

Curriculum Vitae 2016

Richard P. Olenick

ADDRESS

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PROFESSIONAL PREPARATION

Illinois Institute of Technology	Physics	B.S. cum laude, May 1973
Purdue University	Physics	M.S., May 1975
Purdue University	Physics	Ph.D., August 1979

APPOINTMENTS

May 2003 – May 2005: Nancy Cain Marcus and Jeffrey A. Marcus Chair
August 1989 – present: Professor, University of Dallas
August 1989 – August 2014: Chairman, Department of Physics, University of Dallas
August 1986 - August 1989: Associate Professor (tenured) and Chairman, University of Dallas
September 1985 - 1989: Visiting Lecturer, University of Texas at Dallas
January 1983 – Dec. 1986: Visiting Associate, California Institute of Technology
August 1979 - August 1986: Assistant Professor, University of Dallas

PERSONAL DATA

Citizenship: U.S.

PROFESSIONAL MEMBERSHIP

Sigma Xi Research Society, Sigma Pi Sigma Physics Honor Society, American Physical Society, American Association of Physics Teachers, American Association of Variable Star Observers, Kappa Delta Pi Education Honor Society, *Dobro Slovo* Slavic Languages Honor Society.

RESEARCH INTERESTS

Knowledge of C++, Java, UNIX, Python, VPython, and fluent in Russian.

- Astrophysics: Measurements, data analysis, and modeling of dwarf novae and cataclysmic variable stars; transit searches for exoplanets using wide-field surveys.
- Computational physics: modeling of close binary stars.
- Education: pre-conceptions and misconceptions in physics, strategies for correction, improvement of high school teachers' effectiveness, flipping upper level physics courses.

UNDERGRADUATE THESES SUPERVISED

1. *Observations and Modeling of the New δ Scuti GSC 02087-02155*, Ramses Gonzalez, 2016.
2. *Photometric Analysis and Classification of the New Binary System USNO-B1.0 1163-0308203*, Nathan Henderson, 2016.
3. *Observations and Analysis of the New Dwarf Nova ASASSN-14cv*, Anthony Kersting, 2015. Anthony was a Fulbright Scholar to Germany for 2015-2016.
4. *Discovery and Follow-up Observations of the Exoplanet Candidate GSC 02087-01126*, Laura Aumen, 2015.
5. *Visualizing the Growth of High Energy Density Mixing Layers*, Luke Simmons, 2015.
6. *Correlation Between Optical Properties and Charge Carrier Mobility in Poly (3-hexylthiophene-2,5-diyl) Thin Films*, Aaron Mebane, 2015.
7. *Sensitivity of inferred electron temperature from X-ray emission of NIF cryogenic DT implosions*, Michael Klem, 2015.
8. *Blazhko Effect in a New and a Known RR Lyrae Star*, Matt Melendez, 2014.
9. *Observations and Modeling of Two New W UMa Stars*, Nicholas Hedlesky, 2014.
10. *O-C Calculations for the New Binaries GSC 2087 – 0364, GSC 2083 - 1870 and V1097 Herculis*, James Meir, 2013.
11. *PHOEBE Modeling of Three New Binaries in Hercules*, Jeff Schniederjan, 2013.
12. *Analysis of the EEELS Algorithm for STExTs Searches*, Matt Heuser, 2013.
13. *A Search for Variable Star Systems in the Open Cluster Dolidze-Dzimsejvili 9*, Andrew Bechter, 2012.
14. *The Identification and Analysis of Binary Star Systems Within the Open Cluster Dolidze-Dzimsejvili*, Eric Bechter, 2012.
15. *Small Telescope Exoplanet Transit Search(STExTS): Transit Candidates in the Open Cluster Dolidze-Dzimsejvili 9*, Blaise DuFrain, 2012.
16. *Spectral Analysis of SAO 66671*, Daniel Lyons, 2012.
17. *Image Restoration by Convolution Matrices*, Gerard Nickel, 2012.
18. *Analytical Solution in Magnetohydrodynamics: the Rotating Conducting Cylinder*, Jared Rovny, 2012.
19. *Measurements of the Dwarf Nova SDSS J162520.29+120308*, Kyle Meziere, work done at the Crimean Observatory of the Sternberg Astronomical Institute, 2011.
20. *The Segmented Universe: Identifying Cosmic Voids with a Multi-scale Geometric Flow*, Andrew Miller, work done at Notre Dame University, 2011.
21. *Modeling Energy State of Lithium Dimers with the Born-Oppenheimer Approximation*, Colin Lueck, work done at the University of Oklahoma, 2010
22. *SCALE 6.1 Validation Testing: Unit Cell Data and Material Input*, Paul Stauduhar, work done at Oak Ridge National Lab, 2011.

23. *Iridium Satellite Signal Exploitation*, Peter McDonough, work done at the Southwest Research Institute, 2010.
24. *Langmuir Probe Measurement in the Ionosphere*, Benjamin H. Cole, work done at Montana State University, 2009.
25. *Nuclear Magnetic Resonance Study of Interaction Between Water and Polyethylene Glycol Dimethacrylate Hydrogels using T1 Relaxation Times*, Joseph G. Meier, work done at Bucknell University, 2008.
26. *Cold Plasma*, Patrick Norton, 2008.
27. *A Study of Non-Thermal Plasma for Application in Milling and Biological Sterilization*, Nicholas Cornell, 2008.
28. *Superhumps in V795 Her*, Danny Malutich, work done at UD and Sternberg Astronomical Observatory, Crimea, Ukraine, 2007.
29. *ISE TCAD Semiconductor Pixel Detector Simulations*, Gregory Pepin, work done at Purdue University, 2005.
30. *A Performance Analysis of Magnetically Actuated Microvalves*, Adam Douglas Papania, work done at Georgia Tech, 2005.
31. *Modeling and Analyzing the CESR-c Lattice*, Louis Jamie Antonelli, work done at Cornell University, 2005.
32. *Computational Modeling of Mass Accretion in a Cataclysmic Variable*, Alan McLaughlin, 2005.
33. *Data Collection and Analysis of the Variable Star V603 Aql*, Christian Clerc, 2004.
34. *Data Analysis of the T Tauri Star C1331 Cyg*, Joshua Torres, 2004.
35. *Generation of Blue Laser Radiation at 486nm using a PPLN Waveguide*, Daniel Mehaffey, work done at the University of North Texas, 2004.
36. *Coulomb Cluster Dynamics: Numerical Simulations*, Kurt W. Smith, work done at Baylor University, 2004.
37. *Detection of Delta++/Delta-- Particles in Electron-Position Annihilation Using Wavelet Analysis*, Michael Ford, work done at the University of Louisville, 2003.
38. *One Loop Radiative Corrections to Double Dalitz Decays*, Jonathan Engle, work done at the University of Colorado, Boulder under Dr. Anthony Barker, 2002.
39. *Meteorological Study of November Tornadoes*, Megan McHugh, work done at the University of Oklahoma, 2001.
40. *Classical Modeling of Dark Matter Interactions of Spiral Galaxy Formation*, Melvin Laurel, 1998.
41. *Chaotic Behavior of Dipoles in an External Field*, Broc Stirton, 1996.
42. *Analysis of Potential Hazard Near Power Lines*, Robert A. Haaser, 1995, awarded top undergraduate paper at the Texas APS meeting that year.
43. *Issues in Supercollider Higgs Searches: Computational Application of Theory Addressing Experimental Concerns*, Sean Walbran, work done at the SSC under Dr. Ed Wang, 1994.
44. *Measuring Lyapunov Exponents of the Forced Inverted Pendulum*, Brian Schwartz, 1994.
45. *Percolation Modeling of Dielectric Breakdown*, Brian Smith, 1993, awarded top undergraduate paper at the Texas APS meeting that year.
46. *Animated Poincare Maps for a Chaotic Pendulum*, Andrew Hurzeler, 1993.
47. *Poisson Statistics Compatible Curve Fitting Routines*, David Ruppert, work done at the University of Wisconsin, 1992.
48. *Monte Carlo Studies of Thin Film Magnetism*, Donovan Wesley Hall, work done at Argonne National Laboratory under the supervision of Dr. Katherine Strandburg, 1990.

49. *Test Particle Motion in the Vicinity of Black Holes: A Keplerian and General Relativistic Approach*, Jeffrey Laba, 1989.
50. *Fractal Modeling Dielectric Breakdown in Gases*, Gregory Lange, 1989, awarded top undergraduate paper at the Texas APS meeting that year.
51. *Relativistic Electron Beam Scattering in Thin Films*, Larry Robbins, 1989.
52. *Computer Modeling of Plasma and Stellar Systems*, Vincent Higgins, 1989.
53. *Digital Image Processing in Observational Astronomy*, Tony Thompson, 1989, awarded top undergraduate paper at the Texas APS meeting that year.

