

# Curriculum Vitae

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## Education

- Ph.D. 1995 University of Illinois, Urbana-Champaign, Illinois
- M.S. 1987 University of Illinois, Urbana-Champaign, Illinois
- B.S. 1986 Purdue University, West Lafayette, Indiana

## Appointments

- 11/00–present, Assistant Professor of Physics, Indiana University, Bloomington, Indiana.
- 8/00–10/00, Visiting Scientist, Fermi National Accelerator Laboratory, Batavia, Illinois.
- 7/98–10/00, Technical Staff Member, Group P-25, Los Alamos National Laboratory, Los Alamos, New Mexico.
- 7/95–7/98, Postdoctoral Research Associate, Group P-25, Los Alamos National Laboratory, Los Alamos, New Mexico.
- 3/95–7/95, Postdoctoral Research Associate, Nuclear Physics Laboratory, University of Illinois, Urbana–Champaign, Illinois.
- 5/87–3/95, Research Assistant, Nuclear Physics Laboratory, University of Illinois, Urbana–Champaign, Illinois.

## Professional Activities

- 1998-2002, Project Manager: MiniBooNE detector design and installation.
- 2001, Member Fermilab Brighter Booster Working Group
- 2004, Co-convener, Neutrino Scattering Working group for the Fermilab Proton Driver Physics Study
- 2002-present, Spokeperson: Fine-grained Intense Neutrino Scattering Scintillator Experiment “FINeSSE”, proposed at Fermilab and Brookhaven National Labs.
- Member of American Physical Society and Division of Nuclear Physics
- Member of American Association of Physics Teachers

## Research

- Investigation of the phenomenon of neutrino oscillations with the Liquid Scintillator Neutrino Detector (LSND) experiment at Los Alamos National Laboratory and with the Booster Neutrino Experiment (MiniBooNE) at Fermi National Accelerator Laboratory.
- The study of neutrino interactions with the MiniBooNE and SciBooNE experiments at Fermi National Accelerator Laboratory.
- Possible Lorentz violation signatures in neutrino oscillations.
- A measurement of  $G_A^s$ , the strange, axial, form-factor of the proton via neutral-current neutrino-scattering (via the proposed “FINeSSE” experiment)
- Prototype development for a large volume tracking detector (“sci-bath”) for neutrino and neutron physics.

## Teaching

Classes taught at Indiana University:

- Spring 2007, Spring 2006: P332, Electricity and Magnetism II for science majors.
- Fall 2006, Fall 2005: P331, Electricity and Magnetism I for science majors.
- Spring 2005: P301, Physics III for science majors.
- Fall 2004, Spring 2002: P201, Algebra-based introductory physics for science majors.
- Spring 2004, Fall 2003, Spring 2003: P451/551, Experiments in modern physics for physics majors and graduate students.
- Fall 2001: P202, Algebra-based introductory physics for science majors.
- Spring 2001: P221, Calculus-based introductory physics for physics majors.

Teaching awards:

- Joseph and Sophia Konopinski Teaching Award, 2003.
- Indiana University Trustees’ Teaching Award, 2003.

Students Supervised:

- Graduate Students: D. Cox (current), T. Katori (current), J. Horton (current), M. Novak.
- Undergraduate: A. Ferguson (current, STARS program student), S. Breitzmann, J. Griffith (IUCF REU student), J. Horton (IUCF REU student), S. McKenney, P. Ockerse, D Passmore (IUCF REU student), N. Walbridge.
- High School: A. Ferguson (COAS summer research for high-school students).

## Service

### Departmental Service

- 2001–present, Chair of IU Cyclotron Facility Nuclear Physics Seminar Committee
- 2004–present, Chair of IU Physics Department Graduate Recruiting Committee
- 2003-2006, Faculty Liason for the Advanced College Placement Physics P221, taught in Indiana-area high-schools.
- 2004, Member, Local Organizing Committee for Quarks and Nuclear Physics 2004, Bloomington, Indiana, May 23-28, 2004.
- 2004, Faculty advisor, IU Physics and Astronomy club.

### University Service

- 2004–present. Member of IU Radiation Safety Committee