988) 740-743, *Fluorescence at a surface*

33. Henk F. Arnoldus, Sander van Smaalen and Thomas F. George, Lasers, Molecules and Methods, Advances in Chemical Physics **73** (1989), 679-713 (chapter 15), invited contribution, Eds. J. O. Hirschfelder, R. E. Wyatt and R. D. Coalson (Wiley, New York), *Interaction of an adsorbed atom with a laser*

34. Henk F. Arnoldus and Thomas F. George, Surface Science **205** (1988) 617-636, *Symmetries of spontaneous decay for atoms near any surface*

35. Henk F. Arnoldus, Thomas F. George, Kai-Shue Lam, J. F. Scipione, Paul L. DeVries and Jian-Min Yuan, Laser Applications in Physical Chemistry (1989) 329-375 (chapter 8), invited contribution, Ed. D. K. Evans (Marcel Dekker, New York), *Recent progress in the theory of laser-assisted collisions*

36. Henk F. Arnoldus and Thomas F. George, Journal of the Optical Society of America B **6** (1989) 30-35, *Fresnel coefficients for a phase conjugator*

37. Henk F. Arnoldus and Thomas F. George, Journal of Modern Optics **36** (1989) 31-51, *Light scattering by a phase conjugator in the four-wave mixing configuration*

38. Thomas F. George and Henk F. Arnoldus, Comments on Atomic and Molecular Physics **24** (1990) 109-117, invited article, *Observation of atomic relaxation near an interface through detection of emitted fluorescence*

39. Henk F. Arnoldus and Thomas F. George, Physical Review A **43** (1991) 591-592 (Brief Reports), *Detection of three-photon relaxation of an atom near a phase conjugator through absorption measurements*

40. Henk F. Arnoldus and Thomas F. George, Physical Review A **43** (1991) 3675-3689, *Phase-conjugated fluorescence*

41. Henk F. Arnoldus and Thomas F. George, Physical Review A **43** (1991) 6156-6161, *Heisenberg approach to photon emission near a phase conjugator*

42. Henk F. Arnoldus and Thomas F. George, Journal of Physics B: Atomic, Molecular and Optical Physics **24** (1991) 2653-2664, *Resonance fluorescence spectrum of an atom near a phase conjugator*

43. Henk F. Arnoldus and Thomas F. George, Journal of Modern Optics **38** (1991) 1429-1439, *Spectral and temporal distribution of phase-conjugated fluorescent photons*

44. Henk F. Arnoldus, Thomas F. George and Chung I. Um, Journal of the Korean Physical Society **24** (1991) S91-S95, *Statistics of fluorescent photons emitted near a phase conjugator*

45. Henk F. Arnoldus and Thomas F. George, Trends in Chemical Physics **1** (1991) 349-355, invited review article, Ed. J. Menon (Research Trends, Trivandrum, India), *Phonon relaxation and line shapes of adsorbates*

46. Henk F. Arnoldus and Thomas F. George, Journal of Mathematical Physics **33** (1992) 578-583, *Analytical evaluation of elastic Coulomb integrals*

47. Henk F. Arnoldus and Thomas F. George, Optics Communications **87** (1992) 127-133, *Conditions for sub-poissonian photon statistics in phase conjugated resonance fluorescence*

48. Henk F. Arnoldus and Thomas F. George, Journal of Quantum Nonlinear Phenomena **1** (1992) 95-116, *Spontaneous decay of an atom near a phase conjugator*

49. Henk F. Arnoldus and Thomas F. George, Physical Review A **46** (1992) 679-681 (Brief Reports), *Fluctuations and squeezing in resonance fluorescence emitted near a phase conjugator*

50. Thomas F. George, Henk F. Arnoldus and Chung I. Um, Journal of the Korean Physical Society **26** (1993) 128-136, *Spontaneous decay near a metal surface*

51. Henk F. Arnoldus and Thomas F. George, Physical Review A **48** (1993) 3910-3915, *Probe absorption spectrum of a laser-driven atom near a phase conjugator*

52. Henk F. Arnoldus, Journal of Modern Optics **41** (1994) 503-516, *Time evolution of radiation in a damped cavity*

53. Henk F. Arnoldus, Condensed Matter News **3** (1994) 9-14, invited overview article, *Optical phase conjugation*

54. Henk F. Arnoldus and Thomas F. George, Physical Review A **51** (1995) 4250-4263, *Theory of optical phase conjugation in Kerr media*

55. Henk F. Arnoldus and Thomas F. George, Physica A **222** (1995) 330-346, *Squeezing in resonance fluorescence and Schrödinger's uncertainty relation*

56. Henk F. Arnoldus, Journal of the Optical Society of America B **13** (1996) 1099-1106, *Density matrix for photons in a cavity*

57. Henk F. Arnoldus and Thomas F. George, Journal of Physical Chemistry **100** (1996) 19029-19034, *Permanent electronic excitation of a molecular layer on a surface through phase conjugation*

58. Henk F. Arnoldus and Thomas F. George, Nova Journal of Theoretical Physics **4** (1996) 261-285, *Molecular electronic transitions near a dielectric or metallic medium*

59. Henk F. Arnoldus and Thomas F. George, Trends in Chemical Physics **5** (1997) 81-86, invited review article (Research Trends, Trivandrum, India), *Optical properties of molecules near a phase-conjugating medium*

60. Henk F. Arnoldus and Thomas F. George, Recent Research Developments in Physical Chemistry **2** (1998) 283-294, invited review article, Ed. S. G. Pandalai (Transworld Research Network, Trivandrum, India), *Theoretical studies of atom-surface spectroscopy*

61. Henk F. Arnoldus and Thomas F. George, Computational Studies of New Materials (1999) 351-374, invited article, Eds. Daniel A. Jelski and Thomas F. George (World Scientific, Singapore), *Phase conjugation through four-wave mixing*

62. Henk F. Arnoldus, Surface Science **444** (2000) 221-235, *Atomic linewidths and line shifts near a dielectric layer, and the limit of a semi-infinite medium*

63. Henk F. Arnoldus, Optics Communications **182** (2000) 381-391, *Temporal correlations between photon detections from damped single-mode radiation*

64. Alain J. Phares and Henk F. Arnoldus, International Journal of Theoretical Physics, Group Theory and Nonlinear Optics **7** (2000) 1-13, *Overview of the combinatorics function technique*
Reprinted in: Thomas F. George and Henk F. Arnoldus, editors, Theoretical Physics 2002, part 2, Horizons in World Physics, Vol. **243** (Nova Science Publishers, Hauppauge, New York, 2002) Part 5, pages 229-241

65. Henk F. Arnoldus, Journal of the Optical Society of America B **18** (2001) 547-555, *Representation of the near-field, middle-field and far-field electromagnetic Green's functions in reciprocal space*

66. Henk F. Arnoldus, Modern Topics in Chemical Physics (2002) 149-162, invited review article, Eds. Thomas F. George, Xin Sun and Guoping Zhang (Research Signpost, Kerala, India), *Nanoscale resolution of atomic and molecular radiation*

67. Valeri Z. Lozovski, Yuri V. Demidenko, Sergiy V. Kriuchenko and Henk F. Arnoldus, International Journal of Theoretical Physics, Group Theory and Nonlinear Optics **9** (2002) 1-38, *Spectroscopy of a molecular layer on the surface of a phase conjugator*

68. Henk F. Arnoldus and John T. Foley, Journal of the Optical Society of America A **19** (2002) 1701-1711, *Traveling and evanescent parts of the electromagnetic Green's tensor*

69. Henk F. Arnoldus and John T. Foley, Optics Communications **207** (2002) 7-15, *Uniform asymptotic approximation of the evanescent part of the Green's tensor*

70. Henk F. Arnoldus, Journal of Modern Optics **50** (2003) 755-770, *Transverse and longitudinal components of the optical self-, near-, middle- and far field*

71. Henk F. Arnoldus and John T. Foley, Journal of Modern Optics **50** (2003) 1883-1901, *Traveling and evanescent parts of the optical near field*

72. Henk F. Arnoldus and John T. Foley, Optics Letters **28** (2003) 1299-1301, *Spatial separation of the traveling and evanescent parts of dipole radiation*

73. Henk F. Arnoldus and John T. Foley, Optics Communications **231** (2004) 115-128, *The dipole vortex*

74. Henk F. Arnoldus and John T. Foley, Journal of the Optical Society of America A **21** (2004) 1109-1117, *Transmission of dipole radiation through interfaces and the phenomenon of anti-critical angles*

75. Henk F. Arnoldus, Advances in Imaging and Electron Physics, Vol. **132** (2004) 1-67, invited review article, Ed. Peter W. Hawkes (Elsevier Academic Press, New York), *Evanescent waves in the near- and the far field*

