

Mark B. Schneider

Professor of Physics

Grinnell College

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Curriculum Vitae—July 2015

EDUCATION

Ph.D. in Physics, Princeton University, 1983.

M.A. in Physics, Princeton University, 1979.

B.A. in Physics, Carleton College, 1977.

- Magna cum Laude, with Distinction in Department and Comprehensive Exercise.
- Member of Phi Beta Kappa, Pi Mu Epsilon.
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- *Training for faculty mentors.*
 - *Outreach to faculty following personnel reviews.*
- Allocate funds in response to requests to Academic Equipment Budget (\$250,000).
- Oversee Faculty Development programs and budgets (roughly \$100,000).
 - Dean's office member of Instructional Support Committee.
- *Co-creator and co-organizer of Faculty Development Fridays, a weekly series of lunchtime informal presentations and discussions for all faculty.*
- Oversee initiatives and budgets for blended and online learning pilot projects.
 - *Organized and hosted consortial workshop funded by competitive grant for faculty development around instructional technology.*
 - Facilitated support of online course in collaboration with Global Online Academy.
- Supervise academic support professionals and their programs.
 - Two instructional technologists.
 - Alternative Language Study Director.
 - Art Image Curator.
 - Liberal Arts in Prison Program Coordinator.
 - *First-year retention intervention post-baccalaureate fellow.*
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- *Developed a new faculty mentoring program.*
- *Reform of staff policies.*
 - *Served on Staff Handbook revision committee.*
 - *Took lead on revision of progressive discipline policies.*
- *Served as Campus Ombudsman.*
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COMPETITIVE

PUBLICATIONS AND EXHIBITIONS

Books

Shaking Things Up, an analytical mechanics text, M. B. Schneider, self-published (2008) and used four times at Grinnell by two different faculty members.

Journal Articles

“Verification of the Quantum Nature of Light from an LED Using Anticoincidence at a Beamsplitter,” Mark B. Schneider and Claire P. Christensen, in final preparation for *Phys. Rev. A*.

“Help Struggling Students and You’ll Help Their Classmates, Too,” Mark B. Schneider, Diversity supplement to the *Chronicle of Higher Education*, May 27, 2014,

ACADEMIC CONFERENCE PAPERS - Invited or Peer Reviewed

“Network Effects in New Faculty Mentoring: It’s Not What You Know But Who You Know,” Heather Lobban-Viravong and Mark B. Schneider, accepted for 2015 Mentoring Conference, University of New Mexico Mentoring Institute, Albuquerque, October 2015.

“From Failure to Success: Using a Mentoring Community to Improve Undergraduate Habits,” Mark B. Schneider and Heather Lobban-Viravong, accepted for 2015 Mentoring Conference, University of New Mexico Mentoring Institute, Albuquerque, October 2015.

“From Tutoring to Mentoring: Supporting Underrepresented and Underprepared Students, and Why That’s Good for Everyone,” Mark B. Schneider, Annual Biomedical Research Conference for Minority Students, American Society for Microbiology, San Antonio, November 2014.

“Comparing Models of Faculty Mentoring: Internal and External, Term and Tenure-Track,” Heather Lobban-Viravong and Mark B. Schneider, 2014 Mentoring Conference, University of New Mexico Mentoring Institute, Albuquerque, October 2014.

“The Role of ‘Non-Classical’ Two-Photon Effects in Interference of Two Attenuated Laser Beams,” Mark B. Schneider, Proceedings of the 125th Annual Meeting of the Iowa Academy of Science, April 19, 2013.

“Improving Academic Performance, Retention, and Graduation Rates at a Highly Selective College,” Jim Swartz, Narren Brown, Mark Schneider, and Ann Gansemer-Topf, AAC&U Annual Meeting “The Quality of U.S. Degrees” Atlanta, January 25, 2013.

“Faculty Partnership in Orientation for Underrepresented Groups: The Grinnell Science Project (GSP),” Joyce M. Stern and Mark B. Schneider, ISPA (Iowa Student Personnel Association) Annual Conference, Grinnell, October 22, 2012.

“Comprehensive Changes to STEM Education: Reform to Better Serve the Underserved. The Grinnell Science Project,” Leslie Gregg-Jolly, Mark Schneider and Jim Swartz, AAC&U/PKAL joint meeting “Engaged STEM Learning: From Promising to Pervasive Practices” Miami, March 25, 2011.

“Faculty Partnership in Orientation for Underrepresented Groups,” Joyce M. Stern and Mark B. Schneider, NASPA (Student Affairs Administrators in Higher Education) Annual Conference, Chicago, March 9, 2010.

“The Grinnell Science Project,” Mark B. Schneider, ACM FaCE Project, Women in Science Networking Seminar, Coe College, March 4, 2006.

“Simple Experimental Realizations of Quantum Mysteries,” Mark B. Schneider, Gordon Research Conference, *Physics Research and Education: Quantum Mechanics*, Mount Holyoke College, South Hadley, MA, June 2002.