PUBLICATIONS: JOURNAL ARTICLES

1. "Breaking of Dilatational Symmetry of Dipole Interactions by Octupole Interactions", (with T. Erber, M. Duda, H.G. Latal), Magnetism and Magnetic Materials 1972 AIP Conference Proceedings, No. 10, part 2, 1970 (1973).
2. "A Lambda Transition of Two Magnetic Dipoles", (with T. Erber) American Journal of Physics, 42, 338 (1974).
3. "Dilatational Symmetry Breaking in Magnetic Cooperative Systems", Journal of Applied Physics, 52, 1944 (1981).
4. "Gravitational Law in N-Dimensions", (with J. Elmer) American Journal of Physics, 50, 160, 179 (1982).
5. "Lepton Power: Future Fact or Fantasy?", European Journal of Physics, 3, 150 (1982).
7. "Problem: Transfer Orbit to Counter Earth", American Journal of Physics, 52, 526 (1984).
8. "**The Mechanical Universe**--A Physics Course for Television", Proceedings of the International Conference on Communicating Physics, Univ. of Duisburg, Duisburg, F.R. Germany (1985).
9. "Navigating in Space", Foundation Astronautics Notebook, Volume 17/18, July - October 1985.
10. "Making of *The Mechanical Universe*", (with D.L. Goodstein), American Journal of Physics, 56, 779 (1988).
11. "The Development of Video Tapes for High School Physics Courses: The Mechanical Universe and Beyond", Journal of Educational Technology Systems, 17, 33 (1988).
12. "Conceptualizing Physics", (with G. Grant), chapter in *Interdisciplinary Aspects of Physics Education*, Proceedings of the Europhysics Conference on Physics Education, Altmünster, Austria, 1989, ed. by H. Kühnelt, World Scientific Press (1990).
13. "Two and Three-Dimensional Hysteresis: Simple Magnetic Cooperative Systems," book chapter in *Doing Physics: A Festschrift for Thomas Erber*, IIT Press (2010).
14. "The Superoutburst of SDSS J1625+120308 in July 2010," I. Voloshina, R. Olenick, K. Meziere, V. Metlov, J. Rovny, Proceeding of the Ninth Pacific Rim Conference on Stellar Astrophysics, Astronomical Society of the Pacific Conference Series, Vol. 451, p. 195-199 (2011).
15. "Photometric Observations and Numerical Modeling of SDSS J162520.29+120308.7, an SU UMa in the CV Period Gap" with M.M. Montgomery, I. Voloshina, Kyle Meziere, Vladimir Metlov, Amit Goel, *New Astronomy*, 50, 43 (2017).
16. "Observations and Modeling of the W Ursae Majoris Binaries GSC 02087-00364 and GSC 02084-01870 (V Her), with A. Sweeney, J. Schneiderjan, J. Meier, and M. Heuser, in preparation for A&A.
17. Photometric Observations and MHD Modeling of the Disc Precession for the WZ SGE

Dwarf Nova SDSS J213806.5+261957, with M. Montgomery, I. Voloshina, A. Sweeney, J. Rovny, V. Metlov, in preparation.

PUBLICATIONS: BOOKS

1. *The Mechanical Universe: Introduction to Mechanics and Heat*, with T.A. Apostol and D.L. Goodstein, Cambridge University Press, New York (1985).
2. *The Mechanical Universe: Advanced Version*, with S. Frautschi, T.A. Apostol, and D.L. Goodstein, Cambridge University Press, New York (1986).
3. *The Mechanical Universe High School Adaptation: QUAD I, Physics on Earth and in the Heavens, QUAD II, Conservation Laws and Fundamental Forces, QUAD III, Kinematics and Scientific Methods*, Southern California Consortium, Cypress, California (1985).
4. *Beyond The Mechanical Universe: Electricity, Magnetism, and Modern Physics*, with T.A. Apostol and D.L. Goodstein, Cambridge University Press, New York (1986).
5. *The Mechanical Universe High School Adaptation: QUAD IV, From Kepler to Einstein*, Southern California Consortium, Cypress, California (1986).
6. *The Mechanical Universe High School Adaptation: QUAD V, Electricity, QUAD VI, Magnetism and Beyond*, Southern California Consortium, Cypress, CA (1987).
7. *L'Universo meccanico: meccanica e calore*, Italian language version of *The Mechanical Universe: Advanced Version*, with S. Frautschi, T.A. Apostol, and D.L. Goodstein, Zanichelli Editore, Bologna, Italia (1988).
8. Japanese language version of *The Mechanical Universe High School Adaptation*, QUADs I through IV (1989). **最新物理教育ビデオシリーズ**
9. *Oltre L'Universo Meccanico: dall'elettricità alla fisica moderna*, Italian language version of *Beyond The Mechanical Universe*, with T.A. Apostol and D.L. Goodstein, Zanichelli Editore, Bologna, Italia (1989).
10. *The Mechanical Universe High School Adaptation: QUAD VII, Modern Physics*, Southern California Consortium, Cypress, CA (1990).
11. *Klassieke Mechanica*, Dutch language version of *The Mechanical Universe*, with T.A. Apostol and D.L. Goodstein, Niek de Kort, editor, Stichting Teleac, Utrecht (1990).
12. *Klassieke Mechanica Deel 2, Electriciteit en magnetisme*, Dutch language version of *Beyond the Mechanical Universe*, with T.A. Apostol and D.L. Goodstein, Niek de Kort, editor, Stichting Teleac, Utrecht (1991).
13. **C³P**, Comprehensive Conceptual Curriculum for Physics, CD-ROM, TLTG (1997).
14. *Physics—A Calculus Based Course Term 1*, (web content provider) Archipelago Distributed Learning, a division of Harcourt, Inc., San Francisco, CA (1999).
15. *Physics—A Calculus Based Course Term 2*, (web content provider) Archipelago Distributed Learning, a division of Harcourt, Inc., San Francisco, CA (1999).
16. **C³P 2000+** CD-ROM, University of Dallas, Irving, TX (2000).
17. Holt Science *Spectrum*, (contributing author), Holt, Rinehart, and Winston, Austin, TX (2001).
18. *Behold and See 6, A Catholic and Hands-On Approach to Science* by RoseMary C. Johnson, (contributor consultant), CHC Press, (2012).

GRANTS

1. "Exact Results for the Many-Body Problem with Applications to Cooperative Effects" awarded by the Research Corporation, \$8,650 (1980).
2. "Adapting *The Mechanical Universe*: Materials for High School Physics" awarded by the National Science Foundation, \$650,000 (grant number SPE-8318420), 1983.
3. "Adapting *The Mechanical Universe*: Materials for Use in High School Physics" awarded by the National Science Foundation, \$688,505 (grant number MDR-8550178), 1985.
4. "Adapting *Beyond The Mechanical Universe*: Materials for Use In High School Physics", awarded by the National Science Foundation, \$994,055 (grant number MDR-8652023), 1986.
5. "Adapting *Beyond the Mechanical Universe*: Modern Physics for High School Physics" awarded by the National Science Foundation, \$1,147,949 (grant number MDR-8751537), 1986.
6. "The Mechanical Universe" awarded by the U.S. Department of Education National Diffusion Network, \$300,000, 4 yrs. (grant number RO73A90007), 1989.
7. "National Workshops and Support Network for Under-Prepared Teachers of Physics Using **The Mechanical Universe** High School Adaptation" awarded by the National Science Foundation, \$818,400, 3 yrs. (grant number TPE-8954597), 1989.
8. "Workshop for Under-Prepared Teachers of Physics Using **The Mechanical Universe** High School Adaptation" funded by the State of Texas Eisenhower Grants, \$27,828 (grant number 89019UD), 1989.
9. IBM Applications Development Grant, 50% discount on RISC/6000 hardware for developing software applications (1990).
10. "Southwest Teachers' Academy of Physics", awarded by the U.S. Department of Education, \$317,398 (grant number R215R10010), 1991.
11. Fulbright Scholar to Russia, Moscow State University, \$11,000, Spring 1992.
12. "The Mechanical Universe" awarded by the U.S. Department of Education National Diffusion Network, \$320,000, 4 yrs. (grant number RO73A30003), 1993.
13. "**C³P**--Comprehensive Conceptual Curriculum for Physics", awarded by the National Science Foundation, \$2,013,559, 4 yrs. (grant number ESI-9254590), 1993.
14. "**C³P**--Comprehensive Conceptual Curriculum for Physics", awarded by the National Science Foundation, \$231,704, supplement to grant number ESI-9254590, 1996.
15. "Multimedia Discovery Environment for Learning Science and Math," awarded by the National Science Foundation, \$41,000, 2 years (grant number DUE-9751292) with C.W. Eaker and C. Coppin, 1997.
16. "Multimedia Discovery Environment," part of a grant awarded by the Mellon Foundation, \$5,000, 2 years, 1997.
17. "TRIAD Science Education Program," SBC Foundation, \$50,000, 4 years, 2000.
18. Texas Regional Collaborative, Texas Educational Agency, \$129,000, 1 year, (with K.J. Matsler) 2005.
19. Texas Regional Collaborative, Texas Educational Agency, \$430,000, 1 year, (with K.J. Matlser) 2006.
20. APS Sigma Pi Sigma Undergraduate Research Award, \$1800, 1 year, 2009.
21. UD SumMit, Texas Workforce Commission, \$65,000, 1 year, 2010.
22. "STExTS—Small Telescope Extrasolar Transit Search," NASA New Investigations Grant, Texas Space Grant Consortium, \$10,000, 2010.

