

IAN BENTLEY

Department of Chemistry and Physics, St. Mary's College, Notre Dame, IN 46556
574-284-4662 | ibentley@saintmarys.edu

EDUCATION

Ph. D. in Nuclear Physics **May 2010**

University of Notre Dame (Notre Dame, IN)

Dissertation: [Wigner X Resolved and Photo-Reaction Cross-Section Predictions: Improvements for Astrophysical Calculations.](#)

M.S. in Physics **May 2008**

University of Notre Dame (Notre Dame, IN)

B.S. with Honors in Physics with Astrophysics Option **May 2004**

New Mexico Institute of Mining and Technology (Socorro, NM)

Minors: History and Mathematics

ACADEMIC POSITIONS & COURSES INSTRUCTED

Assistant Professor of Physics **Aug. 2012-present**

Saint Mary's College (Notre Dame, IN)

- Calculus Physics I
- Introductory Physics Laboratories

Guest Assistant Professor of Physics **Aug. 2012-present**

University of Notre Dame (Notre Dame, IN)

Visiting Assistant Professor of Physics **Aug. 2011-Aug. 2012**

Marquette University (Milwaukee, WI)

- Quantum Mechanics
- Nuclear and Particle Physics
- Calculus Physics I & II
- Algebra Summer Physics I & II

Adjunct Assistant Professor of Physics **May 2010-Aug. 2011**

Indiana University South Bend (South Bend, IN)

- Algebra Summer Physics II
- Introduction to Astronomy
- Introductory Physics Laboratories

Post Doctoral Research Associate **June 2010-Aug. 2011**

University of Notre Dame (Notre Dame, IN)

AWARDS AND GRANTS

Research and Dissertation Award- Department of Physics, University of Notre Dame (2010)
Travel Grant- Japan United States Theory Institute for Physics with Exotic Nuclei (2008)
Outstanding Teacher Award Recipient- Kaneb Center, University of Notre Dame (2006)
Outstanding Teaching Award Recipient- American Association of Physics Teachers (2006)

PUBLICATIONS

1. I. Bentley, S. Frauendorf. [Microscopic Calculation of IBM Parameters by Potential Energy Surface Mapping](#), Phys. Rev. C 83, 064322 (2011).
2. Stirling A. Colgate, Howard Beckley, Jiahe Si, Joe Martinic, David Westpfahl, James Slutz, Sebastian Westrom, Brianna Klein, Paul Schendel, Cletus Scharle, Travis McKinney, Rocky Ginanni, Ian Bentley, Timothy Mickey, Regnar Ferrel, Hui Li, Vladimir Pariev, and John Finn. [High Magnetic Shear Gain in a Liquid Sodium Stable Couette Flow Experiment; A Prelude to an alpha-Omega Dynamo](#), PRL 106, 175003 (2011).
3. I. Bentley, S. Brant, F. Doenau, S. Frauendorf, B. Kampf, R. Schwengner, S. Zhang. [Instantaneous Shape Sampling - a model for the gamma-absorption cross section of transitional nuclei](#), Phys. Rev. C 83, 014317, (2011).
4. S. Q. Zhang, I. Bentley, S. Brant, F. Dönau, S. Frauendorf, B. Kämpfer, R. Schwengner, and A. Wagner. [Instantaneous-Shape Sampling for Calculation of the Electromagnetic Dipole Strength in Transitional Nuclei](#). Phys. Rev. C Rapid Communications, 80(2) 021307, (2009).

TALKS GIVEN AT CONFERENCES, COLLOQUIUMS AND SEMINARS

1. "Nucleosynthesis." Marquette University, Physics Department Colloquium (May 2012)
2. "The Role of Deformation and Isovector Pairing on the Nuclear Symmetry Energy." Texas A&M University-Commerce, Nuclear Astrophysics Seminar (March 2011).
3. "Investigations of the Nuclear Symmetry Energy (Wigner Energy) and Mapping of Fermionic to Bosonic Deformation Energy Surfaces" Argonne National Laboratory, Theory Seminar (December 2010)
4. "Microscopic Calculation of Low Lying Levels by Potential Energy Surface Mapping." Argonne National Laboratory, 23rd Annual Midwest Theory Get-Together (September 2010).
5. "Binding Energies in Nuclei Near N=Z: Wigner X Resolved." University of Notre Dame, Nuclear Theory Seminar (April 2010).
6. "Beyond BCS Pairing Applied to Symmetry Energy." RIKEN Wako Institute, Nuclear Theory Seminar (February 2009).
7. "Beyond BCS Pairing Applied to Symmetry Energy." Tokyo University, Nuclear Theory Seminar (January 2009).

8. "Isospin and the Wigner Energy." Argonne National Laboratory, 20th Annual Midwest Theory Get-Together (October 2007).
9. "Wigner X." Argonne National Laboratory, 19th Annual Midwest Theory Get-Together (October 2006).

POSTERS

1. "Microscopic calculation of the IBM parameters by potential energy surface mapping," I. Bentley, S. Frauendorf, poster, Nuclear Structure 2010, Berkeley, CA, (August 2010).