76. Henk F. Arnoldus and Thomas F. George, International Journal of Theoretical Physics, Group Theory and Nonlinear Optics **10** (2003) 285-369, *Phase conjugation in a layer of nonlinear material*

77. Henk F. Arnoldus, Surface Science **571** (2004) 173-186, *Power emitted by a multipole near an interface*

78. John T. Foley, Renat R. Letfullin and Henk F. Arnoldus, Tribute to Emil Wolf: Science and Engineering Legacy of Physical Optics (2004) Chapter 14, 289-317, Ed. Tomasz P. Jannson (SPIE Press, Bellingham, Washington), *The diffractive multifocal focusing effect*

79. Henk F. Arnoldus, Journal of the Optical Society of America A **22** (2005) 190-198, *Reflection and refraction of multipole radiation by an interface*

80. Henk F. Arnoldus and John T. Foley, Optics Communications **246** (2005) 45-56, *Highly-directed transmission of multipole radiation by an interface*

81. Henk F. Arnoldus, Journal of Modern Optics **52** (2005) 1215-1241, *Evanescent waves in the magnetic field of an electric dipole*

82. Henk F. Arnoldus, Optics Communications **252** (2005) 253-261, *Vortices in multipole radiation*

83. Henk F. Arnoldus, Surface Science **590** (2005) 101-116, *Angular spectrum representation of the electromagnetic multipole fields, and their reflection at a perfect conductor*

84. Henk F. Arnoldus and Thomas F. George, Phase Conjugation in a Layer of Nonlinear Material (Nova Science Publishers, Inc., Hauppauge, New York, 2005) **book**, 124 pages, ISBN 1-59454-557-X
Reprinted from: Henk F. Arnoldus and Thomas F. George, International Journal of Theoretical Physics, Group Theory and Nonlinear Optics **10** (2003) 285-369, *Phase conjugation in a layer of nonlinear material*, publication 76

85. John T. Foley, Renat R. Letfullin, Henk F. Arnoldus and Thomas F. George, International Journal of Theoretical Physics, Group Theory and Nonlinear Optics **11** (2004) 149-163, *The diffractive multifocal focusing effect and the phase of the optical field*
Reprinted in: Henk F. Arnoldus and Thomas F. George, editors, New Topics in Theoretical Physics, Horizons in World Physics, Vol. **258** (Nova Science Publishers, New York, 2007) Chapter 1, pages 1-15

86. Henk F. Arnoldus, Optics Communications **265** (2006) 52-59, *Conservation of charge at an interface*

87. Henk F. Arnoldus, Journal of the Optical Society of America A **23** (2006) 3063-3071, *Boundary conditions in an integral approach to scattering*

88. Henk F. Arnoldus, Surface Science **601** (2007) 450-459, *Surface currents on a perfect conductor, induced by a magnetic dipole*

89. Henk F. Arnoldus, Journal of Modern Optics **54** (2007) 45-66, *Reflection off a mirror*

90. Henk F. Arnoldus, Journal of the Optical Society of America A **25** (2008) 930-937, *Integral equation formulation for reflection by a mirror*

91. Henk F. Arnoldus, Optics Letters **33** (2008) 162-164, *Current density in a perfect mirror*

92. Henk F. Arnoldus, Xin Li and Jie Shu, Optics Letters **33** (2008) 1446-1448, *Sub-wavelength displacement of the far-field image of a radiating dipole*

93. Henk F. Arnoldus, Journal of Modern Optics **55** (2008) 1667-1682, *Current densities in an illuminated perfectly-conducting sheet*

94. Jie Shu, Xin Li and Henk F. Arnoldus, Journal of Modern Optics **55** (2008) 2457-2471, *Energy flow lines for the radiation emitted by a dipole*

95. Xin Li, Jie Shu and Henk F. Arnoldus, Optics Letters **33** (2008) 2269-2271, *Far-field detection of the dipole vortex*

96. Jie Shu, Xin Li and Henk F. Arnoldus, Journal of the Optical Society of America A **26** (2009) 395-402, *Nanoscale shift of the intensity distribution of dipole radiation*

97. Xin Li (李 昕), Jie Shu (舒 婕) and Henk F. Arnoldus, Chinese Optics Letters **7** (2009) 149-151, *Nanoscale displacement of the image of an atomic source of radiation*

98. Xin Li, Jie Shu and Henk F. Arnoldus, Optics Letters **34** (2009) 3595-3597, *Optical vortices and singularities due to interference in atomic radiation near a mirror*

99. Xin Li and Henk F. Arnoldus, Physics Letters A **374** (2010) 1063-1067, *Macroscopic far-field observation of the sub-wavelength near-field dipole vortex*

100. Xin Li and Henk F. Arnoldus, Physical Review A **81** (2010) 053844-1-053844-10, *Electric dipole radiation near a mirror*

101. Xin Li and Henk F. Arnoldus, Physics Letters A **374** (2010) 4479-4482, *Reversal of the dipole vortex in a negative index of refraction material*

102. Xin Li, Donna M. Pierce and Henk F. Arnoldus, Optics Letters **36** (2011) 349-351, *Redistribution of energy flow in a material due to damping*

103. Henk F. Arnoldus, International Journal of Theoretical Physics, Group Theory and Nonlinear Optics **14** (2011) 1-12, *Application of the Magnetic Field Integral Equation to diffraction and reflection by a conducting sheet*

104. Xin Li, Henk F. Arnoldus and Jie Shu, in Computational Studies of New Materials II: From Ultrafast Processes and Nanostructures to Optoelectronics, Energy Storage and Nanomedicine (2011), Chapter 14, 379-404, invited article, Eds. Thomas F. George, Daniel A. Jelski, Renat R. Letfullin and Guoping Zhang (World Scientific, Singapore) *Nanoscale resolution in the near and far field intensity profile of optical dipole radiation*

105. Xin Li, Donna M. Pierce and Henk F. Arnoldus, Journal of the Optical Society of America A **28** (2011) 778-785, *Damping of the dipole vortex*

106. Xin Li, Donna M. Pierce and Henk F. Arnoldus, in Electromagnetic Radiation (2012), Chapter 4, pages 79 - 106, invited article, Ed. Saad Osman Bashir (InTech, Croatia), ISBN: 978-953-51-0639-5, *Vortices in electric dipole radiation*
http://www.intechopen.com/books/electromagnetic-radiation/vortices-in-electric-dipole-radiation

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113. Xin Li and Henk F. Arnoldus, Physics Letters A **377** (2013) 2235-2238, *Fresnel coefficients for a layer of NIM*

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115. Henk F. Arnoldus, Franco Battaglia and Thomas F. George, The Journal of Physical Chemistry A **118** (2014) 6514 - 6520, Franco Gianturco Festschrift, invited article, *Photon statistics of resonance fluorescence in the limit of separated spectral lines*

116. Henk F. Arnoldus and Matthew J. Berg, Journal of Modern Optics **62** (2015) 244-254 (218-228 in online version), *Energy transport in the near field of an electric dipole near a layer of material*

117. Henk F. Arnoldus and Zhangjin Xu, Journal of the Optical Society of America A **33** (2016) 882 - 886, *Propagation of magnetic dipole radiation through a medium*

118. Henk F. Arnoldus, Xin Li and Zhangjin Xu, Journal of Modern Optics **63** (2016) 1068-1072, *The giant dipole vortex*

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121. Henk F. Arnoldus and Zhangjin Xu, Journal of Advanced Optics and Photonics **1** (2018) 143-155, *Emission of electric dipole radiation in between parallel mirrors* http://www.techscience.com/doi/10.3970/jaop.2018.903.858.html

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123. Henk F. Arnoldus and Zhangjin Xu, Journal of the Optical Society of America B **36** (8) (2019) F18-F24, *Force on an electric dipole near an ENZ interface*

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1. Henk F. Arnoldus and Thomas F. George, editors, Theoretical Physics 2001, Horizons in World Physics, Vol. **238** (Nova Science Publishers, Huntington, New York, 2002), 286 pages, ISBN 1-59033-243-1

2. Thomas F. George and Henk F. Arnoldus, editors, Theoretical Physics 2002, part 1, Horizons in World Physics, Vol. **239** (Nova Science Publishers, Hauppauge, New York, 2002), 220 pages, ISBN 1-59033-435-3

3. Thomas F. George and Henk F. Arnoldus, editors, Theoretical Physics 2002, part 2, Horizons in World Physics, Vol. **243** (Nova Science Publishers, Hauppauge, New York, 2002), 252 pages, ISBN 1-59033-722-0

4. Henk F. Arnoldus and Thomas F. George, *Monograph*, Phase Conjugation in a Layer of Nonlinear Material (Nova Science Publishers, Inc., Hauppauge, New York, 2005), 124 pages, ISBN 1-59454-557-X