INVITED PAPERS/SEMINARS

1. "Are Leftists Taking Over High Energy Physics?", North Texas State University Physics Department Colloquium, 25 November 1980.
2. "No GUTS, No Glory: A Look at Grand Unified Theories", North Texas State University Physics Department Colloquium, 14 July 1981.
3. "Some Paradoxes in Relativity Theory", University of Texas at Arlington, Dunsworth Lecture Series, 12 February 1982.
4. "Cosmology and Particle Physics", Academy of Sciences of the USSR, Dagestan Affiliate, Makhachkala, USSR, 27 May 1982.
5. "Fusion by Leptons", North Texas State University Physics Department Colloquium, 16 November 1982.
6. "The New Physics as Psychological Revolution", American Psychological Association Meeting, Anaheim, CA, 29 August 1983.
7. "The Making of *The Mechanical Universe*", North Texas State University Physics Department Colloquium, 29 November 1983.
8. "The Apple and the Moon", University of Dallas SPS, 18 October 1984.
9. "Can Big Bird Teach Physics?: *The Mechanical Universe*", University of Tennessee--Chattanooga Physics Department Colloquium, 14 November 1984.
10. "Can Big Bird Teach Physics?", Purdue University Physics Department Colloquium, 15 November 1984.
11. "The Making of *The Mechanical Universe*", San Francisco State University Physics Department Colloquium, 10 December 1984.
12. "*The Mechanical Universe*: A Look at Physics Through the Window of Television", APS/AAPT Joint Meeting, Toronto, Canada, 24 January 1985, *Bull. Am. Phys. Soc.*, 30, 52 (1985).
13. "The Making of *The Mechanical Universe*", University of Auckland (New Zealand), 15 February 1985; University of Melbourne (Australia), 1 March 1985; University of Sydney (Australia), 4 March 1985.
14. "*The Mechanical Universe*", NSTA Spring Meeting, Cincinnati (Ohio), 18 April 1985.
15. "*The Mechanical Universe*--A Physics Course for Television", International Conference on Communicating Physics, University of Duisburg (F.R. Germany), 27 August 1985.
16. "Classical Science in the Space Age", Tome Symposium on Science in the Liberal Arts, Dickinson College (Pennsylvania), 27 September 1985.
17. "Visual Metaphors in *The Mechanical Universe*", MCC Meeting, Austin (Texas), 7 November 1985.
18. "Image, Imagery, and Imagination in Teaching Physics", U.S. Air Force Academy, Physics Department Colloquium, 14 November 1986.
19. "*The Mechanical Universe and Beyond*: Physics for Science Teachers", Ninth Annual Rural and Small Schools Conference, Kansas State University, 26 October 1987.
20. "Instant Replay Physics: Videos on Conceptual Physics", National Science Teachers Association Meeting, San Antonio, TX, 19 November 1987.
21. "Conceptual Physics", Fifteenth Annual Meeting of the National Diffusion Network of the Department of Education, 23 February 1989.
22. "Conceptualizing Physics", Europhysics Conference on Physics Education, Altmünster, Austria, 31 July 1989.

23. "Sticky Physics", U.S. Air Force Academy Physics Department Seminar, 12 October 1989.
24. "Enhancing Teachers' and Students' Conceptual Understanding with Videotapes," 22 January 1991, AAPT/APS Joint Meeting, San Antonio, TX, *Bull. Am. Phys. Soc.*, **36**, 82 (1991).
25. "A Course in Computational in Computational Physics Leading to Undergraduate Research," IBM ACIS Conference, DFW/Marriott, 11 June 1991.
26. << Компьютерное Моделирование по Физике>>, Kiev State University, Ukraine, Physics Department Seminar, 7 April 1992.
27. << Компьютерное Моделирование по Физике>>, Russian State Pedagogical University, St. Petersburg, Russia, Physics Department Seminar, 5 May 1992.
28. "Conceptual Physics", The Secretary's Conference on Science and Mathematics Education, Washington, D.C., October 22, 1992.
29. "Some Misconceptions about Teaching Physics," U.S. Air Force Academy, 8 March 1993.
30. "Percolation Models of Growth Process from Cities to Lightning," Worcester Polytechnic Institute, 26 February 1993.
31. "Fractal Characteristics of Dielectric Breakdown," Moscow State University, Moscow, Russia, 24 May 1993.
32. "New Initiatives in Physics Curricula", Purdue University, 28 November, 1994.
33. "Courses and Degrees in the Former Soviet Union," American Physical Society Meeting, San Jose, CA, 21 March 1995.
34. "C³P-A New Curriculum Project in Physics," Purdue University, 31 May 1995.
35. "Comprehensive Conceptual Curriculum for Physics--An Overview," AAPT Winter Meeting, *AAPT Announcer*, vol. 25, 81 (1995).
36. "C³P", AAPT Summer Meeting, *AAPT Announcer*, vol. 26, 68 (1996).
37. "Reflections on Misconceptions," 1996 Maiben Lecture, Nebraska Academy of Sciences, Fremont, NE, 24 October 1996.
38. "C³P--Physics for the Ninth Grade," Nebraska Association of Teachers of Science (NATS), 25 October 1996.
39. "Teaching Science Interactively," Excellence in Education Address, University of Dallas, November 1997.
40. "Practical Applications for Physics Education Research for Conceptual Courses," TCCTA, Dallas, TX, March 2001.
41. "It's What You Know That Ain't So," CAST Keynote Speaker, Austin, TX, 10 November 2001.
42. "Practical Applications for Physics Education Research for Conceptual Courses," Southern Methodist University, Dallas, TX, 21 January 2002.
43. "Scaling and Dielectric Breakdown," Beloit College Physics Seminar, 7 March 2002.
44. "Scaling and Dielectric Breakdown," Marquette University Physics Seminar, 14 March 2002.
45. "A Tale of Two Stars—V603 Aql and V1331 Cyg," Victoria University of Wellington (New Zealand) Physics Seminar, 20 July 2004.
46. "Searching for Disasters," Fairfield University Physics Seminar, 23 February 2005.
47. "Analysis of the Cataclysmic Variables V1331 Cyg and V603 Aql," Southwest Missouri State University Physics Seminar, 17 March 2005.
48. "Stop! My Brain Can't Hold Any More: How Students Learn Science," NSTA Annual Convention High School Breakfast Talk, 1 April 2005.
49. "Cataclysmic Variables," The Citadel, 22 February 2006.

50. "Cataclysmic Variables: Observations and Mechanics," Texas Astronomical Society, University of Texas at Dallas, 17 November 2006.
51. "Modelling Baseball, Avalanches, Electron Scattering, and All Sorts In Between," Citadel Physics Seminar, 25 April 2007.
52. "Using Astronomy Concepts to Teach Physics," CAST, 8 November 2008.
53. Gunnison Valley Observatory, "Dark Matter," "Binaries", "Tunguska" three lectures in June-July 2009.
54. Gunnison Valley Observatory, "Dwarf Novae, Novae, and Supernovae," July 2010.
55. University of Dallas Ministry Conference, "Creation: The Big Bang", October 2010.
56. Gunnison Valley Observatory, "STExTs (Small Telescope Exoplanet Searches)," July 2011.
57. University of Dallas Ministry Conference, "Beyond Earth", October 2011.
58. University of Dallas Ministry Conference, "The Beginning of the Universe", October 2012.
59. University of Dallas Ministry Conference, "Creation: The Big Bang", October 2013.
60. Texas A&M University-Commerce, Physics Colloquium, "Small Telescope Extrasolar Transit Searches and Incidental Discoveries," February 27, 2014.
61. University of Northern Michigan Physics Colloquium, "How White Dwarfs Evolve into Supernovae", 14 September 2015.
62. Michigan Technological University Physics Colloquium, "Small Telescope Extrasolar Transit Searches (STExTS)", 8 October 2015.
63. University of North Texas Physics Colloquium, "Small Telescope Extrasolar Transit Searches (STExTS)", 17 November 2015.

