

Matthew J. Gidden

CONTACT INFORMATION	<p>Department of Nuclear Engineering University of Wisconsin - Madison 1500 Engineering Dr., Rm. 434 Madison, WI 53706 USA</p>	<p>Mobile: +1-225-892-3192 Fax: +1-608-263-7451 E-mail: gidden@wisc.edu Website: mattgidden.com</p>
CITIZENSHIP	USA	
RESEARCH INTERESTS	Nuclear fuel cycle simulation and analysis, agent-based modeling, linear/non-linear optimization techniques, simulation execution leveraging high throughput computing, energy policy, nuclear non-proliferation, reactor physics simulations for fuel cycles, advanced nuclear fuel cycles	
EDUCATION	<p>University of Wisconsin - Madison, Madison, WI USA</p> <p>Ph.D., Nuclear Engineering, In Progress</p> <ul style="list-style-type: none">• Adviser: Professor Paul Wilson• Area of Study: Nuclear Fuel Cycle Simulation• GPA: 3.7/4.0 <p>University of Wisconsin - Madison, Madison, WI USA</p> <p>M.S., Nuclear Engineering, December 2011</p> <ul style="list-style-type: none">• GPA: 3.7/4.0 <p>Texas A&M University, College Station, TX USA</p> <p>B.S., Nuclear Engineering, May 2009</p> <ul style="list-style-type: none">• <i>Summa cum Laude</i>, With Honors in Engineering• Minor in Mathematics• GPA: 3.97/4.0	
AWARDS	<p>Innovations in Fuel Cycle Research</p> <ul style="list-style-type: none">• Energy Policy, 2nd Place, 2014 <p>Nuclear Energy University Program</p> <ul style="list-style-type: none">• Graduate Research Fellowship, 2010–2013 <p>American Nuclear Society</p> <ul style="list-style-type: none">• Graduate Scholarship, 2013 <p>Nuclear Regulatory Commission</p> <ul style="list-style-type: none">• Undergraduate Scholarship, 2008–2009 <p>Texas A&M University</p> <ul style="list-style-type: none">• President's Endowed Scholarship, 2005–2009• Stinson Scholarship, 2005–2009	
PROFESSIONAL EXPERIENCE	<p>AREVA, Paris FRANCE</p> <p><i>Research Intern in the Core Design Group</i></p> <ul style="list-style-type: none">• 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.	<p>February 2010 to July 2010</p>

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-Fluoride 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

- Member (2006 - present)
- Communications Committee member (2013 - present)
- Public Policy 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

- Member (2005 - 2009)
- Vice President of Internal Affairs (2006 - 2007)

Alpha Nu Sigma

- Member (2009 - present)

Institute of Nuclear Materials Management

- Member (2008 - present)

Nuclear Engineering Student Delegation

- Chair (2013)
- Vice Chair (2012)
- Delegate (2011)

Software Carpentry

- Workshop Instructor (Jan. 2015, Aug. 2014, Aug. 2013, Apr. 2013)

PRESENTATIONS

Gidden, M.; Wilson, P., *Dynamic Resource Exchange Performance in Cyclus*, ANS Summer Conference (2015, *Accepted*).

Gidden, M.; Wilson, P., *Dynamic Resource Exchange with CoinOR-CBC in Cyclus, a Nuclear Fuel Cycle Simulator*, 14th INFORMS Computing Society Conference (2015).

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., <i>Cyclus Once-Through Fuel Cycle Capabilities: An INPRO Benchmark & VISION Comparisons</i> , ANS Winter Conference (2012).
	Gidden, M.; Wilson, P.; Huff, K., <i>Cyclus Once-Through Fuel Cycle Benchmarks</i> , ANS Student Conference (2011).
	Gidden, M.; Blessinger, C.; Livesay, J.; York, R., <i>Collimation of Radiation Portal Monitors to Reduce the Innocent Alarm Rate</i> , Poster, ANS Winter Conference (2007).
PROCEEDINGS	Gidden, M.; Carlsen, R.; Opotowsky, A.; Rakhimov, O.; Scopatz, A.; Wilson, P., <i>Agent-Based Dynamic Resource Exchange in Cyclus</i> , PHYSOR Conference, Kyoto, Japan (2014).
	Gidden, M.; Wilson, P., <i>Agent-Based Framework for Fuel Cycle Simulation with Recycling</i> , GLOBAL Conference, Salt Lake City, UT, USA (2013).
PUBLICATIONS	Pearce, T.M.; Williams, J.J.; Kruzel, S.P.; Gidden, M.J.; Williams, J.C., <i>Dynamic control of extracellular environment in in vitro neural recording systems</i> , Neural Systems and Rehabilitation Engineering, 13, 2, pp. 207-212 (2005).
SOFTWARE	Carlsen, R.; Gidden, M.; Huff, K.; Opotowsky, A.; Rakhimov, O.; Scopatz, A.; Wilson, P., <i>Cyclus v1.0.0</i> , http://dx.doi.org/10.6084/m9.figshare.1174603 (2014).
	Carlsen, R.; Gidden, M.; Huff, K.; Opotowsky, A.; Rakhimov, O.; Scopatz, A.; Wilson, P., <i>Cycamore v1.0.0</i> , http://dx.doi.org/10.6084/m9.figshare.1041829 (2014).
	Gidden, M.; <i>Cyclopts v0.10.0</i> , http://dx.doi.org/10.6084/m9.figshare.1288959 (2015).
	Scopatz, A.; Gidden, M.; Welch, Z.; <i>Polyphemus v0.1</i> , http://dx.doi.org/10.6084/m9.figshare.1066058 (2015).
PROGRAMMING SKILL SET	<p>Languages</p> <ul style="list-style-type: none"> • C/C++ • Python • FORTRAN (95) • Visual Basic • Perl <p>Applications</p> <ul style="list-style-type: none"> • IPython/IPython Notebooks • MCNP • MATLAB • Origen • Mathcad • Maple • DRAGON • TransLAT