5. Henk F. Arnoldus and Thomas F. George, editors, New Topics in Theoretical Physics, Horizons in World Physics, Vol. **258** (Nova Science Publishers, New York, 2007), 89 pages, ISBN 1-60021-355-3

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1. H. F. Arnoldus and G. Nienhuis, Spectral Line Shapes Vol. **3** (1985) 557-558, Edited by F. Rostas (W. de Gruyter & Co., Berlin - New York), Proceedings of the Seventh International Conference on Spectral Line Shapes, Aussois, France, June, 1984, *Correlations and statistics of photons in fluorescence radiation*

2. Henk F. Arnoldus and Thomas F. George, Spectral Line Shapes Vol. **4** (1987) 569-570, Edited by R. J. Exton (A. Deepak Publ., Hampton, Virginia, USA), Proceedings of the Eight International Conference on Spectral Line Shapes, Willamsburg, Virginia, June 9-13, 1986, *Sensitivity of atomic line shapes to the laser model*

3. Henk F. Arnoldus and Thomas F. George, Advances in Laser Science III (1988) 445-447, Optical Science and Engineering Series **9**, Edited by A. C. Tam, J. L. Gole and W. C. Stwalley, American Institute of Physics Conference Proceedings **172**, Proceedings of the Third International Laser Science Conference, Atlantic City, New Jersey, November 1-4, 1987, *Memory effects on infrared adsorbate spectra*

4. Henk F. Arnoldus and Thomas F. George, Proceedings of the Sixth Rochester Conference on Coherence and Quantum Optics (1989) 67-69, Edited by J. H. Eberly, L. Mandel and E. Wolf (Plenum, New York), *Extraordinary behavior of atoms near a phase conjugator*

5. Henk F. Arnoldus and Thomas F. George, Proceedings of the International School on Lasers and Applications, Part II, (1991) 154-175, Edited by A. K. Popov (L. V. Kirensky Institute of Physics, Siberian Branch of the USSR Academy of Sciences, Krasnoyarsk, USSR), *Interference phenomena in atomic emission near an interface: Pure classical effects in quantum radiation*

6. Henk F. Arnoldus and Thomas F. George, Quantum Electronics and Laser Science Conference, Technical Digest Series, Vol. **13** (Optical Society of America, Washington, DC, 1992) p. 76, *Spectral distribution of resonance fluorescence, emitted near a phase conjugator*

7. Henk F. Arnoldus, Thomas F. George and Rolf W. F. Gross, Quantum Electronics and Laser Science Conference, Technical Digest Series, Vol. **12** (Optical Society of America, Washington, DC, 1993) p. 113-114, *Absorption profile of a laser-driven atom near a phase conjugator*

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9. Henk F. Arnoldus, Proceedings of the Second International Workshop on Squeezed States and Uncertainty Relations, NASA Conference Publication 3219 (1993) 111-116, Edited by D. Han, Y. S. Kim and V. I. Man'ko, *Squeezing in phase-conjugated resonance fluorescence*

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11. Henk F. Arnoldus and Thomas F. George, Journal of the Mississippi Academy of Sciences, Vol. **40** (1995) 76, *Absorption profile of a laser-driven atom near a phase conjugator*

12. Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **40** (1995) 77, *Time dependence of the spectral distribution of radiation in a cavity*

13. Henk F. Arnoldus and Thomas F. George, Proceedings of the First International Autumn School/Conference "Solid State Physics: Fundamentals & Applications", National Academy of Sciences of Ukraine, Kiev Institute of Semiconductor Physics, Kiev, Ukraine (1994) L15-L26, Edited by E. Bortchagovsky, J. V. Gumenjuk-Sichevskaya and A. K. Kolezhuk, *Spectroscopy near a phase conjugator*

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16. Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **40** (1995) 2059, *Matrix elements of the density operator for radiation in a single-mode cavity at a finite temperature*

17. Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **41** (1996) 75, *Matrix elements of the density operator for radiation in a single-mode cavity at a finite temperature*

18. Valeri Z. Lozovsky and Henk F. Arnoldus, Notions and Perspectives of Nonlinear Optics (1996) 560-565, Edited by O. Keller (World Scientific, Singapore), Proceedings of the Third International Aalborg Summer School on Nonlinear Optics, Aalborg, Denmark, August 7-12, 1995, *The susceptibility of a molecular layer on the surface of a phase conjugator*

19. Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **41** (1996) 1670, *Atomic lifetimes near a dielectric or metal layer*

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23. Sungho Kim and Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **44** (1999) 94, *Theory of optical phase conjugation through four-wave mixing in a nonlinear crystal*

24. Qiuhan Xue and Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **44** (1999) 91, *The survival time of squeezed light in a single-mode cavity*

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27. Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **44** (1999) 13, *Correlated photon detections from cavity radiation*

28. Sungho Kim and Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **44** (1999) 13, *Theoretical study of optical phase conjugation in a nonlinear crystal*

29. Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **45** (2000) 29, *Splitting of the electromagnetic Green's function*

30. Renat R. Letfullin, Henk F. Arnoldus and John T. Foley, Proceedings of SPIE, Gas and Chemical Lasers and Intense Beam Applications IV, Vol. **4971**, 104-115 (Proc. of Photonics West 2003, January 25-31, 2003, San Jose, California, S. J. Davis and M. C. Heaven, editors), *Self-contained pulsed HF laser-amplifier with super-high output energy in a pulse*

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34. Renat R. Letfullin, Henk F. Arnoldus and John T. Foley, Proceedings of SPIE, Photonic Crystal Materials and Devices, Vol. **5000**, 276-286 (Proc. of Photonics West 2003, January 25-31, 2003, San Jose, California, A. Adibi, A. Scherer and S-Y. Lin, editors), *Diffractive photonic crystal fiber*

35. John T. Foley and Henk F Arnoldus, Proceedings of Frontiers in Optics/Laser Science XIX, the 87th Annual Meeting of the Optical Society of America, October 5-9, 2003, Tucson, Arizona, *Transmission of dipole radiation through interfaces and the phenomenon of anti-critical angles*

36. John T. Foley and Henk F Arnoldus, Proceedings of Frontiers in Optics/Laser Science XIX, the 87th Annual Meeting of the Optical Society of America, October 5-9, 2003, Tucson, Arizona, *Spatial separation of the traveling and evanescent parts of dipole radiation*

37. Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **52** (2007) 124, *The dipole vortex*

38. Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **53** (2008) 101, *The current density in a mirror*

39. Henk F. Arnoldus, Proceedings of the Optical Society of America Topical Conference on Nanophotonics 2008, May 26-29, 2008, Nanjing, P. R. China, *Nanoscale features of the current density in a mirror*

40. Xin Li and Henk F. Arnoldus, Proceedings of Frontiers in Optics/Laser Science XXV, Technical Digest (CD), paper FMF3, the 93th Annual Meeting of the Optical Society of America, October 11-15, 2009, San Jose, California, *Vortices in the near field of atomic radiation emitted near an interface*

41. Xin Li and Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **54** (2010) 29, *Vortices in dipole radiation near a mirror*

42. Zachary Schulz, Xin Li and Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **58**, no. 1 (2013) Abstract V1.00265, *Vortex strings in electric dipole radiation near a mirror*

43. George Hinerman, Henk F. Arnoldus and Xin Li, Bulletin of the American Physical Society, Vol. **59**, no. 1 (2014) Abstract C1.00271, *The energy flow of a linear dipole in a dielectric medium*

44. Kanan Grosklos, Xin Li and Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **60**, no. 4 (2015) Abstract T1.00006, *Dipole radiation interference patterns*

45. Zhangjin Xu and Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **62** (2017) 120, Abstract O10.13, *Electric dipole radiation in between parallel mirrors*

46. Zhangjin Xu and Henk F. Arnoldus, Bulletin of the American Physical Society, Vol. **62** (2017) Abstract F3.00001, *Energy flow of electric dipole radiation between parallel mirrors*

47. Zhangjin Xu and Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **63** (2018) 131, Abstract O10.09, *Reflection and transmission by an ENZ interface*

48. Zhangjin Xu and Henk F. Arnoldus, Journal of the Mississippi Academy of Sciences, Vol. **64** (2019) 120, Abstract O10.11, *Levitation and energy flow of a dipole near an ε-near-zero material*

Colloquia and Presentations

1. *Velocity measurements in a fluid bed with radioactive grains*
   Colloquium, August, 1977, Eindhoven University of Technology, Eindhoven, The Netherlands

2. *Energy-sudden and centrifugal-sudden approximations in DWBA calculations*
   Colloquium, August 30, 1978, Eindhoven University of Technology, Eindhoven, The Netherlands

3. *Quantum field theory of distinguishable identical particles*
   Colloquium, August, 1979, Eindhoven University of Technology, Eindhoven, The Netherlands