CONTRIBUTED PAPERS

1. "The Dominance of Weak Forces Over Strong Forces in Complex Systems", **Richard Olenick**, T. Erber, M. Duda, H.G. Latal, Bull. Am. Phys. Soc., 18, 1592 (1973).
2. "Two-Dimensional (Synergistic Hysteresis)", **Richard Olenick**, T. Erber, H.G. Latal, Bull. Am. Phys. Soc., 19, 20 (1974).
3. "Dilatational Symmetry Breaking in Magnetic Cooperative Systems", **Richard Olenick**, T. Erber, AIP Magnetism and Magnetic Materials Conference (Dallas), 14 November 1980.
4. "Gravitational Law in N-Dimensions", **Richard Olenick**, Jeff Elmer, Bull. Am. Phys. Soc., 26, 1225 (1981).
5. "N-Dimensional Hydrogenic Atoms", **Richard Olenick**, Jeff Elmer, Bull. Am. Phys. Soc., 26, 1195 (1981).
6. "Lepton Catalyzed Fusion", **Richard Olenick**, Bull. Am. Phys. Soc., 26, 1216 (1981).
7. "Synergistic Hysteresis", **Richard Olenick**, S. Shappell, Bull. Am. Phys. Soc., 30, 28 (1985).
8. "Classical Limits to the Charge of the Universe", **Richard Olenick**, Bull. Am. Phys. Soc., 30, 29 (1985).
9. "Improving Cross-Over Teachers' Teaching of Physics", **Richard Olenick**, AAPT Announcer, **22**, 60 (1992).
10. "There's More to Training Than Training", **Richard Olenick**, AAPT Announcer, **22**, 80 (1992).
11. "Fractal Characteristics of Stochastic Growth Phenomena", **Richard Olenick**, Brian Smith, AAPT Announcer, **22**, 74 (1992).
12. "Data Analysis of the Variable Star V603 Aql" **Christian Clerc**, Richard Olenick, TX APS Fall Meeting, 25 October 2003.

13. “Differential and Absolute Photometric Analysis of V1331 Cyg” **Joshua Torres**, Richard Olenick, TX APS Fall Meeting, 25 October 2003.
14. “A Photometric Investigation and Examination of Superhumps of V795 Her,” **Daniel Malutich**, Richard Olenick and Irina Voloshina, Texas Section American Physical Society Fall Meeting, October 2006, UTA.
15. “Period Variation and Superhumps in V795 Her,” **Daniel Malutich**, Richard Olenick, Irina Voloshina, American Astronomical Society –American Association of Physics Teachers Joint Meeting, January 2007, Seattle, WA.
16. “Charming VPython Simulations,” **Eric Pepin**, Richard Olenick, American Astronomical Society—American Association of Physics Teachers Joint Meeting, January 2007, Seattle, WA.
17. “Visual Python in a Computational Physics Course,” **Richard Olenick**, David Case, Eric Pepin, William Spearman, Pycon 2007, February 23, 2007, Addison, TX.
18. “SU UMa Type Dwarf Nova J1625”, **Kyle Meziere**, Richard Olenick, Irina Voloshina, Vladimir Metlov, Jared Rovny, Texas APS meeting, October 2010, Bull. Am. Phys. Soc. V. 55, No.3, (2010).
19. “Further Measurements of the New Dwarf Nova J2138+26”, **Jared Rovny**, Richard Olenick, Irina Voloshina, Vladimir Metlov, Texas APS meeting, October 2010, Bull. Am. Phys. Soc. V. 55, No.3, (2010).
20. “Photometric Search for Variables in DD9 with STExTS”, **Eric Bechter**, Richard Olenick, Arthur Sweeney, Blaise DuFrain, Andrew Bechter, Texas APS meeting, March 2012, Bull. Am. Phys. Soc. V. 57, No.2, (2012).
21. “Small Telescope Exoplanet Transit Search (STExTS) Transit Candidates in the Open Cluster Dolidze-Dzimsevijili 9 (D9)”, **Blaise DuFrain**, Richard Olenick Arthur Sweeney, Andrew Bechter, Eric Bechter, Texas APS meeting, March 2012, Bull. Am. Phys. Soc. V. 57, No.2, (2012).
22. “Small Telescope Extrasolar Transit Searches (STExTS) Data Analysis”, **Eric Bechter**, Richard Olenick, Arthur Sweeney, Andrew Bechter, Blaise DuFrain, Texas APS meeting, March 2012, Bull. Am. Phys. Soc. V. 57, No.2, (2012).
23. “Measurements of the New Dwarf Nova SDSS J162520+12030”, **Irina Voloshina**, Richard Olenick, Kyle Meziere, V. Melkov, and E. Pavlovna, EWASS (European Week of Astronomy and Space Science), Rome, Italy, July 2012.
24. “Small Telescope Extrasolar Transit Search”, **Richard Olenick**, A. Sweeney, A. Bechter, E. Bechter, and B. DuFrain, EWASS (European Week of Astronomy and Space Science), Rome, Italy, July 2012.
25. “Evaluation of Two Transit Algorithms”, **Matt Heuser**, Richard Olenick, Arthur Sweeney, Jeff Schneiderjan, James Meier, Texas APS meeting, March 2013. Bull. Am. Phys. Soc. V 58, No.3, (2013).
26. “PHOEBE modeling of Three New Binaries in Hercules”, **Jeff Schneiderjan**, Richard Olenick, Arthur Sweeney, James Meier, Matt Heuser, Texas APS meeting March 2013, . Bull. Am. Phys. Soc. V 58, No.3, (2013).
27. “O-C Calculations for Two New Binaries and V1097 Herculis”, **James Meier**, Richard Olenick Arthur Sweeney, Jeff Schneiderjan, Matt Heuser, Texas APS meeting March 2013, . Bull. Am. Phys. Soc. V 58, No.3, (2013).
28. “Observations and Modeling of Two New W UMa Stars”, **Nicholas Hedlesky**, Richard Olenick, Arthur Sweeney, Matt Melendez, Anthony Kersting, Thaddeus Howard, Texas APS meeting, March 2014, Bull. Am. Phys. Soc. V 59, No. 2 (2014).

29. "Blazhko Effect in a Newly Discovered and a Known RR Lyrae Star", **Matt Melendez**, Richard Olenick, Arthur Sweeney, Nicholas Hedlesky, Thaddeus Howard, Anthony Kersting, Texas APS meeting, March 2014, Bull. Am. Phys. Soc. V 59, No. 2 (2014)
30. "Discovery and Follow-up Observations of the Exoplanet Candidate GSC02087-01126", **Laura Aumen**, Richard Olenick, Arthur Sweeney, Texas APS meeting, March 2015, Bull. Am. Phys. Soc. V 60, No. 2 (2015).
31. "Observations and Analysis of the New Dwarf Nova ASASSN-14cv", **Anthony Kersting**, Richard Olenick, Arthur Sweeney, Texas APS meeting, March 2015, Bull. Am. Phys. Soc. V 60, No. 2 (2015).
32. "Observations and Modeling of the New delta Scuti GSC 02087-02155", **Ramses Gonzalez**, Richard Olenick, Arthur Sweeney, Joint Spring 2016 Meeting of the Texas Sections of APS, AAPT, and Zone 13 of the SPS, Thursday–Saturday, March 31–April 2 2016; Beaumont, Texas.
33. "Photometric observations and modeling of the new W UMa binary USNO-B1.) 1163-0308203", **Alex Henderson**, Richard Olenick, Arthur Sweeney, Ramses Gonzalez, Tommy Byrd, Joint Spring 2016 Meeting of the Texas Sections of APS, AAPT, and Zone 13 of the SPS, Thursday–Saturday, March 31–April 2 2016; Beaumont, Texas.

