

## Publications

Rachel N. Slaybaugh

May 29, 2014

- S.C. Wilson and R.N. Slaybaugh. “Improved Monte Carlo Variance Reduction for Space and Energy Self-Shielding,” *Nuclear Science and Engineering*. Accepted March 2014.
- S.C. Wilson and R.N. Slaybaugh. “Monte Carlo Importances in the Presence of Space and Energy Self-Shielding,” Proceedings of the 2013 ANS Winter Meeting in Washington, DC, Nov 2013. Transactions vol. 109.
- R.N. Slaybaugh, T.M. Evans, G.G. Davidson, and P.P.H. Wilson. “Multigrid in energy preconditioner for Krylov solvers,” *Journal of Computational Physics*. **242** (2013) 405-419.
- R.N. Slaybaugh and S.C. Wilson. “Deterministic Parameter Study for Fixed-Source Calculations Using FW-CADIS,” Proceedings of the 2013 ANS Annual Meeting in Atlanta, GA, June 2013. Transactions vol. 108.
- R.N. Slaybaugh, T.M. Evans, G.G. Davidson, and P.P.H. Wilson. “Rayleigh Quotient Iteration in 3D, Deterministic Neutron Transport,” Proceedings of the PHYSOR 2012 Meeting in Knoxville, TN, April 2012.
- G.G. Davidson, T.M. Evans, J.J. Jarrell, R.N. Slaybaugh, and C.G. Baker, “Massively Parallel, Three-Dimensional Transport Solutions for the k-Eigenvalue Problem,” *Nuclear Science and Engineering*. Accepted October 2013.
- P.J. Snouffer, R.N. Slaybaugh, and P.P.H. Wilson. “Criticality Benchmark Comparisons for DAGMC,” Proceedings of the 2011 ANS Annual Meeting in Hollywood, FL, June 2011. Transactions vol. 104.
- T.M. Evans, A.S. Stafford, R.N. Slaybaugh, and K.T. Clarno. “Denovo—A new three-dimensional parallel discrete ordinates code in SCALE.” *Nuc. Tech.* **171** (2010) 171-200.
- G.G. Davidson, T.M. Evans, R.N. Slaybaugh, and C.G. Baker. “Massively Parallel Solutions to the k-Eigenvalue Problem,” Proceedings of the 2010 ANS Winter Meeting in Las Vegas, NV, Nov 2010. Transactions vol. 103. [winner of Mathematics and Computation Division “Best Summary + Presentation” award]
- T.M. Evans, G.G. Davidson, and R.N. Slaybaugh. “Three-Dimensional Full Core Power Calculations for Pressurized Water Reactors,” Proceedings of the 2010 Scientific Discovery through Advanced Computing (SciDAC) Conference. Chattanooga, TN, 11-15 July, 2010. Oak Ridge National Laboratory.
- R.N. Slaybaugh, P.P.H. Wilson, L.A. El-Guebaly, and E.P. Marriott. “Three-Dimensional Neutron Source Models for Toroidal Fusion Energy Systems.” *Fusion Engineering and Design*. **84** (2009) 1774-1778.
- R.N. Slaybaugh, “Scouting Programs for Educational Outreach,” Proceedings of the 2009 ANS Winter Meeting in Washington, DC, Nov 2009. Transactions vol. 101.
- R.N. Slaybaugh, E.P. Marriott, P.P.H. Wilson, and L. El-Guebal, “A Study of the Effects of Source Sampling Methods on ARIES-RS NWL Profiles,” Proceedings of the ARIES-Pathways Project Meeting, 28-29 May 2008, Madison WI.
- R.N. Slaybaugh, M.L. Williams, D. Ilas, D.E. Peplow, B.L. Kirk, T.L. Nichols, Y.Y. Azmy, and M.P. Langer, “Radiation Treatment Planning Using Discrete Ordinates Codes,” Proceedings of the 2007 ANS Annual Meeting in Boston, MA, June 2007. Transactions vol. 96.

R. Slaybaugh. "Strengths and Weaknesses of Nuclear Engineering Education," presented at 2007 ANS Annual Meeting in Boston, MA, June 2007. Transactions vol. 96.