“An ECR Ionizer for an Atomic Beam Polarized Source...Will It Help?” T. B. Clegg, M. B. Schneider; Proceedings of the International Workshop on Polarized Sources and Targets, Montana, Switzerland, Jan. 13-17, 1986: *Helv. Phys. Acta* 59,533 (1986).

“Search for Finite Mass Neutrinos in the Decay $\tau \rightarrow \mu^+ \mu^-$,” F. P. Calaprice, D. F. Schreiber, M. B. Schneider, M. Green, R. E. Pollock, *Neutrino '81*, vol. II, p. 57 (1981).

INVITED SEMINARS AND COLLOQUIA

“Japan’s Nuclear Crisis: Meltdown at Fukushima,” panelist with Wayne Moyer, Mariko Schimmel, and Tim Werner, Rosenfield Program event at Grinnell College, March 18, 2011.

“The Grinnell Science Project,” presentation with Jim Swartz at Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring award ceremony, Washington, DC, January 2011.

“Forbidden Glimpses; What does a photon do between emission and detection?” Physics Colloquium, University of Northern Iowa, March 25, 2009.

“Quantum Measurement, or Being in Two Places at the Same Time,” Bates College Physics Seminar, March 25, 2005.

“What is a Photon Anyway?” Carleton College Physics Seminar, October 22, 2003.

Keynote address, “New Faculty Workshop,” Pew Midstates Consortium, Grinnell College, June 9-11, 2000.

“Active Learning in Science Education: A Fad or a Fix?” with Clark Lindgren, Des Moines Area Sigma Xi, January 25, 2000.

“Workshop Physics: More Learning and Less Teaching,” Grinnell College Alumni (Reunion) College, June 1999.

“A Lab-Based Lecture-Free General Physics Course,” Project Kaleidoscope Workshop,

“The New Science Project,” Project Kaleidoscope Workshop, *Introductory Courses*, Beloit College, Beloit, Wisconsin, August 1994.

“The New Science Project,” Project Kaleidoscope Workshop, *The Art and Craft of Reform*, College of the Holy Cross, Worcester, Massachusetts, June 1994.

“The New Science Project: Stimulating Curricular Reform in Introductory Science,” Edgewood College, Madison, Wisconsin, 1993.

“Workshop Physics at Grinnell,” Grinnell College, Grinnell Iowa, 1993.

“Fundamental Symmetries in Nuclear Physics: High Energy Physics at Low Energies,” Grinnell College, Grinnell Iowa, 1987.

“Delayed Proton Decay of ^{33}Ar : Probing the Weak Interaction,” University of Wisconsin, Madison, Wisconsin, 1987.

“Fundamental Symmetries in Nuclear Physics,” Amherst College, Amherst, Massachusetts, 1986.

“Fundamental Symmetries in Nuclear Physics: High Energy Physics at Low Energies,” Carleton College, Northfield, Minnesota, 1986.

“Delayed Proton Decay of ^{33}Ar : Searching for Weak Scalar Currents,” Triangle University Nuclear Laboratory, Durham, North Carolina, 1986.

ACADEMIC CONFERENCE PAPERS – ConEnb-0.2 (u -0.24) 0.2 (d -0.24) -0.2 () -0.2 (CoP) -0.240.2

“The Measurement of Nuclear Decay Recoil Through Doppler Shifts in Gamma Rays,” M. B. Schneider, A. S. Huesmann, and J. A. Patmon, BAPS 37,888 (1992).

“A Method of Measuring Diode Laser Tuning Curves,” K. A. Nassiff and M. B. Schneider, Pew Undergraduate Research Symposium in the Physical Sciences, Washington University, October 1990.

“The Measurement of Doppler Shifts in Gamma Rays Due to Nuclear Recoil Following Beta Decay,” M. B. Schneider, A. B. Craft, N. K. Gregory, K. A. Nassiff, and J. A. Patmon; BAPS 35,1672 (1990).

“Beta-Neutrino Angular Correlations in the Decay of ^{33}Ar ,” T. C. Spencer, H. J. Karwowski, and M. B. Schneider; International Conference on Weak and Electromagnetic Interactions in Nuclei, Montreal, May 1989.

“ Angular Correlations in the Decay of 33

“Depolarization Corrections to Beta Asymmetry Measurements on ^{19}Ne ,” D. F. Schreiber, F. P. Calaprice, A. L. Hallin, D. W. MacArthur, M. B. Schneider; BAPS 27,492 (1982).

“A Test of Time Reversal Invariance in the Beta Decay of ^{19}Ne ,” M. B. Schneider, F. P.

Major Committees or Initiatives

SERVICE TO ACADEMIC/SCIENTIFIC COMMUNITY

Outside review visits of physics departments

- Leader for outside review team at Muhlenberg College ITY

GRADUATE STUDENT THESES SUPERVISED

Duane Lee Rosenberg, MS 1987, University of North Carolina at Chapel Hill, "A Monte Carlo Simulation and a Beta Spectrometer: Aiding in a Study of the Beta-