ADDITIONAL PROFESSIONAL ACHIEVEMENTS AND AWARDS

1. Senior Convocation Speaker (chosen by the Senior Class), May 1982.
2. Faculty Good Guy Award from the Senior Class of 1983.
3. Associate Project Director of *The Mechanical Universe*, a telecourse consisting of 26 half-hour programs on classical physics as part of the Annenberg/CPB Project for the PBS (initially aired Fall 1985).
4. Associate Project Director of *Beyond The Mechanical Universe*, a telecourse consisting of 26 half-hour programs on electricity, magnetism, relativity, and modern physics as part of the Annenberg/CPB Project for the PBS (initially aired Spring 1987).
5. Project Director of the National Science Foundation project on high School Adaptations of *The Mechanical Universe and Beyond*, 1984 - 1990.
6. Fall Convocation Speaker 1985.
7. 1986 Michael A. Hagggar Fellow (Distinguished Junior Faculty Member) at the University of Dallas.
8. Senior Convocation Speaker (chosen by the Senior Class), May 1986.
9. CASE (Council for Advancement and Support of Education) Professor of the Year Silver Medalist 1986.
10. University of Dallas Presidential Award Winner, 1987.
11. Faculty Good Guy Award from the Senior Class of 1988.
12. Gallery Exhibit, "Seeing the Unseen," Hagggar Gallery, 9 April - 15 May 1988.
13. Listed in *American Men and Women of Science* (1980).
14. Listed in *Who's Who in the South and Southwest* (1988).
15. Listed in *Men of Achievement*, Cambridge, England (1989).
16. Gallery Exhibit, "Voyager 2: Journey and Discoveries," Irving Arts Center, 6 October - 5 November 1989.
17. Principal Investigator for the National Diffusion Network dissemination grant of **The Mechanical Universe** High School Adaptation, 1989 - present.

18. Principal Investigator for the workshop dissemination program supported by the National Science Foundation for **The Mechanical Universe** High School Adaptation, 1989 - present.
19. Faculty Good Guy Award from Student Government, 1990.
20. Listed in *Men and Women in American Education* (1990).
21. Member of CUPS, Consortium for Upper-level Physics Software, based on a NSF Grant to George Mason University (1990 - 1992).
22. Member of the Board of Examiners for the Graduate Record Exam Physics Test (1990-1998).
23. Faculty Good Guy Award from Student Government, 1991.
24. Presidential Award Winner (University of Dallas), 1992.
25. Principal Investigator, Southwest Teachers' Academy of Physics (1991-93).
27. Fulbright Scholar, Moscow State University, Spring semester 1992.
28. Chautauqua Workshop Leader, Caltech, 18-20 March 1993.
29. Visiting Professor, Physics Department, Moscow State University, May 1993.
30. Principal Investigator, U.S. Department of Education National Diffusion Network project "The Mechanical Universe," (1993 - 1998).
31. Principal Investigator for C³P Project funded by the National Science Foundation, (1993 - present).
32. Advisory Board Member of *Project Discovery*, a video tape series on middle-school science (1993 - 94).
33. Member of Teacher Enhancement Institute Advisory Team for the Dallas Independent School District Urban Systemic Initiative Grant.
35. Carnegie Foundation Texas Professor of the Year (1995).
36. Student Government "Outstanding Faculty Member," 1995-96.
37. Chair, Committee of Examiners for the Graduate Record Physics Test (1996-98).
38. Editor-in-Chief, *Physics and Technology Quest* (Singapore), 1996 - 1998.
64. Minnie Stevens Piper Professor (1997).
65. Student Government "Outstanding Faculty Member," 1997-98.
66. Reviewer for U.S. Department of Education grant proposals, 1998.
67. Writer and Reviewer for Archipelago Productions Distance Learning Course in Calculus-based Physics, 1998-1999.
68. Chautauqua Workshop Leader, Western State College, Gunnison, CO, 17-19 June 1998.
69. Writer for Holt *Science Spectrum*, 1998-1999.
70. Listed in *Who's Who in Education*, 1999.
71. Chautauqua Workshop Leader, Western State College, Gunnison, CO, 15-17 June 2000.
72. Reviewer, Academic Decathlon, 2001.
73. Vice-Presidential Candidate, American Association of Physics Teachers, Fall 2002.
74. Member, Board of Directors, Gunnison Valley Observatory, 2002 – present.
75. Listed in *Who's Who Among America's Teachers*, 2004.
76. Nancy Cain Marcus and Jeffrey A. Marcus Endowed Chair in Science, 2003 - 2005.
77. Chair, Committee of Examiners, Major Field Test, Educational Testing Service, 2002-03.
78. Outstanding Faculty Advisor, presented by UD Student Government, 2004.
79. American Association of Physics Teachers Director of Examinations 2004 – 2007.
80. Florence and Carl King Award (Highest Honor for a Senior Faculty Member), University of Dallas, 2005.
81. Rural Physics Teaching Resource Agents Site, 2005 – 2007.
82. Texas Regional Collaborative Director of University of Dallas Site, 2005 – 2007.

83. Senior Convocation Speaker (chosen by Senior Class) 2007.
84. Reviewer for Texas Space Grant Consortium K-12 education proposals, 2009.
85. Haggerty Teaching Fellow Award, University of Dallas, 2010.
86. Reviewer for Texas Space Grant Consortium Higher Education proposals, 2010.
87. Reviewer for Texas Space Grant Consortium New Investigation proposals, 2011-12.
88. Reviewer for National Science Foundation Graduate Research Fellowships, 2012.
89. Member, Major Field Test in Physics Committee, Educational Testing Services, 2010-12.
90. Reviewer, National Science Foundation Graduate Research Fellowships, 2012.
91. Haggerty Teaching Fellow Award, University of Dallas, 2012.
92. Senior Convocation Invocation Speaker, University of Dallas 2013.
93. Faculty Sponsor Award (for Society of St. Joseph) University of Dallas 2015.
94. Senior Convocation Speaker (chosen by Senior Class) University of Dallas 2015.

CONTRIBUTED WORKSHOPS

1. Chautauqua Workshop, Caltech, 18-20 March 1993.
2. AAPT Summer Meeting, August 1996, College Park, MD, *C³P*.
3. AAPT Winter Meeting, January 1997, Phoenix, AZ, *C³P*.
4. AAPT Summer Meeting, August 1997, Denver, CO, *C³P*.
5. AAPT Winter Meeting, January 1998, Orlando, FL, *C³P*.
6. Chautauqua Workshop Leader, Western State College, Gunnison, CO, 17-19 June 1998.
7. Chautauqua Workshop Leader, Western State College, Gunnison, CO, 15-17 June 2000.
8. *C³P* Workshop Leader, University of Dallas, Irving, TX, 26 June – 1 July 2000.
9. *C³P* Workshop Leader, University of Dallas, Irving, TX, 24 June – 30 2001.
10. *C³P* Workshop Leader, University of Dallas, Irving, TX, 30 June – 5 July 2002.
11. *C³P* Workshop Leader, University of Dallas, Irving, TX, 27 June – 4 July 2004.
12. *C³P* Workshop Leader, University of Dallas, Irving, TX, 27 June – 1 July 2005.
13. Rural Physics Teaching Resource Agent Workshop (Rural PTRAs), University of Dallas, Irving, TX, 19 – 23 June 2006.
14. Texas Regional Collaborative Workshops, University of Dallas, Irving, TX, June 2006.
15. Rural Physics Teaching Resource Agent Workshop (Rural PTRAs), University of Dallas, Irving, TX, 11 – 15 June 2007.
16. Texas Regional Collaborative Workshops, University of Dallas, Irving, TX, 18 – 21 June 2007.
17. *C³P* Workshop Leader, University of Dallas, Irving, TX, 25 June – 29 June 2007.

UNIVERSITY COMMITTEES

1. Ad Hoc Committee on University Computing, October 1983 - May 1984.
2. Constantin College Curriculum Committee, September 1985 - May 1987.
3. Faculty Senate, September 1985 - May 1986.
4. Student Life Committee, September 1985 - 87.
5. Ad Hoc Committee of Student Life for Formulating a New Alcohol Policy, 1986.
6. Ad Hoc Committee on the Science Core, Chair, Spring 1986.
7. King Scholarship Committee, Chair, September 1985 - 1988.

8. Faculty Development Committee, September 1986 - May 1987.
9. Council of Deans and Chairmen, September 1986 - present.
10. Task Force on Marketing of the University, September 1987 - October 1987.
11. Faculty Senate, Secretary, May 1988 - May 1989.
12. Faculty Senate, August 1989 - 1993.
13. Faculty Senate, Secretary, May 1990 - May 1991.
14. Task Force on Student Government, Chairman, Spring 1991.
15. Self-Study Committee on Institutional Advancement, Chairman, 1992-93.
16. Constantin Curriculum Committee, 1993.
17. Committee on Retention, 1993.
18. Faculty Senate, 1994 - 1998.
19. Library Planning Committee, 1995 - 1996.
20. Constantin Computer Committee, 1994 - 2001.
21. Presidential Search Committee, February - September 1996.
22. Student Life Committee, 1995 - 1997.
23. Vice Chair, Faculty Senate, 1999-2000.
24. Rank and Tenure Committee, 1999-2001.
25. Chair, Faculty Senate, 2000-2001.
26. Faculty Development Committee, 2000-2001.
27. University Council, 1999-2001
28. Faculty Senate 2001 - 2003.
29. Admissions Committee 2001 – 2003.
30. Committee on Patents and Intellectual Property, 2003 – 2004.
31. Committee on Retention, 2003 – 2005.
32. Faculty Senate 2004 – 2006.
33. University Web Overview Committee, 2005.
34. Faculty Development Committee, 2006.
35. New Programs Committee, 2006.
36. Rome Summer Programs Committee, 2007.
37. Faculty Senate 2006 – 2008.
38. Retention Committee, 2008 – 2013.
39. Faculty Senate, 2010 – 2012.
40. Committee on Student Life, 2010 – 2012.
41. Faculty Senate 2013 - 2015.
42. Rank and Tenure, 2013 - 2015.
43. Faculty Senate 2016-2017.