4. *Radial electric multipole matrix elements for inelastic heavy-ion collisions*
   Colloquium, October, 1981, Eindhoven University of Technology, Eindhoven, The Netherlands

5. *Collisional redistribution of intense finite-linewidth laser light*
   Colloquium, July, 1982, Institute for Atomic and Molecular Physics (AMOLF), Amsterdam, The Netherlands

6. *Recent progress in quantum optics*
   Colloquium, July, 1983, Utrecht University, Utrecht, The Netherlands

7. *Effects of the laser linewidth on the spectrum of resonance fluorescence*
   Meeting of the Dutch Physical Society (NNV), Section of Atomic and Molecular Physics
   Poster presentation, September 1983, The Netherlands

8. *Photon correlations and statistics in atomic fluorescence*
   Colloquium, June, 1984, Utrecht University, Utrecht, The Netherlands

9. *Correlations and statistics of photons in fluorescence radiation*
   Seventh International Conference on Spectral Line Shapes
   Poster presentation, June, 1984, Aussois, France

10. *Laser linewidth effects on resonance fluorescence*
    Workshop on Spectral Line Shapes
    Oral presentation, July, 1984, Laboratoire des Interactions Moleculaires et des Hautes Pressions, C. N. R. S., Villetaneuse (Paris), France

11. *Photon correlations of resonance fluorescence*
    Meeting of the Dutch Physical Society (NNV), Section of Atomic and Molecular Physics
    Poster presentation, September 1984, The Netherlands

12. *Photon statistics of resonance fluorescence*
    European Conference on Atomic and Molecular Physics
    Poster presentation, July 1984, Free University of Amsterdam, Amsterdam, The Netherlands

13. *Stochastic processes in atomic fluorescence*
    Colloquium, November, 1985, Utrecht University, Utrecht, The Netherlands

14. *Sensitivity of atomic line shapes to the laser model*
    Eight International Conference on Spectral Line Shapes
    Poster presentation, July 9-13, 1986, College of William and Mary, Williamsburg, Virginia

15. *Confinement of charges and currents on a surface by external fields*
Colloquium, August, 1986, State University of New York at Buffalo, Buffalo, New York

16. *Laser heating of a transparent crystal via adsorbed atoms*
Colloquium, September, 1986, State University of New York at Buffalo, Buffalo, New York

17. *Spectroscopy of adsorbates*
Colloquium, October, 1986, State University of New York at Buffalo, Buffalo, New York

18. *Current research in Tom George's group*
Presentation for sponsors, November 10, 1986, State University of New York at Buffalo, Buffalo, New York

19. *The physics in theory*
Seminar, February 20, 1987, State University of New York at Buffalo, Buffalo, New York

20. *Current research in Tom George's group*
Presentation for sponsors, June 30, 1987, State University of New York at Buffalo, Buffalo, New York

21. *Memory effects on infrared adsorbate spectra*
Third International Laser Science Conference
Oral presentation, November 1-4, 1987, Atlantic City, New Jersey

22. *Line shapes of adsorbates*
Presentation for sponsors, January 27, 1988, State University of New York at Buffalo, Buffalo, New York

23. *Memory-induced extra resonances of adsorbates*
Colloquium, February 18, 1988, Villanova University, Villanova, Pennsylvania

24. *Phase conjugation of atomic fluorescence*
Colloquium, September 8, 1988, Villanova University, Villanova, Pennsylvania

25. *Recent progress in the theory of optical phase conjugation by four-wave mixing*
Colloquium, March 31, 1989, Villanova University, Villanova, Pennsylvania

26. *Extraordinary behavior of atoms near a phase conjugator*
Sixth Rochester Conference on Coherence and Quantum Optics
Oral presentation, June 26-28, 1989, University of Rochester, Rochester, New York

27. *Quantum radiation*
Seminar, September 19, 1989, Villanova University, Villanova, Pennsylvania

28. *Phase conjugation*
Sigma Xi Lunchtime Seminar, January 23, 1991, Department of Mechanical Engineering, Villanova University, Villanova, Pennsylvania

29. *Time and frequency resolved phase-conjugated fluorescence*
Colloquium, January 24, 1991, Villanova University, Villanova, Pennsylvania

30. *Phase-conjugated fluorescence*
Colloquium, September 12, 1991, Drexel University, Philadelphia, Pennsylvania

31. *Phase conjugation*
Seminar, September 17, 1991, Villanova University, Villanova, Pennsylvania

32. *Statistics of fluorescent photons emitted near a phase conjugator*
Fifth Workshop on Statistical Physics
Invited Speaker, October 3-5, 1991, Korea University, Seoul, Korea

33. *Phase-conjugated fluorescence*
Colloquium, October 7, 1991, Chungbuk National University, Cheongju, Korea

34. *Recursion relations*
Seminar, February 18, 1992, Villanova University, Villanova, Pennsylvania

35. *Spectral distribution of resonance fluorescence, emitted near a phase conjugator*
Quantum Electronics and Laser Science Conference
Poster presentation, May 10-15, 1992, Anaheim Convention Center, Anaheim, California

36. *Phase-conjugated fluorescence*
Second International Workshop on Squeezed States and Uncertainty Relations
Invited Speaker, May 25-29, 1992, P. N. Lebedev Physical Institute of the Academy of Sciences of the U. S. S. R., Moscow, Russia

37. *Optical phase conjugation and its applications to resonance fluorescence*
Fifth International Topsøe Summer School on Nonlinear Optics
Invited Lecturer, August 3-8, 1992, University of Aalborg, Aalborg Ost, Denmark

38. *Spectroscopy near a phase conjugator*
Colloquium, September 23, 1992, University of Maryland at Baltimore County, Baltimore, Maryland

39. *Lie series*
Seminar, October 8, 1992, Villanova University, Villanova, Pennsylvania

40. *Squeezing of light*
Colloquium, November 5, 1992, Villanova University, Villanova, Pennsylvania

41. *Spectroscopy near a phase conjugator*
Colloquium, December 10, 1992, Lehigh University, Bethlehem, Pennsylvania

42. *Squeezing of light*
Seminar, January 11, 1993, Electronics Technology Center, Aerospace Corporation, Los Angeles, California

43. *Spectroscopy near a phase conjugator*
Quantum Electronics Seminar, January 13, 1993, Department of Electrical Engineering, University of Southern California, Los Angeles, California

44. *Absorption profile of a laser-driven atom near a phase conjugator*
Quantum Electronics and Laser Science Conference
Poster presentation, May 2-7, 1993, Baltimore Convention Center, Baltimore, Maryland

45. *Review of coherent states and squeezed states*
Colloquium, May 19, 1993, Villanova University, Villanova, Pennsylvania

46. *Spectroscopy near a phase conjugator*
Colloquium, May 26, 1993, University of Nevada at Reno, Reno, Nevada

47. *Correlated quadratures of resonance fluorescence and the generalized uncertainty relation*
Third International Workshop on Squeezed States and Uncertainty Relations
Invited Speaker, August 10-13, 1993, University of Maryland at Baltimore County, Baltimore, Maryland

48. *Spectroscopy near a phase conjugator*
Colloquium, March 24, 1994, California State University at Fullerton, Fullerton, California

49. *Spectral distribution of resonance fluorescence, emitted near a phase conjugator*
Annual Meeting of the Villanova Chapter of Sigma Xi (The Scientific Research Society)
Poster presentation, April 8, 1994, Villanova University, Villanova, Pennsylvania

50. *Absorption profile of a laser-driven atom near a phase conjugator*
Annual Meeting of the Villanova Chapter of Sigma Xi (The Scientific Research Society)
Poster presentation, April 8, 1994, Villanova University, Villanova, Pennsylvania

51. *Spectroscopy near a phase conjugator*
Colloquium, April 22, 1994, Mississippi State University, Starkville, Mississippi

52. *Spectroscopy near a phase conjugator*
First International Autumn School/Conference "Solid State Physics: Fundamentals & Applications"
Invited Lecturer, September 26 - October 4, 1994, Uzhgorod, Ukraine

53. *Absorption profile of a laser-driven atom near a phase conjugator*
Fifty-Ninth Annual Meeting of the Mississippi Academy of Sciences
Poster presentation, February 9-10, 1995, Biloxi, Mississippi

54. *Time dependence of the spectral distribution of radiation in a cavity*
Fifty-Ninth Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 9-10, 1995, Biloxi, Mississippi

55. *Spectroscopy near a phase conjugator*
Colloquium, September 26, 1995, University of Alabama at Huntsville, Huntsville, Alabama

56. *Matrix elements of the density operator for radiation in a single-mode cavity at a finite temperature*
Sixty-Second Meeting of the South Eastern Section of the American Physical Society
Oral presentation, November 9-11, 1995, Tallahassee, Florida

57. *Matrix elements of the density operator for radiation in a single-mode cavity at a finite temperature*
Sixtieth Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 22-23, 1996, Jackson, Mississippi

