Paul P.H. Wilson

Contact Information

Department of Engineering Physics
University of Wisconsin-Madison
1500 Engineering Dr, Madison, WI 53706

paul.wilson@wisc.edu
608-263-0807
https://go.wisc.edu/pphw

Education and Training

U. of Wisconsin-Madison	Fusion Technology	Post-doc	1999-2001
U. of Wisconsin-Madison	Nuclear Engineering	Ph.D.	1999
"Analytic and Laplacian Adaptive Radioactivity Analysis", Douglass L. Henderson			
Technical University of Karlsruhe	Mechanical Engineering	Dr-Ing	1998
"Neutronics of the IFMIF neutron source: development and analyses", Gunther Kessler			
U. of Wisconsin-Madison	Nuclear Engineering	MS	1994
U. of Toronto	Engineering Science	B.A.Sc.	1992

Research and Professional Experience

University of Wisconsin-Madison	Grainger Professor of Nuclear Engineering,	2016-present
	Professor,	2013-present
	Faculty Director, Advanced Computing Infrastructure	2012-2016
	Chair, Energy Analysis & Policy Program,	2008-2013
	Associate Professor,	2008-2012
	Assistant Professor,	2001-2008
	Post-doctoral Research Associate,	1999-2001
	Graduate Student Researcher,	1992-1995
Blue Ribbon Comm. on America's Nuclear Future	Consultant,	2010-2011
Forschungszentrum Karlsruhe	Marie Curie Research Fellow,	1996-1998
	Graduate Student Researcher,	1995-1996

Selected Publications

1. E.D. Biondo, A. Davis, P.P.H. Wilson, "Shutdown dose rate analysis with CAD geoemtry, Cartesian/tetrahedral mesh, and advanced variance reduction," *Fusion Engineering and Design*, **106**, pp 77-84 (2016).
2. P. Shriwise, A. Davis, P.P.H. Wilson. "Leveraging Intel's Embree Ray Tracing in the DAGMC Toolkit." *Transactions of the American Nuclear Society,* **113**, pp. 717–20 (2015)
3. K.R. Kiesling, A. Davis, P.P.H. Wilson. "PyNE: Usage for Automatic PARTISN Input File Generation from a CAD Geometry." *Transactions of the American Nuclear Society,* **113** , pp. 1029–32 (2015).
4. E. Relson, P.P.H. Wilson, and Elliott Biondo. "Improved Mesh Based Photon Sampling Techniques For Neutron Activation Analysis." *Proc. of Intl Conf. on Mathematics and Computational Methods Applied to Nuclear Science & Engineering (M&C 2013)*, Sun Valley, Idaho, USA, May 5-9, 2013
5. M.E. Sawan, A.M. Ibrahim, P.P.H. Wilson, E.P. Marriott, R.D. Stambaugh, C.P.C. Wong, "Neutronics Analysis in Support of the Fusion Development Facility Design Evolution," *Fusion Science and Technology*, **60** (2), p. 671-675 (2011)

6. A.M. Ibrahim, M. Sawan, S.W. Mosher, T.M. Evans, P. Wislon, et al, "Global Evaluation of Prompt Dose Rates in ITER Using Hybrid Monte Carlo/Deterministic Techniques," *Fusion Science and Technology*, **60** (2), p. 676-680 (2011)
7. L. El-Guebaly, P. Wilson, D. Henderson, et al, "Designing ARIES-CS compact radial build and nuclear system: Neutronics, shielding and activation." *Fusion Science and Technology*, **54** (3), p. 747-770 (2008)
8. P.P.H. Wilson, R. Feder, U. Fischer, M. Loughlin, L. Petrizzi, Y. Wu, M. Youssef, "State-of-the-Art 3-D Neutronics Analysis Methods for Fusion Energy Systems," *Fusion Engineering and Design*, **83** (7) p. 824-833 (2008)
9. M.E. Sawan, A. Ibrahim, T.D. Bohm, P.P.H. Wilson, "Three-Dimensional Nuclear Analysis of the Final Optics of a Laser Driven Fusion Power Plant," *Fusion Engineering and Design*, **83** (10), p.1879-1883 (2008)
10. M. Zucchetti, L. Di Pace, L. El-Guebaly, B.N. Kolbasov, V. Massaut, R. Pampin, and P. Wilson, "An Integrated Approach to the Back-end of the Fusion Materials Cycle," *Fusion Engineering and Design*, **83** (10), p.1706-1709 (2008)

GRADUATE AND POSTDOCTORAL ADVISORS

Postdoctoral: Prof. Gregory A. Moses, U. Wisconsin-Madison
Ph.D.: Prof. Douglass L. Henderson, U. Wisconsin-Madison
Dr.Ing: Dr. Ulrich Fischer, Karlsruhe Research Center, Karlsruhe, Germany

GRADUATE AND POSTDOCTORAL ADVISEES

Postgraduate-scholars: Dr. Phiphat Phruksarojanakun (Nuclear Regulatory Commission of Thailand), Dr. Rachna Jain (Exxon-Mobil), Dr. Meghan McGarry (LLNL), Dr. Matthew Gidden (IIASA), Dr. Robert Carlsen (INL)

Total Number of Postdoctoral Scholars Sponsored: 5

Past thesis advisees: Dr. Phiphat Phruksarojanakun (Nuclear Regulatory Commission of Thialand), Dr. Eric Edwards (Entergy), Dr. Po Hu (Shang-hai Jiaotong U.), Dr. Jeremy Roberts (Kansas State University), Mr. Geoffrey Bull (US Army) Mr. Ryan Grady (Exelon), Mr. Michael Priaulx (Exelon), Mr. Kyle Olvier (Columbia University), Mr. Chris Staum (Global Nuclear Fuels), Mr. Benjamin Schmitt (Westinghouse Fuel), Ms Tracey Radel (Shine Medical), Mr. Tim Setter (TVA), Ms. Marina Arabidze (Rep. of Georgia), Dr. Brian Kiedrowski (University of Michigan), Dr. Brandon Smith (Los Alamos National Laboratory), Mr. Damien Moule, Mr. Erik Nygaard (B&W), Mr. Patrick Snouffer (Sandia National Laboratory), Dr. Rachel Slaybaugh (UC-Berkeley), Dr. Ahmad Ibrahim (Phoenix Nuclear Laboratory), Dr. Kathryn Huff (U. Illinois-UC), Dr. Kerry Dunn (Sandia National Laboratory), Dr. Stuart Slattery (Oak Ridge National Laboratory), Dr. Matthew Gidden (IIASA), Dr. Robert Carlsen (Idaho National Laboratory), Dr. Elliott Biondo (Oak Ridge National Laboratory)

Total Number of Graduate Students advised: 26 former and 11 current students