COMMUNITY EDUCATION COURSES AND LECTURES

1. Astronomy in Perspective: The Drama of the Universe, 25 March - 15 April, 1981.
2. Astronomy: Exploring the Universe in Space and Time, 16 September - 7 October, 1981.
3. "Energy: Tyrant or Tenant of the Future", 18 November, 1981.
4. Astronomy in Perspective: Exploring the Universe, 6 October - 27 October, 1982.
5. "Borscht, Babushkas, and Balalaikas: An Outsider's Inside Look at Life in the USSR", 10 October 1982.
6. Astronomy in Perspective: Exploring the Universe (at Highland Park H.S. Planetarium), 20

March - 10 April, 1984.

7. Observatory Open House, first Thursday of every month, Fall 1988 - Spring 1989.
8. Observatory Open House, first Thursday of every month, Fall 1990 and Fall 1991.
9. Observatory Open House, first Thursday of every month, Fall 1992 - Spring 1993.
10. Russian Language and Culture, Spring 1993.
11. Fractals and Chaos in Physics, Fall 1993.
12. UD Summer (High School) Scholars, Astronomy, Summer 1994.
13. UD Summer (High School) Scholars, Modern Physics Through Films, Summer 1996.
14. Observatory Open House, first Thursday of every month, Fall 1996 - Spring 1997.
34. "Navigating by the Stars," a workshop for middle school teachers, 26 September 1996.
35. Observatory Open House, Wednesdays, Fall 2001, Spring 2002.
36. Mars Mania, August 27, 2003.
37. Four Hundred Years of Telescope Observations, April 25, 2009.
38. Promise House Colorado Trip, July 27 – 31, 2009.
39. Promise House Colorado Trip, July, 2010.
40. Introductory Russian, Iron County Library, June-July 2015.

COMMUNITY SERVICE LECTURES

1. NSF Teachers Institute (UD Education Dept.), "Is Anybody Else Out There?", 7 February 1980.
2. Chemistry Department Colloquium (UD), "Color My World With Quarks", 21 February 1980.
3. Cistercian Preparatory School (Irving), "Is Anybody Else Out There?", 6 March 1980.
4. Friday Club (UD), "Does God Play Dice With the Universe?", 21 March 1980.
5. Metroplex Science Educators Meeting (UD), "Is Anybody Else Out There?", 22 April 1980.
6. NSF Teachers Institute (UD Education Dept.), "The Problem of Energy", 17 April 1980.
7. Travis High School (Irving), "Is Anybody Else Out There?", 8 May 1980.
8. Kimball Science Symposium (Dallas), "Prospects and Problems of Space Travel", 8 November 1980.
9. TSEA (UD), "The Stellar Schoolhouse and a Lesson on Life", 28 January 1981.
10. Kiwanis Club (Irving), "Is Anybody Else Out There?" 24 February 1981.
11. Second Annual Pecan Plantation Symposium on Improving the Quality of Undergraduate Education, 5 - 7 April, 1981.
12. American Association of University Women (Irving), "Energy: Tyrant or Tenant of the Future?", 24 September 1981.
13. Kimball Science Symposium (Dallas), "Shall We Ever Be UFOs on Other Worlds?", 14 November 1981.
14. Brookhaven Junior College (DCCC), "Cosmology", 28 April 1982.
15. Young People's University (DISD), "Is Anybody Else Out There?", 1 May 1982.
16. America Overnight Radio, The Ed Busch Show (KRLD 1080), talk show on astronomy and cosmology, 15 September 1982.
17. Friday Club (UD), "An Inside Look at Life in the USSR", 17 September 1982.
18. America Overnight Radio, The Ed Busch Show (KRLD 1080), talk show on twentieth-century physics, 17 December 1982.
19. Friday Club (UD), "Does the Moon Disappear When You're Not Looking?: Quantum Mysteries for Everyone", 16 September 1983.

20. Irving Forum, "A Look Through the Iron Curtain", 7 October, 1983.
21. Metroplex Science Educators Meeting (UD), "The Making of *The Mechanical Universe*", Spring 1984.
22. Plano/Richardson Telecable, "Weekdays", cable television talk show on Comet Halley, 18 December 1985.
23. Irving Forum, "Nuclear Power", 6 June 1986.
24. The Karen Denard Show, KERA 90.1 (PBS), talk show on physics, 10 June 1986.
25. Irving Chapter of AMBUCS, talk on life in the Soviet Union, 9 June 1986.
26. The Ed Busch Show, (KRLD 1080) radio talk show on physics, 11 October 1986.
27. Texas State Science Supervisors Meeting, "Conceptual Physics using Videotapes", 6 February 1987.
28. The Teachers Academy, Dallas Institute of Humanities and Culture, "Science as a State of Mind", 25 April 1987.
29. Irving Chapter of AMBUCS, talk on the University telescope, 23 July 1987.
30. In-service Workshop for Ft. Worth Independent School District, 27 August 1987.
31. The Ed Busch Show, radio talk show on quantum theory, 29 August 1987.
32. Friday Forum (UD), Life in the Soviet Union, 5 February 1988.
33. Forgotten Fundamental of the Energy Crisis, Irving Lions, 27 July 1988.
34. Kevin McCarthy Radio Talk Show, KLIF 1190, 21 December 1988.
35. Open Line, talk show on science fiction and technology, Irving Cable TV, 8 March 1989.
36. Kevin McCarthy Radio talk Show, KLIF 1190, 4 July 1989.
37. Irving Chapter of AMBUCS, talk on space travel, 6 July 1989.
38. Openline, talk show on *Voyager 2*, Irving Cable TV, 4 October 1989.
39. Texas Astronomical Society, talk on stellar evolution, 25 November 1990.
40. Keynote Speaker, Irving Chamber of Commerce Dinner Honoring Top Irving High School Graduates, 22 May 1991.
41. David Gold Radio Talk Show, KLIF 570, 8 June 1992, discussion of Russia.
42. Open Line with Robin Engle, Irving Cable talk show on Russia, 10 June 1992.
43. "From Order to Chaos", lecture at the Irving Arts Center, 19 June 1992.
44. The McQuisition Show, guest expert, program on Russia in Transition, 15 December 1992.
45. Texas Astronomical Society, talk on galaxies, 29 January 1993.
46. The Alex Burton Show, KRLD, radio talk show in science education, 10 August 1993.
47. Open Line with Robin Engle, Irving Cable talk show on physics education, 10 September 1993.
48. "The Physics of Toys", Lamar Jr. High School Science Club meeting, 28 October 1993.
49. Metroplex Physics Teachers Club, host and presentation on laboratory interfaces, 30 October 1993.
50. The Karen Denard Show, talk show on physics education, 6 November 1993.
51. Irving Chapter of AMBUCS, "Russia in Transition", 30 June 1994.
52. Irving Library Children's Story Hour, 4 talks on "Stars and Planets," Summer 1994.
53. North Dallas Rotary, "Some Ideas on Science Education," 19 July 1994.
54. Irving Sunrise Rotary, "From Chessboards to World Population," 15 September 1994.
55. TexasPrep, "Physics from Galileo to Hawking", 19 July 1995.
56. Irving Sunrise Rotary, "Is Anybody Else Out There?," 9 November 1995.
57. Texas Astronomical Society, "Is Anybody Else Out There?," 26 April 1996.
58. Academic Forum, UD, "Is Anybody Else Out There?," 3 May 1996.
59. Dinner and Discourse, "Science and Faith," 1 October 1996.

