

## Matthew J. Gidden

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CONTACT INFORMATION	<p>Department of Nuclear Engineering University of Wisconsin - Madison 1500 Engineering Dr., Rm. 434 Madison, WI 53706 USA</p>	<p><i>Mobile:</i> +1-225-892-3192 <i>Fax:</i> +1-608-263-7451 <i>E-mail:</i> <a href="mailto:gidden@wisc.edu">gidden@wisc.edu</a> <i>Website:</i> <a href="http://mattgidden.com">mattgidden.com</a></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><b>University of Wisconsin - Madison</b>, Madison, WI USA</p> <p>Ph.D., Nuclear Engineering, In Progress</p> <ul style="list-style-type: none"><li>• Adviser: <a href="#">Professor Paul Wilson</a></li><li>• Area of Study: Nuclear Fuel Cycle Simulation</li><li>• GPA: 3.7/4.0</li></ul> <p><b>University of Wisconsin - Madison</b>, Madison, WI USA</p> <p>M.S., Nuclear Engineering, December 2011</p> <ul style="list-style-type: none"><li>• GPA: 3.7/4.0</li></ul> <p><b>Texas A&amp;M University</b>, College Station, TX USA</p> <p>B.S., Nuclear Engineering, May 2009</p> <ul style="list-style-type: none"><li>• <i>Summa cum Laude</i>, With Honors in Engineering</li><li>• Minor in Mathematics</li><li>• GPA: 3.97/4.0</li></ul>	
AWARDS	<p><b>Innovations in Fuel Cycle Research</b></p> <ul style="list-style-type: none"><li>• Energy Policy, 2<sup>nd</sup> Place, 2014</li></ul> <p><b>Nuclear Energy University Program</b></p> <ul style="list-style-type: none"><li>• Graduate Research Fellowship, 2010–2013</li></ul> <p><b>American Nuclear Society</b></p> <ul style="list-style-type: none"><li>• Graduate Scholarship, 2013</li></ul> <p><b>Nuclear Regulatory Commission</b></p> <ul style="list-style-type: none"><li>• Undergraduate Scholarship, 2008–2009</li></ul> <p><b>Texas A&amp;M University</b></p> <ul style="list-style-type: none"><li>• President's Endowed Scholarship, 2005–2009</li><li>• Stinson Scholarship, 2005–2009</li></ul>	
PROFESSIONAL EXPERIENCE	<p><b>AREVA</b>, Paris FRANCE</p> <p><i>Research Intern in the Core Design Group</i></p> <ul style="list-style-type: none"><li>• Simulated and analyzed a boron dilution accident for various full-core configurations of France's fleet of nuclear reactors using MCNP.</li><li>• Mentored by Christian ROYERE.</li></ul>	<p><b>February 2010 to July 2010</b></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 (Aug. 2014, Aug. 2013, Apr. 2013)

PRESENTATIONS

Gidden, M.; Wilson, P., *Dynamic Resource Exchange with CoinOR-ABC 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., *Cyclus Once-Through Fuel Cycle Capabilities: An INPRO Benchmark & VISION Comparisons*, 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).
SOFTWARE	Carlsen, R.; Gidden, M.; Huff, K.; Opotowsky, A.; Rakhimov, O.; Scopatz, A.; Wilson, P., <i>Cyclus v1.0.0</i> , <a href="http://dx.doi.org/10.6084/m9.figshare.1174603">http://dx.doi.org/10.6084/m9.figshare.1174603</a> (2014).
	Carlsen, R.; Gidden, M.; Huff, K.; Opotowsky, A.; Rakhimov, O.; Scopatz, A.; Wilson, P., <i>Cycamore v1.0.0</i> , <a href="http://dx.doi.org/10.6084/m9.figshare.1041829">http://dx.doi.org/10.6084/m9.figshare.1041829</a> (2014).
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).
PROGRAMMING SKILL SET	<p>Languages</p> <ul style="list-style-type: none"> <li>• C/C++</li> <li>• Python</li> <li>• FORTRAN (95)</li> <li>• Visual Basic</li> <li>• Perl</li> </ul> <p>Applications</p> <ul style="list-style-type: none"> <li>• IPython/IPython Notebooks</li> <li>• MCNP</li> <li>• MATLAB</li> <li>• Origen</li> <li>• Mathcad</li> <li>• Maple</li> <li>• DRAGON</li> <li>• TransLAT</li> </ul>