58. *Phase conjugation*
Seminar, April 8, 1996, Mississippi State University, Starkville, Mississippi

59. *Atomic lifetimes near a metal or dielectric layer*
Sixty-First Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 20-21, 1997, Biloxi, Mississippi

60. *Spectral distribution of radiation in a single-mode cavity at a finite temperature*
Annual Meeting of the Optical Society of America 1997
Oral presentation, October 12-17, 1997, Long Beach, California

61. *Spectroscopy near a phase conjugator*
Colloquium, February 18, 1998, The University of Memphis, Memphis, Tennessee

62. *The black-body level shift integral*
Sixty-Second Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 26-27, 1998, Biloxi, Mississippi

63. *Theoretical optics at MSU*
Seminar, September 30, 1998, Mississippi State University, Starkville, Mississippi

64. *Spectroscopy near a phase conjugator*
Colloquium, October 27, 1998, The University of Mississippi, Oxford, Mississippi

65. *Conditions for optimal narrowing of the photon distribution of a squeezed state*
Sixty-Third Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 25-26, 1999, Tupelo, Mississippi

66. *Combinatorial solution for the photon intensity correlations in a cavity at finite temperature*
Sixth International Conference on Squeezed States and Uncertainty Relations
Poster presentation, May 24-29, 1999, Napels, Italy

67. *Correlated photon detections from cavity radiation*
Sixty-Sixth Annual Meeting of the Southeastern Section of the American Physical Society
Oral presentation, November 7-9, 1999, Chapel Hill, North Carolina

68. *Splitting of the electromagnetic Green's function*
Sixty-Seventh Annual Meeting of the Southeastern Section of the American Physical Society
Oral presentation, November 2-4, 2000, Starkville, Mississippi

69. *The quantum nature of photons*
Tea-time talk, March 28, 2001, Mississippi State University, Starkville, Mississippi

70. *Computation of the Green's tensor*
Optics Seminar, April 16, 2002, Mississippi State University, Starkville, Mississippi

71. *Memory-induced extra resonance of adsorbates*
Optics Seminar, January 29, 2003, Mississippi State University, Starkville, Mississippi

72. *The dipole vortex*
Optics Seminar, April 20, 2004, Mississippi State University, Starkville, Mississippi

73. *The dipole vortex*
Seventy-First Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 21-23, 2007, Starkville, Mississippi

74. *The current density in a mirror*
Seventy-Second Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 20-22, 2008, Olive Branch, Mississippi

75. *Nanoscale features of the current density in a mirror*
    The Optical Society of America Topical Conference on Nanophotonics 2008
    Oral presentation, May 26-29, 2008, Nanjing, China

76. *Vortices in the near field of optical dipole radiation*
    Colloquium, March 4, 2009, Mississippi State University, Starkville, Mississippi

77. *Vortices in dipole radiation*
    Talk for: Physics Graduate Students Association, October 13, 2011, Mississippi State University, Starkville, Mississippi

78. *Reflection off a mirror*
    Colloquium, March 13, 2013, Millersville University, Millersville, Pennsylvania

Co-Author of Presentations by Others

1. *Interference phenomena in atomic emission near an interface: Pure classical effects in quantum radiation*
   Henk F. Arnoldus and Thomas F. George (presenting)
   International School on Lasers and Applications
   Oral presentation, 1991, Krasnoyarsk, USSR

2. *Molecular spectroscopy and dynamics modified by a metallic surface*
   Thomas F. George (presenting) and Henk F. Arnoldus
   Fifth International Topsøe Summer School on Nonlinear Optics
   Invited Lecturer (TFG), August 3-8, 1992, University of Aalborg, Aalborg Ost, Denmark

3. *Observation of sub-poissonian photon distributions in a laser amplifier combined with a high-gain four-wave Brillouin mirror*
   R. W. F. Gross (presenting) S. T. Amimoto, L. Garman-DuVall, T. Good and H. F. Arnoldus
   Conference on Lasers and Electro-Optics
   Poster presentation, May 2-7, 1993, Baltimore Convention Center, Baltimore, Maryland

4. *The susceptibility of a molecular layer on the surface of a phase conjugator*
   Valeri Z. Lozovsky (presenting) and Henk F. Arnoldus
   Third International Aalborg Summer School on Nonlinear Optics
   Oral presentation, August 7-12, 1995, Aalborg, Denmark

5. *Surface waves in a molecular layer at a surface of a phase conjugator*
   Henk Arnoldus, Yuri Demidenko and Valeri Z. Lozovski (presenting)
   International School-Conference for Young Scientists “Solid State Physics: Fundamentals & Applications”
   Oral presentation, June 14-22, 1997, Katsyveli, Crimea, Ukraine

6. *Theory of optical phase conjugation through four-wave mixing in a nonlinear crystal*
   Sungho-Kim (presenting) and Henk F. Arnoldus
   Sixty-Third Annual Meeting of the Mississippi Academy of Sciences
   Oral presentation, February 25-26, 1999, Tupelo, Mississippi

7. *The survival time of squeezed light in a single-mode cavity*
   Qiuhan Xue (presenting) and Henk F. Arnoldus
   Sixty-Third Annual Meeting of the Mississippi Academy of Sciences
   Oral presentation, February 25-26, 1999, Tupelo, Mississippi

8. *Theoretical study of optical phase conjugation in a nonlinear crystal*
   Sungho-Kim (presenting) and Henk F. Arnoldus
   Sixty-Sixth Annual Meeting of the Southeastern Section of the American Physical Society
   Oral presentation, November 7-9, 1999, Chapel Hill, North Carolina

9. *Self-contained pulsed HF laser-amplifier with super-high output energy in a pulse*
   Renat R. Letfullin (presenting), Henk F. Arnoldus and John T. Foley
   Photonics West 2003
   Oral presentation, January 25-31, San Jose, California

10. *Diffractive photonic-crystal pumping of power lasers*
    Renat R. Letfullin (presenting), Henk F. Arnoldus and John T. Foley
    Photonics West 2003
    Oral presentation, January 25-31, San Jose, California

11. *Compact self-contained pulsed HF laser based on an auto-wave photon-branched chain reaction*
    Renat R. Letfullin (presenting), Henk F. Arnoldus and John T. Foley
    Photonics West 2003
    Poster presentation, January 25-31, San Jose, California

12. *Giant energy gain in a pulsed HF laser based on a photon-branched chain reaction*
    Renat R. Letfullin (presenting), Henk F. Arnoldus and John T. Foley
    Photonics West 2003
    Poster presentation, January 25-31, San Jose, California

13. *Diffractive photonic crystal fiber*
    Renat R. Letfullin (presenting), Henk F. Arnoldus and John T. Foley
    Photonics West 2003
    Poster presentation, January 25-31, San Jose, California

14. *Transmission of dipole radiation through interfaces and the phenomenon of anti-critical angles*
    John T. Foley (presenting) and Henk F. Arnoldus
    Frontiers in Optics/Laser Science XIX, the 87th Annual Meeting of the Optical Society of America
    Oral presentation by Scott Carney, October 5-9, 2003, Tucson, Arizona

15. *Spatial separation of the traveling and evanescent parts of dipole radiation*
    John T. Foley (presenting) and Henk F. Arnoldus
    Frontiers in Optics/Laser Science XIX, the 87th Annual Meeting of the Optical Society of America
    Oral presentation by Scott Carney, October 5-9, 2003, Tucson, Arizona

16. *Vortices in the optical near field of an electric dipole*
    Jie Shu (presenting) and Henk F. Arnoldus
    Seventy-Second Annual Meeting of the Mississippi Academy of Sciences
    Oral presentation, February 20-22, 2008, Olive Branch, Mississippi

17. *Light propagation near a mirror*
    Xin Li (presenting) and Henk F. Arnoldus
    Seventy-Second Annual Meeting of the Mississippi Academy of Sciences
    Oral presentation, February 20-22, 2008, Olive Branch, Mississippi

18. *Nanoscale displacement of the image of an atomic source of radiation*
    Xin Li (presenting), Jie Shu and Henk F. Arnoldus
    The Optical Society of America Topical Conference on Nanophotonics 2008
    Oral presentation, May 26-29, 2008, Nanjing, China

19. *Nanoscale features of the energy transport in atomic radiation*
    Xin Li (presenting), Jie Shu and Henk F. Arnoldus
    Graduate Students Association Research Symposium
    Oral presentation, Mississippi State University, Starkville, Mississippi, April 3, 2009

20. *Detection of atomic radiation with sub-wavelength resolution*
    Jie Shu (presenting), Xin Li and Henk F. Arnoldus
    Graduate Students Association Research Symposium
    Oral presentation, Mississippi State University, Starkville, Mississippi, April 3, 2009