60. Friday Forum, UD, "Extraterrestrial Intelligence," 4 October 1996.
61. Irving Sunrise Rotary, "Warp Drive and Wormholes," 5 November 1997.
62. Irving Public Libraries, "Mr. Wizard," physics demonstrations at five branch libraries, July 1997.
63. Irving Sunrise Rotary, "Close Encounters," 12 March 1998.
64. Irving Sunrise Rotary, "God and Science," 11 November 1999.
65. Dinner and Discourse, "A Voice Cries Out in the Wilderness: Lenten Reflections," 28 March 2000.
66. AMBUCS, "Astronomy in the 21st Century," 10 August 2000.
67. Mars Party, 26 and 29 August 2003.
68. Irving Sunrise Rotary, "The Search for ET," 4 December 2003.
69. Irving Sunrise Rotary, "Out of This World," 2 November 2006.
70. Dinner and Discourse, Oct. 30, 2007: "The Nexus Between Science and Religion."
71. Irving Sunrise Rotary, "Conversation," 3 November 2007.
72. University of Dallas Parents Association, Nov. 15, 2007: "Science as an Essential Liberal Art for Understanding Today's Universe."
73. Last Chance Lecture, "An Infinity of Possibilities," April 16, 2009.
74. Parents Weekend Sunday Brunch, "Astronomy in Colorado," October 4, 2009.
75. Las Colinas Women's Literary Guild, "A Tear in Creation". March 2011.
76. Stars in the Park, telescope viewing and lecture for area residents, April 2011.
77. Stars at UD, telescope viewing and activities for University Hills residents, April 2012.
78. Stars at UD, telescope viewing and activities for University Hills residents, April 2013.
79. Las Colinas Women's Literary Guild, "Russian Poetry", March 2013.
80. Stars at UD, telescope viewing and activities for University Hills residents, April 2014.
81. Iron River Public Library, "A Look at Russia," June 2, 2014.
82. Iron River Public Library, "Mysteries of the Night Sky," August 12, 2014.
83. Stars in the Park, University Hills Homeowners Association, April 2015.
84. Astronomy, Farine Middle School, Irving, TX, April 2015.
85. Open House UD Observatory for T.J. Lee Middle School, Irving, TX April 2015.
86. Northern Michigan's Dark Skies, Windsor Community Center, Iron River, MI, July 11, 2015.
87. Introductory Russian, Iron County Public Library, June-July, 2015.
88. How All the Iron Got to Iron County: A Cosmic Perspective, Iron County Museum, August 6, 2015.
89. Open House UD Observatory for Students and Parents of T.J. Lee Middle School, Irving, TX April 2016.
90. Astronomy in the Park, University Hills Homeowners Association, April 2016.

COURSES TAUGHT

- Fall 1979: General Physics I (PHY 2411), General Physics I Lab (PHY 2011), Electrical Measurements Lab (PHY 3136), Quantum Mechanics (PHY 4351).
- Spring 1980: General Physics II (PHY 2412), General Physics II Lab (PHY 2012), Optics (PHY 3331), Optics Lab (PHY 3132), Research (PHY 4V44).
- Fall 1980: General Physics I (PHY 2411), General Physics I Lab (PHY 2011), Theoretical Mechanics (PHY 4423).

- Spring 1981: Basic Ideas of Astronomy (SCI 2311), Basic Ideas of Astronomy Lab (SCI 2010), Astronomy (2311), Quantum Mechanics (PHY 4351), Research (PHY 4V44).
- Fall 1981: Electromagnetic Theory I (PHY 4327), Basic Ideas of Physics (SCI 2311), Basic Ideas of Physics Lab (SCI 2011), Seminar on Particle Physics (PHY 4153).
- Spring 1982: General Physics I (PHY 2411), General Physics I Lab (PHY 2011), Basic Ideas of Astronomy (SCI 2310), Basic Ideas of Astronomy Lab (SCI 2010), Electromagnetic Theory II (PHY 4328).
- Fall 1982: Theoretical Mechanics (PHY 4423), Research (PHY 4V43), Basic Ideas of Physics (SCI 2311), Basic Ideas of Science Lab (SCI 2011).
- Spring 1983: (On leave at Caltech.)
- Fall 1983: Electromagnetic Theory I (PHY 4327), Basic Ideas of Physics (SCI 2311), Basic Ideas of Physics Lab (SCI 2011), Seminar on Computers in Physics (PHY 4153).
- Spring 1984: Electromagnetic Theory II (PHY 4328), Astronomy (PHY 2310), Basic Ideas of Astronomy (SCI 2310), Basic Ideas of Astronomy Lab (SCI 2010), Research (PHY 4V44).
- Fall 1984: (On leave at Caltech.)
- Spring 1985: (On leave at Caltech.)
- Fall 1985: Electromagnetic Theory (PHY 4327), General Physics I (PHY 2411), General Physics I Lab (PHY 2011), Elementary Particles (PHYS 6309), Graduate Course at the University of Texas--Dallas.
- Spring 1986: Electrodynamics (PHY 4328), Basic Ideas of Astronomy (SCI 2310), Basic Ideas of Astronomy Lab (SCI 2010), Astronomy (PHY 2310), Research (PHY 4V44).
- Fall 1986: Theoretical Mechanics (PHY 4423), Advanced Lab II (PHY 3136), Basic Ideas of Physics (SCI 2310), Basic Ideas of Physics Lab (SCI 2010), Research (4V44), Quantum Field Theory I (PHYS 6311), Graduate Course at the University of Texas--Dallas.
- Spring 1987: Quantum Mechanics (PHY 4451), Basic Ideas of Astronomy (SCI 2310), Basic Ideas of Astronomy Lab (SCI 2010), Research (PHY 4V44).
- Fall 1987: Electromagnetic Theory (PHY 4327), Computational Physics (PHY 4361), Basic Ideas of Physics (SCI 2310), Basic Ideas of Physics Lab (SCI 2010).
- Spring 1988: Electrodynamics (PHY 4328), Basic Ideas of Astronomy (SCI 2310), Basic Ideas of Astronomy Lab (SCI 2010), Astronomy (PHY 2310).
- Fall 1988: Theoretical Mechanics (PHY 4423), Basic Ideas of Physics (SCI 2310), Basic Ideas of Physics Lab (SCI 2010), Astrophysics (PHY 4366), Theoretical Research (PHY 4V45), Quantum Field Theory I (PHYS 6311), Graduate Course at the University of Texas--Dallas.
- Spring 1989: Quantum Mechanics (PHY 4424), Basic Ideas of Astronomy (SCI 2310), Basic Ideas of Astronomy Lab (SCI 2010), Theoretical Research (PHY 4V46).
- Fall 1989: General Physics I (PHY 2311), General Physics I Laboratory & Quiz (PHY 2111), Basic Ideas of Physics (SCI 2310), Basic Ideas of Physics Lab (SCI 2010), Computational Physics (PHY 3363).
- Spring 1990: Astronomy (PHY 2310), Basic Ideas of Astronomy (SCI 2310), Basic Ideas of Astronomy Lab (SCI 2010), Electrodynamics (PHY 4328).
- Fall 1990: Basic Ideas of Physics (PHY 1401), Basic Ideas of Physics Lab, Computational Physics (PHY 3363).
- Spring 1991: Basic Ideas of Astronomy (PHY 1402), Quantum Mechanics (PHY 4424),

- Seminar on X Window System (PHY 4154).
- Fall 1991: Basic Ideas of Physics (PHY 1301), Basic Ideas of Physics Lab (1101), Electromagnetic Theory (PHY 4327).
 - Spring 1992: (on sabbatical, Fulbright Grant) Computational Physics at Moscow State University.
 - Fall 1992: General Physics I (PHY 2311) (two sections), General Physics I Lab (2111), Computational Physics (PHY 3363), Theoretical Research (PHY 4V45).
 - Spring 1993: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Quantum Mechanics (PHY 4424), Theoretical Research (PHY 4V46).
 - Fall 1993: General Physics I (PHY 2311) (two sections), General Physics I Lab (two sections), Electromagnetic Theory (PHY 4327), Theoretical Research (PHY 4V45).
 - Spring 1994: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Astronomy (PHY 2310), Electrodynamics (PHY 4328).
 - Fall 1994: General Physics I (PHY 2311) (two sections), General Physics I Lab (two sections), Computational Physics (PHY 3363), Cosmology and Astrophysics (PHY 4366) (one-third of course), Theoretical Research (PHY 4V45).
 - Spring 1995: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Quantum Mechanics (PHY 4424), Theoretical Research (PHY 4V46).
 - Fall 1995: Electromagnetic Theory (PHY 4327), Introduction to Computer Science (MCS 2310), (on partial (1 course) leave).
 - Spring 1996: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Astronomy (PHY 2310), Electrodynamics (PHY 4328).
 - Fall 1996: Basic Ideas of Physics (PHY 1301), Basic Ideas of Physics Lab (PHY 1101), Computational Physics (PHY 3363), General Physics I (PHY 2311), General Physics I Lab (PHY 2111).
 - Spring 1997: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (three sections), Quantum Mechanics (PHY 4424), General Physics II (calculus-based) (PHY2312), General Physics II Lab (PHY2112).
 - Fall 1997: Basic Ideas of Physics (PHY 1301), Basic Ideas of Physics Lab (PHY 1101), Computational Physics (PHY 3363), Electromagnetic Theory (PHY 4327).
 - Spring 1998: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Electrodynamics (PHY 4328), Advanced Computational Physics (PHY 4369).
 - May Term 1998: Basic Ideas of Astronomy (PHY 1302), Basic Ideas of Astronomy Lab (PHY 1102).
 - Fall 1998: On sabbatical.
 - Interterm 1999: Basic Ideas of Astronomy (PHY 1302), Basic Ideas of Astronomy Lab (PHY 1102).
 - Spring 1999: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (three sections), Quantum Mechanics (PHY 4424), Cosmology and Astrophysics (PHY 4366).
 - May Term 1999: Basic Ideas of Astronomy (PHY 1302), Basic Ideas of Astronomy Lab

