Matthew J. Gidden

Contact Information

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Citizenship

USA

Research Interests

Nuclear fuel cycle simulation and analysis, energy policy analysis, linear/non-linear optimization techniques, nuclear non-proliferation, agent-based modeling

Education

University of Wisconsin - Madison, Madison, WI USA

Ph.D., Nuclear Engineering, In Progress

- Adviser: Professor Paul Wilson
- Area of Study: Nuclear Fuel Cycle Simulation
- GPA: 3.7/4.0

University of Wisconsin - Madison, Madison, WI USA

M.S., Nuclear Engineering, December 2011

- GPA: 3.7/4.0

Texas A&M University, College Station, TX USA

B.S., Nuclear Engineering, May 2009

- *Summa cum Laude*, With Honors in Engineering
- Minor in Mathematics
- GPA: 3.97/4.0

Awards

Nuclear Energy University Program
- Graduate Research Fellowship, 2010–2013

American Nuclear Society
- Graduate Scholarship, 2013

Nuclear Regulatory Commision
- Undergraduate Scholarship, 2008–2009

Texas A&M University
- President's Endowed Scholarship, 2005–2009
- Stinson Scholarship, 2005–2009

Professional Experience

AREVA, Paris FRANCE

Research Intern in the Core Design Group **February 2010 to July 2010**

- Simulated and analyzed a boron dilution accident for various full-core configurations of France's fleet of nuclear reactors using MCNP.
- Mentored by Christian ROYERE.

Pacific Northwest National Lab, Richland, Washington USA

Research Intern **Summer 2009**

- Analyzed a proof-of-concept design of an automated verification unit for canisters of enriched Uranium Hexa-Flouride using MCNP.
- Mentored by Eric Smith.

TN International (AREVA), Montigny-le-Bretonneux FRANCE

Research Intern in the Materials Group **Summer 2008**

- Performed dynamic compression testing on a variety of materials in order to determine property changes under dynamic rather than static loads. Analysis of results was performed using Microsoft Excel.
- Mentored by Herve ISSARD.

Oak Ridge National Lab, Oak Ridge, Tennessee USA

Research Intern **Summers 2006 & 2007**

- Tested and analyzed a collimated radiation portal monitor designed to increase efficiency at port facilities under the U.S. Megaports Initiative.
- Mentored by Chris Blessinger.

Professional Organizations

American Nuclear Society

- Public Information Committee member (2013 - present)
- Student Sections Committee member (2010 - present)
- Local Sections Committee member (2010 - 2012)
- Nuclear Nonproliferation Special Committee member (2010 - 2012)
- 2008 ANS Student Conference co-chair

American Nuclear Society, Texas A&M Chapter

- Vice President of Internal Affairs, 2006–2007

Alpha Nu Sigma

Institute of Nuclear Materials Management

Presentations

Gidden, M.; Scopatz, A.; Wilson, P., *Developing Standardized, Open Benchmarks and a Corresponding Specification Language for the Simulation of Dynamic Fuel Cycles*, ANS Summer Conference (2013).

Gidden, M.; Wilson, P., Huff, K.; Carlsen, R., *Cyclus Once-Through Fuel Cycle Capabilities: An INPRO Benchmark & VISION Comparisons*, ANS Winter Conference (2012).

Gidden, M.; Wilson, P; Huff, K., *Cyclus Once-Through Fuel Cycle Benchmarks*, ANS Student Conference (2011).

Gidden, M.; Blessinger, C.; Livesay, J.; York, R., *Collimation of Radiation Portal Monitors to Reduce the Innocent Alarm Rate*, Poster, ANS Winter Conference (2007).

Proceedings

Gidden, M.; Wilson, P., *An Agent-Based Framework for Fuel Cycle Simulation with Recycling*, GLOBAL Conference (2013).

Publications

Pearce, T.M.; Williams, J.J.; Kruzel, S.P.; Gidden, M.J.; Williams, J.C., *Dynamic control of extracellular environment in in vitro neural recording systems*, Neural Systems and Rehabilitation Engineering, 13, 2, pp. 207-212 (2005).

Programming Skill Set	Languages • C/C++, Python, FORTRAN (95), Visual Basic, Perl Applications • MCNP, MATLAB, Origen, Mathcad, Maple, DRAGON, TransLAT