21. *Vortices in the near field of atomic radiation emitted near an interface*
    Xin Li (presenting) and Henk F. Arnoldus
    Annual Meeting of the Optical Society of America, Frontiers in Optics/Laser Science XXV
    Oral presentation, San Jose, California, October 11-15, 2009

22. *Vortices in dipole radiation near a mirror*
    Xin Li (presenting) and Henk F. Arnoldus
    Seventy-Seventh Annual Meeting of the Southeastern Section of the American Physical Society
    Oral presentation, October 20-23, 2010, Baton Rouge, Louisiana

23. *Vortex strings in electric dipole radiation near a mirror*
    Zachary Schulz (presenting), Xin Li and Henk F. Arnoldus
    March Meeting of the American Physical Society
    Poster presentation, March 18-22, 2013, Baltimore, Maryland

24. *The energy flow pattern of a linear dipole in a dielectric medium*
    Xin Li (presenting) and Henk F. Arnoldus
    2013 International Conference on Materials Architecture and Engineering Technology
    Oral presentation, December 19-20, 2013, Beijing, China

25. *The energy flow of a linear dipole in a dielectric medium*
    George Hinerman (presenting), Henk F. Arnoldus and Xin Li
    March Meeting of the American Physical Society
    Poster presentation, March 3-7, 2014, Denver, Colorado

26. *Dipole radiation interference patterns*
    Kanan Grosklos (presenting), Xin Li and Henk F. Arnoldus
    March Meeting of the American Physical Society
    Poster presentation, April 11-14, 2014, Baltimore, Maryland

27. *Electric dipole radiation in between parallel mirrors*
    Zhangjin Xu (presenting) and Henk F. Arnoldus
    Eighty-First Annual Meeting of the Mississippi Academy of Sciences
    Oral presentation, February 23-24, 2017, Hattiesburg, Mississippi

28. *Energy flow of electric dipole radiation between parallel mirrors*
    Zhangjin Xu (presenting) and Henk F. Arnoldus
    Eighty-Fourth Annual Meeting of the Southeastern Section of the American Physical Society
    Oral presentation, November 16-18, 2017, Milledgeville, Georgia

29. *Reflection and transmission by an ENZ interface*
    Zhangjin Xu (presenting) and Henk F. Arnoldus
    Eighty-Second Annual Meeting of the Mississippi Academy of Sciences
    Oral presentation, February 22-23, 2018, Hattiesburg, Mississippi

30. *Reflection by and transmission through an ENZ interface*
    Zhangjin Xu (presenting) and Henk F. Arnoldus
    Frontiers in Optics and Laser Science
    Oral presentation, September 16-20, 2018, Washington, DC

31. *Levitation and energy flow of a dipole near an ε-near-zero material*
Zhangjin Xu (presenting) and Henk F. Arnoldus
Eighty-Third Annual Meeting of the Mississippi Academy of Sciences
Oral presentation, February 21-22, 2019, Hattiesburg, Mississippi

Conferences Attended

1. Meeting of the Dutch Physical Society (NNV), Section of Nuclear Physics, August, 1980, Petten, The Netherlands

2. Meeting of the German Physical Society, Section of Nuclear Physics, January, 1981, University of Hamburg, Hamburg, Germany

3. Meeting of the Dutch Physical Society (NNV), Section of Nuclear Physics, August, 1981, Petten, The Netherlands

4. Thirty-Eight Les Houches Summer School: New Trends in Atomic Physics, June 28 - July 29, 1982, Les Houches, France

5. Nato Advanced Study Institute on Quantum Electrodynamics and Quantum Optics, May 27 - June 8, 1983, University of Colorado, Boulder, Colorado

6. Fifth Rochester Conference on Coherence and Quantum Optics, June 13-15, 1983, University of Rochester, Rochester, New York

7. International Conference on Bistability, June 15-17, 1983, University of Rochester, Rochester, New York

8. Workshop on Spectral Line Shapes, June, 1984, Laboratoire des Interactions Moleculaires et des Hautes Pressions, C. N. R. S., Villetaneuse (Paris), France

9. Seventh International Conference on Spectral Line Shapes, June, 1984, Aussois, France

10. European Conference on Atomic and Molecular Physics, August, 1984, Free University of Amsterdam, Amsterdam, The Netherlands

11. Meeting of the Dutch Physical Society (NNV), Section of Atomic and Molecular Physics, September, 1984, The Netherlands

12. Meeting of the Dutch Physical Society (NNV), Section of Atomic and Molecular Physics, September, 1985, The Netherlands

13. Eight International Conference on Spectral Line Shapes, June 9-13, 1986, College of William and Mary, Williamsburg, Virginia

14. Modern Physics in America: A Michelson-Morley Centennial, October 30-31, 1987, Case Western Reserve, Cleveland, Ohio

15. Third International Laser Science Conference, November 1-4, 1987, Atlantic City, New Jersey

16. Drexel Workshop on Quantum Nonintegrability, 1989, Drexel University, Philadelphia, Pennsylvania

17. Sixth Rochester Conference on Coherence and Quantum Optics, June 26-28, 1989, University of Rochester, Rochester, New York

18. Conference on Super-Intense Laser-Atom Physics, June 28-30, 1989, University of Rochester, Rochester, New York

19. Second Drexel Workshop on Quantum Nonintegrability, 1990, Drexel University, Philadelphia, Pennsylvania

20. Fifth Workshop on Statistical Physics, October 3-5, 1991, Korea University, Seoul, Korea, Invited speaker

21. Workshop on Harmonic Oscillators, March 25 - 28, 1992, University of Maryland, College Park, Maryland, Session chairman

22. Quantum Electronics and Laser Science Conference/Conference on Lasers and Electro-Optics, May 10-15, 1992, Anaheim Convention Center, Anaheim, California

23. Third Drexel Symposium on Quantum Nonintegrability, May 20-22, 1992, Drexel University, Philadelphia, Pennsylvania

24. Second International Workshop on Squeezed States and Uncertainty Relations, May 25-29, 1992, Lebedev Physical Institute, Moscow, Russia, Invited speaker

25. Fifth International Topsøe Summer School on Nonlinear Optics, August 3-8, 1992, University of Aalborg, Aalborg Ost, Denmark, Invited lecturer

26. Quantum Electronics and Laser Science Conference/Conference on Lasers and Electro-Optics, May 2-7, 1993, Baltimore Convention Center, Baltimore, Maryland

27. Third International Workshop on Squeezed States and Uncertainty Relations, August 10-13, 1993, University of Maryland at Baltimore County, Baltimore, Maryland, Invited speaker

28. First International Autumn School/Conference "Solid State Physics: Fundamentals & Applications", September 26 - October 4, 1994, Uzhgorod, Ukraine, Invited lecturer, Session chairman

29. Fifty-Ninth Annual Meeting of the Mississippi Academy of Sciences, February 9-10, 1995, Biloxi, Mississippi

30. Seventh Rochester Conference on Coherence and Quantum Optics, June 7-10, 1995, University of Rochester, Rochester, New York

31. Symposium on Spectral Effects in Collective Phenomena, June 10, 1995, University of Rochester, Rochester, New York

32. Sixty-Second Meeting of the South Eastern Section of the American Physical Society, November 9-11, 1995, Tallahassee, Florida

33. Sixtieth Annual Meeting of the Mississippi Academy of Sciences, February 22-23, 1996, Jackson, Mississippi

34. Sixty-First Annual Meeting of the Mississippi Academy of Sciences, February 20-21, 1997, Biloxi, Mississippi

35. Annual Meeting of the Optical Society of America 1997, October 12-17, 1997, Long Beach, California, Together with the Thirteenth Interdisciplinary Laser Science Conference

36. Sixty-Second Annual Meeting of the Mississippi Academy of Sciences, February 26-27, 1998, Biloxi, Mississippi

37. Sixty-Third Annual Meeting of the Mississippi Academy of Sciences, February 25-26, 1999, Tupelo, Mississippi

38. Sixth International Conference on Squeezed States and Uncertainty Relations, May 24-29, 1999, Napels, Italy

39. Sixty-Sixth Annual Meeting of the Southeastern Section of the American Physical Society, November 7-9, 1999, Chapel Hill, North Carolina

40. Sixty-Seventh Annual Meeting of the Southeastern Section of the American Physical Society, November 2-4, 2000, Starkville, Mississippi

41. Seventy-First Annual Meeting of the Mississippi Academy of Sciences, February 21-23, 2007, Starkville, Mississippi

42. Seventy-Second Annual Meeting of the Mississippi Academy of Sciences, February 20-22, 2008, Olive Branch, Mississippi

43. The Optical Society of America Topical Conference on Nanophotonics 2008, May 26-29, 2008, Nanjing, China

44. Graduate Students Association Research Symposium, April 3, 2009, Mississippi State University, Starkville, Mississippi