- (PHY 1102).
- Fall 1999: Basic Ideas of Physics (PHY 1301), Basic Ideas of Physics Lab (PHY 1101), Computational Physics (PHY 3363), General Physics I (trig) Lab (PHY 2105).
 - Spring 2000: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Electrodynamics (PHY 4328).
 - May Term 2000: Basic Ideas of Astronomy (PHY 1302), Basic Ideas of Astronomy Lab (PHY 1102).
 - Fall 2000: General Physics 1 Calculus Based (PHY 2311) (two sections), General Physics 1 Calculus Based Lab (PHY 2111), Computational Physics (PHY 3363), Differential Equations (MAT 3323), IS/Quantum Mechanics (PHY4362).
 - Interterm 2001: Basic Ideas of Astronomy (PHY 1302), Basic Ideas of Astronomy Lab (PHY 1102).
 - Spring 2001: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Quantum Mechanics (PHY 4424), Applied Math I (MAT4315), IS/Relativistic Quantum Mechanics (PHY 4463).
 - May Term 2001: Basic Ideas of Astronomy (PHY 1302), Basic Ideas of Astronomy Lab (PHY 1102).
 - Fall 2001: General Physics 1 Calculus Based (PHY 2311) (two sections), General Physics 1 Calculus Based Lab (PHY 2111) (two labs), General Physics 2 (PHY 2312), General Physics 2 Lab (PHY2112), Electromagnetic Theory (PHY 4327), IS/Computational Physics (PHY 3363), IS/Calculus III (MAT 2412).
 - Spring 2002: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Electrodynamics (PHY 4328), Advanced Lab (PHY 4120), Astrophysics (PHY 4366).
 - Mayterm 2002: Astronomy in Colorado.
 - Fall 2002: General Physics 1 Calculus Based (PHY 2311) (two sections), General Physics 1 Calculus Based Lab (PHY 2111), Computational Physics (PHY 3363), Physics Seminar (PHY 4125).
 - Spring 2003: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Quantum Mechanics (PHY 4424), Astronomical Image Processing (PHY 4269).
 - Mayterm 2003: Astronomy in Colorado.
 - Fall 2003: General Physics 1 Calculus Based (PHY 2311) (two sections), General Physics 1 Calculus Based Lab (PHY 2111), Electromagnetic Theory (PHY 4327), Mathematical Physics (PHY4361)
 - Spring 2004: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Electrodynamics (PHY 4328), Astrophysics (PHY 4366).
 - Mayterm 2004: Astronomy in Colorado.
 - Fall 2004: General Physics 1 Calculus Based (PHY 2311), General Physics 1 Calculus Based Lab (PHY 2111), Computational Physics (PHY 3363), Theoretical Mechanics (PHY 4423).
 - Spring 2005: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Quantum Mechanics (PHY 4424), Astronomical Image Processing (PHY 4369).
 - Fall 2005: On sabbatical.
 - Spring 2006: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of

Astronomy Lab (PHY 1102) (two sections), Electrodynamics (PHY 4328), Astrophysics (PHY 4366), Elementary Russian I (GST 3345).

- Mayterm 2006: Astronomy in Colorado.
- Fall 2006: General Physics 1 Calculus Based (PHY 2311), General Physics 1 Calculus Based Lab (PHY 2111) (two sections), Computational Physics (PHY 3363), Differential Equations (MAT 3324).
- Spring 2007: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), Quantum Mechanics (PHY 4424), Elementary Russian I (GST 3345).
- Mayterm 2007: Astronomy in Colorado
- Fall 2007: General Physics 1 Calculus Based (PHY 2311), General Physics 1 Calculus Based Lab (PHY 2111), Physics and Technology (PHY 2303), Physics and Technology Lab (PHY 2103), Electromagnetic Theory (PHY 4327).
- Spring 2008: Basic Ideas of Astronomy (PHY 1302) (two sections), Basic Ideas of Astronomy Lab (PHY 1102) (two sections), General Physics 2 Calculus Based (PHY 2312), General Physics 2 Lab (PHY 2112), Electrodynamics (PHY 4328).
- Mayterm 2008: Astronomy in Colorado
- Fall 2008: General Physics 1 Calculus Based (PHY 2311), General Physics 1 Calculus Based Lab (PHY 2111), Computational Physics (PHY 3363), Physics and Technology (PHY 2303), Physics and Technology Lab (2103), Differential Equations (MAT 3323).
- Spring 2009: Basic Ideas of Astronomy (PHY 1302), Basic Ideas of Astronomy Lab (PHY 1102), Quantum Mechanics (PHY 4424), Astronomical Image Processing (PHY 4369).
- Mayterm 2009: Astronomy in Colorado
- Fall 2009: General Physics 1 Calculus Based (PHY 2311), General Physics 1 Calculus Based Lab (PHY 2111), Electromagnetic Theory (PHY 4327), Physics and Technology (PHY 2303), Physics and Technology Lab (2103), Elementary Russian I (GST 3345).
- Spring 2010: Introductory Astronomy (PHY 2302) (two sections), Introductory Astronomy Lab (PHY 2102) (two sections), Electrodynamics (PHY 4328), Astrophysics (PHY 4366).
- Mayterm 2010: Astronomy in Colorado.
- Fall 2010: General Physics 1 Calculus Based (PHY 2311), General Physics 1 Calculus Based Lab (PHY 2111), Computational Physics (PHY 3363), Physics and Technology (PHY 2303), Physics and Technology Lab (2103).
- Spring 2011: Introductory Astronomy (PHY 2302) (two sections), Introductory Astronomy Lab (PHY 2102), Quantum Mechanics (PHY 4424), Astronomical Image Processing (PHY 4369).
- Mayterm 2011: Astronomy in Colorado
- Fall 2011: General Physics 1 Calculus Based (PHY 2311) (two sections), Electromagnetic Theory (PHY 4327), Physics and Technology (PHY 2303), Physics and Technology Lab (2103), Physics Seminar (PHY 3140).
- Spring 2012: General Physics II Calculus-Based (PHY 2312), Electrodynamics (PHY 4328), Introductory Astronomy (PHY 2302) (two sections), Introductory Astronomy Lab (PHY 2102) (two labs), Astrophysics (PHY 4366).
- Mayterm 2012: Astronomy in Colorado
- Fall 2012: General Physics 1 Calculus Based (PHY 2311) (two sections), Computational Physics (PHY 3363), Physics and Technology (PHY 2303), Physics and Technology Lab (2103).

- Spring 2013: Introductory Astronomy (PHY 2302), Introductory Astronomy Lab (PHY 2102) (three sections), Quantum Mechanics (PHY 4424), GST 2310 Introductory Russian.
- Mayterm 2013: Astronomy in Colorado.
- Fall 2013: Electromagnetic Theory (PHY4327), Physics and Technology (PHY 2303), Physics and Technology Lab (2103), Physics Seminar (PHY 3140), Differential Equations (MAT 3324).
- Spring 2014: Introductory Astronomy (PHY 2302) (two sections), Introductory Astronomy Lab (PHY 2102) (three sections), Astrophysics (PHY4366), Independent Studies/Electromagnetic Theory, Independent Studies/Quantum Mechanics.
- Mayterm 2014: Astronomy in the Upper Peninsula.
- Fall 2014: General Physics 2 Calculus Based (PHY 2312), Computational Physics (PHY 3363), Physics and Technology (PHY 2303), Physics and Technology Lab (2103).
- Spring 2015: : Introductory Astronomy (PHY 2302), Introductory Astronomy Lab (PHY 2102) (three sections), Quantum Mechanics (PHY 4424).
- Mayterm 2015: Astronomy in the Upper Peninsula.
- Fall 2015: On sabbatical leave.
- Spring 2016: Introductory Astronomy (PHY 2302) (two sections), Electrodynamics (PHY 4328).
- Mayterm 2016: Astronomy in the Upper Peninsula.