45. Quantum Electronics and Laser Science Conference/Conference on Lasers and Electro-Optics, May 31-June 5, 2009, Baltimore Convention Center, Baltimore, Maryland

46. Seventy-Seventh Annual Meeting of the Southeastern Section of the American Physical Society, October 20-23, 2010, Baton Rouge, Louisiana

Physics Courses Taught

Villanova University

Fall 1988
- 1101 : General Physics Laboratory
- 2502 : Introductory Physics II
- 2503 : Introductory Physics Lab II

Spring 1989
- 2500 : Introductory Physics I
- 2500 : Introductory Physics I

Fall 1989
- 1001 : Physics Laboratory
- 2501 : Introductory Physics Lab I
- 2502 : Introductory Physics II

Spring 1990
- 2500 : Introductory Physics I
- 4200 : Mathematical Physics I

Fall 1990
- 2501 : Introductory Physics Lab I
- 4202 : Mathematical Physics II
- 5900 : Quantum Optics I (Physics Elective for physics majors)

Spring 1991
- 1001 : Physics Laboratory
- 2500 : Introductory Physics I
- 4200 : Mathematical Physics I
- 6600 : Quantum Optics II (Physics Elective for physics majors)

Fall 1991
- 1101 : General Physics Laboratory
- 2503 : Introductory Physics Lab II
- 4202 : Mathematical Physics II
- 6600 : Quantum Optics I (Physics Elective for physics majors)

Spring 1992
- 1001 : Physics Laboratory
- 2502 : Introductory Physics II
- 2503 : Introductory Physics Lab II

Fall 1992
- 1101 : General Physics Laboratory
- 2410 : University Physics: Mechanics
- 2411 : University Physics Laboratory: Mechanics

Spring 1993
2400 : Physics I: Mechanics
2400 : Physics I: Mechanics
2403 : Physics Laboratory for Engineers

Summer 1993
1000 : Physics

Fall 1993
2410 : University Physics: Mechanics
2411 : University Physics Laboratory: Mechanics
2411 : University Physics Laboratory: Mechanics

Spring 1994
2400 : Physics I: Mechanics
2400 : Physics I: Mechanics
4200 : Mathematical Physics I

Summer 1994
2410 : University Physics: Mechanics
2411 : University Physics Laboratory: Mechanics

Mississippi State University

Fall 1994
8743 : Quantum Mechanics I

Spring 1995
2213 : Physics I
8753 : Quantum Mechanics II

Summer 1995
2213 : Physics I

Fall 1995
2213 : Physics I
4713 : Introduction to Quantum Mechanics (includes 6713)

Spring 1996
2213 : Physics I
2213 : Physics I
4723 : Applications of Quantum Mechanics (includes 6723)

Summer 1996
2213 : Physics I

Fall 1996
2213 : Physics I
2213 : Physics I
4003 : Directed Individual Study (Advanced Quantum Mechanics)
8743 : Quantum Mechanics I

Spring 1997
2213 : Physics I
2213 : Physics I
4003 : Directed Individual Study (Introduction to Quantum Mechanics)
8753 : Quantum Mechanics II

Summer 1997
2223 : Physics II

Fall 1997
2213 : Physics I
2213 : Physics I
8233 : Methods of Theoretical Physics I

Spring 1998
1113 : General Physics I
8243 : Methods of Theoretical Physics II

Summer 1998
2223 : Physics II
2223 : Physics II

Fall 1998
1113 : General Physics I
1113 : General Physics I
2223 : Physics II
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (two PhD students)

Spring 1999
1113 : General Physics I
4723 : Applications of Quantum Mechanics (includes 6723)
9000 : Research/Dissertation (two PhD students)

Summer 1999
2223 : Physics II
1123 : General Physics II
9000 : Research/Dissertation (two PhD students)

Fall 1999
1113 : General Physics I
1113 : General Physics I
8990 : Quantum Optics (includes 4990)
9000 : Research/Dissertation (one PhD student)

Spring 2000
1113 : General Physics I
1113 : General Physics I
4723 : Applications of Quantum Mechanics (includes 6723)
9000 : Research/Dissertation (one PhD student)

Summer 2000
2223 : Physics II
1123 : General Physics II
9000 : Research/Dissertation (one PhD student)

Fall 2000
4000 : Directed Individual Study (Mathematical Physics II)
8243 : Methods of Theoretical Physics II
8743 : Quantum Mechanics I
9000 : Research/Dissertation (one PhD student)

Spring 2001
1113 : General Physics I
4000 : Directed Individual Study (Mathematical Physics I)
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (one PhD student)

Summer 2001
2223 : Physics II
9000 : Research/Dissertation (one PhD student)

Fall 2001
1113 : General Physics I
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (two PhD students)

Spring 2002
1113 : General Physics I
8243 : Methods of Theoretical Physics II
9000 : Research/Dissertation (two PhD students)

Summer 2002
2223 : Physics II
9000 : Research/Dissertation (one PhD student)

Fall 2002
1113 : General Physics I
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (one PhD student)

Spring 2003
1113 : General Physics I
1123 : General Physics II
8243 : Methods of Theoretical Physics II

Summer 2003
2223 : Physics II
2223 : Physics II

Fall 2003
1123 : General Physics II
8233 : Methods of Theoretical Physics I

Spring 2004
2213 : Physics I
8243 : Methods of Theoretical Physics II

Summer 2004
2223 : Physics II
2213 : Physics I

Fall 2004
1113 : General Physics I
8233 : Methods of Theoretical Physics I

Spring 2005
1123 : General Physics II
8243 : Methods of Theoretical Physics II

Summer 2005
1113 : General Physics I
2223 : Physics II

Fall 2005
1023 : Physical Science Survey II
8233 : Methods of Theoretical Physics I

Spring 2006
1113 : General Physics I
8243 : Methods of Theoretical Physics II

Fall 2006
1023 : Physical Science Survey II
4000 : Directed Individual Study (Mathematical Physics I)
8233 : Methods of Theoretical Physics I

Spring 2007
1023 : Physical Science Survey II
4000 : Directed Individual Study (Mathematical Physics II)
8243 : Methods of Theoretical Physics II
8743 : Quantum Mechanics I

Fall 2007
1023 : Physical Science Survey II
9000 : Research/Dissertation (two MS/PhD students)

Spring 2008
8753 : Quantum Mechanics II
9000 : Research/Dissertation (two MS/PhD students)

Fall 2008
8743 : Quantum Mechanics I
8990 : Special Topics in Physics: Quantum Optics I
9000 : Research/Dissertation (two MS/PhD students)

Spring 2009
7000 : Directed Individual Study (Xin Li and Jie Shu)
8753 : Quantum Mechanics II
8990 : Special Topics in Physics: Quantum Optics II
9000 : Research/Dissertation (two MS/PhD students)

Summer 2009
2223 : Physics II
2223 : Physics II
9000 : Research/Dissertation (one PhD student)

Fall 2009
4000 : Directed Individual Study (Methods of Theoretical Physics I)
4000 : Directed Individual Study (Quantum Mechanics I)
8233 : Methods of Theoretical Physics I
8743 : Quantum Mechanics I
8000 : Research/Dissertation (one MS student)
9000 : Research/Dissertation (one PhD student)

Spring 2010
8243 : Methods of Theoretical Physics II
8753 : Quantum Mechanics II
8000 : Research/Dissertation (two MS students)
9000 : Research/Dissertation (one PhD student)

Summer 2010
2223 : Physics II
2223 : Physics II
8000 : Research/Dissertation (two MS students)
9000 : Research/Dissertation (one PhD student)

Fall 2010
1123 : General Physics II
8233 : Methods of Theoretical Physics I
8000 : Research/Dissertation (two MS students)
9000 : Research/Dissertation (two PhD students)

Spring 2011
4000 : Directed Individual Study (Methods of Theoretical Physics II)
8243 : Methods of Theoretical Physics II
8753 : Quantum Mechanics II
8000 : Research/Dissertation (two MS students)
9000 : Research/Dissertation (one PhD student)

Summer 2011
2223 : Physics II
2223 : Physics II
8000 : Research/Dissertation (one MS student)
9000 : Research/Dissertation (one PhD student)

Fall 2011
4000 : Directed Individual Study (Methods of Theoretical Physics I, two students)
7000: Directed Individual Study (Photon Statistics, one student)
8233 : Methods of Theoretical Physics I
8313 : Electromagnetic Theory
9000 : Research/Dissertation (one PhD student)

Spring 2012
2213 : Physics I
8243 : Methods of Theoretical Physics II
9000 : Research/Dissertation (one PhD student)

Summer 2012
2213 : Physics I (Maymester)
2223 : Physics II

Fall 2012
4000 : Directed Individual Study (Methods of Theoretical Physics I, one student)
4000 : Directed Individual Study (Electromagnetic Theory, one student)
8233 : Methods of Theoretical Physics I
8313 : Electromagnetic Theory

Spring 2013
1123 : General Physics II
7000 : Directed Individual Study (Methods of Theoretical Physics II, one student)
8243 : Methods of Theoretical Physics II

Summer 2013
1123 : General Physics II
2213 : Physics I (Maymester)
2223 : Physics II

Fall 2013
8233 : Methods of Theoretical Physics I
8313 : Electromagnetic Theory

Spring 2014
1113 : General Physics I
8243 : Methods of Theoretical Physics II

Summer 2014
1113 : General Physics I
1113 : General Physics I
2213 : Physics I (Maymester)
1123 : General Physics II

Fall 2014
8233 : Methods of Theoretical Physics I
8313 : Electromagnetic Theory
9000 : Research/Dissertation (one PhD student)

Spring 2015
8243 : Methods of Theoretical Physics II

Summer 2015
1113 : General Physics I
2213 : Physics I (Maymester)
2223 : Physics II

Fall 2015
2213 : Physics I
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (one PhD student)

Spring 2016
1113 : General Physics I
8243 : Methods of Theoretical Physics II
9000 : Research/Dissertation (one PhD student)

Summer 2016
2213 : Physics I (Maymester)
2223 : Physics II

Fall 2016
1113 : General Physics I
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (one PhD student)

Spring 2017
2213 : Physics I
8243 : Methods of Theoretical Physics II
9000 : Research/Dissertation (one PhD student)

Summer 2017
2213 : Physics I (Maymester)
2213 : Physics I

Fall 2017
1113 : General Physics I
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (one PhD student)

Spring 2018
2213 : Physics I
8243 : Methods of Theoretical Physics II
9000 : Research/Dissertation (one PhD student)

Summer 2018
2213 : Physics I (Maymester)
2213 : Physics I

Fall 2018
2213 : Physics I
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (one PhD student)

Spring 2019

2213 : Physics I
8243 : Methods of Theoretical Physics II
9000 : Research/Dissertation (one PhD student)

Summer 2019

2213 : Physics I (Maymester)
2223 : Physics II

Fall 2019

2213 : Physics I
8233 : Methods of Theoretical Physics I
9000 : Research/Dissertation (one PhD student)

Committees and Services

Villanova University

1. Guidelines Committee, Calculus-based Physics Sequence, Chairman and Recording Secretary, October 1989 - January 1990

2. Design of Departmental Tests for Physics 2502, Introductory Physics II, Fall 1990 semester

3. Coordinator for the multisection course Physics 2500, Introductory Physics I, Spring 1991 semester

4. Help Sessions Introductory Physics I, Spring 1991 semester

5. Recitation Mathematical Physics I, Spring 1991 semester

6. Computing Committee, March 1991 - July 1994

7. Physics GRE Practice Sessions, Fall 1991 semester

8. Coordinator for the multisection course Physics 2503, Introductory Physics Lab II, Spring 1992 semester

9. Mendel Safety Committee, Chairman and Recording Secretary, November 1992 - December 1993

10. Supervised Studies Committee, Chairman, November 1992 - July 1994

11. Annual Faculty Research Evaluation Committee, March 1993 - July 1994

12. Coordinator for the multisection course Physics 2411, University Physics Laboratory: Mechanics, Fall 1993 semester

13. Physics Department Coordinator for the Poster Session of the Annual Meeting of the Villanova Chapter of Sigma Xi (The Research Society), April 1994

Mississippi State University

1. Library Acquisitions Committee, Chairman, August 1994 - September 1996

2. Organizer of Departmental Colloquia, August 1994 - September 1996

3. Graduate Placement Examination Committee, November 1994 - May 2007

4. Textbook Committee (calculus-based physics sequence), Chairman, March 1995 - April 1995

5. Preliminary Examination Committee, Mathematical Physics (Chair) and Quantum Mechanics, April 1995 - present

6. US representative for the Second International Autumn School/Conference "Solid State Physics: Fundamentals and Applications , September 18 - 26, 1995, Uzhgorod, Ukraine

7. Graduate Program Committee, August 1995 - September 1996

8. Library Resources Committee, Chairman, September 1996 - August 2002
   This includes organizing departmental colloquia.

9. Departmental Search Committee for the Jefferson Laboratory Optics Faculty Position, December 1997 - August 2000

10. Departmental Search Committee for the Instructional Support Coordinator Faculty Position, January 1998 - May 1998

11. Laboratory Coordinator for General Physics I, Spring 1998 semester

12. Graduate Program Committee, July 1998 - December 1998

13. Laboratory Coordinator for General Physics I, Fall 1998 semester

14. Departmental Self Study Committee, October 1998 - March 1999

15. College Faculty Senate, January 1999 - December 2000

16. Laboratory Coordinator for General Physics I, Spring 1999 semester

17. Laboratory Coordinator for General Physics I, Fall 1999 semester

18. Assessment Committee, August 1999 - October 1999

19. Laboratory Coordinator for General Physics I, Spring 2000 semester

20. Weekly help sessions for General Physics I, Spring 2000 semester

21. University Library Committee, March 2000 - July 2003

22. Helped with the writing of the departmental GAANN proposal (Graduate Assistance in Areas of National Need), December 2000

23. Weekly help sessions for General Physics I, Spring 2001 semester

24. Alternate for the College Faculty Senate, January 2001 - January 2004

25. Help sessions for Physics II, Summer I, 2001

26. Graduate Program Committee, August 2001 - present

27. Library Resources Committee, Chairman, August 2002 - January 2003

28. Colloquia Committee, August 2002 - August 2004

29. Departmental Self Study Committee, November 2003 - December 2003

30. Laboratory Coordinator for General Physics I, Fall 2004 semester

31. Non-Calculus Sequence Committee, August 2004 - October 2005

32. Laboratory Coordinator for Physical Science Survey II, Fall 2005 semester

33. Rundel Room Committee, October 2005 - August 2009

34. Laboratory Coordinator for Physical Science Survey II, Spring 2006 semester

35. MSMS Committee, April 2006 - May 2006

36. Laboratory Coordinator for Physical Science Survey II, Fall 2006 semester

37. Physical Science Survey Reorganization Committee (chair), October 2006 - October 2007

38. Laboratory Coordinator for Physical Science Survey II, Spring 2007 semester

39. Laboratory Coordinator for Physical Science Survey II, Fall 2007 semester

40. Laboratory Coordinator for Physical Science Survey II, Fall 2008 semester

41. Textbook 1013/1023 Committee, December 2008 - April 2009

42. Departmental Promotion & Tenure Committee, August 2009 - May 2015

43. Physics Outreach Committee, August 2009 - August 2010

44. Departmental website, September 2009 - August 2011

45. Undergraduate Program Committee, August 2010 - present

46. Graduate Placement and Preliminary Exam Coordinator, August 2010 - present

47. Graduate Placement Committee, Quantum Mechanics, E&M, Mechanics, continuous

48. Graduate Preliminary Committee, Quantum Mechanics, continuous

49. Graduate Preliminary Committee, Mathematical Physics, continuous

50. Departmental Search Committee for two tenure-track faculty, November 2010 - May 2011

51. Reviewer for proposals for the Henry Family Research Fund (10 proposals), March 2011

52. Judge for the Regional Science Fair, March 22, 2011
    Judge for the State Science Fair, March 29, 2011

53. Faculty Development/Peer Teaching Review Committee, August 2011 - present

54. Judge for the Regional Science Fair, February 14, 2012

55. Graduate Preliminary Committee, Electromagnetism, April 2012 - present

56. Judge for the Regional Science Fair, February 12, 2013

57. Departmental Search Committee for a tenure-track faculty position, January 2014 - August 2014

58. Co-Graduate Coordinator, August 2014 - December 2014

59. Graduate Coordinator, January 2015 - present

60. Reviewer for proposals for the Henry Family Research Fund (11 proposals), March 2015
61. Appointed representative for Arts & Sciences on the Graduate Council, Fall 2016 - Spring 2019
62. Evaluator for the Teaching Assistant Workshop Classroom Certification Evaluation, January 6, 2017
63. Evaluator for the Teaching Assistant Workshop Classroom Certification Evaluation, August 9, 2017
64. Departmental Search Committee for a tenure-track faculty position in AMOP, September 2017
65. Evaluator for the Teaching Assistant Workshop Classroom Certification Evaluation, August 17, 2018

Funding

1. Research Foundation of the State University of New York at Buffalo, 1989, $6,000.-

2. Research Foundation of the State University of New York at Buffalo, 1990, $6,300.-

3. Research Foundation of the State University of New York at Buffalo, 1991, $6,500.-

4. National Science Foundation, College Faculty Research Opportunity Award, Supplement to NSF Grant CHE-9016789, 1992, $10,300.-