

Kent E. Wardle

Argonne National Laboratory
Chemical Sciences and Engineering Division
9700 South Cass Avenue, Building 205
Argonne, IL 60439-4837
phone: 630/252-4638, fax: 630/972-4538
e-mail: kwardle@anl.gov



Professional Experience

- **June 2008 – Present.** *Assistant Nuclear Engineer*, Argonne National Laboratory, Chemical Sciences and Engineering Division. Conduct research into advanced methods for simulation of liquid–liquid extraction processes for nuclear fuel recycling including computational fluid dynamics (CFD) of turbulent, multiphase flow, molecular dynamics, and lattice Boltzmann simulation
- **September 2004 – May 2008.** *Ph.D. Candidate and Research Fellow*, Department of Engineering Physics, University of Wisconsin-Madison
- **May 2004 – August 2004.** *Graduate Research Aide*, Argonne National Laboratory, Chemical Engineering Division
- **May 2003 – May 2004.** *Research Assistant*, Dept. of Chemical Engineering, Brigham Young University, Provo, Utah
- **May 2003 – August 2003.** *DOE SULI Research Intern*, Argonne National Laboratory-West, Idaho Falls, ID

Education

- **Ph.D.**, Nuclear Engineering & Engineering Physics (May 2008)
University of Wisconsin-Madison
- **B.S.**, Chemical Engineering, Minor: Korean, *Cum Laude* (April 2004)
Brigham Young University, Provo, UT

Awards

- World Nuclear University-Summer Institute Fellow, South Korea (Summer 2007)
- U.S. Department of Energy Nuclear Engineering/Health Physics Fellow (Fall 2004 – 2008)
- Roy G. Post Foundation Scholar (Spring 2007)
- John Randall Memorial Scholar of the American Nuclear Society (Fall 2006)
- American Nuclear Society Graduate Scholar (Fall 2005)
- National Merit Scholar (2001 – 2004)

Recent Publications

- K. E. Wardle, T. R. Allen, M. H. Anderson, R. Swaney. "Analysis of the Effect of Mixing Vane Geometry on the Flow in an Annular Centrifugal Contactor," *AICHE J.* **55**, 2244-2259 (2009).
- K. E. Wardle, T. R. Allen, R. Swaney. "CFD Simulation of the Separation Zone of an Annular Centrifugal Contactor," *Separ. Sci. Tech.* **44**, 517-542 (2009).
- K. E. Wardle, T. R. Allen, M. H. Anderson, R. Swaney. "Free Surface Flow in the Mixing Zone of an Annular Centrifugal Contactor," *AICHE J.* **54**, 74-85 (2008).
- K. E. Wardle, D. Henderson, R. L. Rowley. "Molecular Dynamics Simulation of Surfactant Effects on Ion Transport through a Liquid-Liquid Interface between Partially Miscible Liquids." *Fluid Phase Equilib.* **233**, 96-102 (2005).
- K. E. Wardle, E. Carlson, D. Henderson, and R. L. Rowley. "Molecular-Dynamics Simulation of the Effects of Ions on a Liquid-Liquid Interface for a Partially Miscible Mixture." *J. Chem. Phys.* **120**, 7681-7688 (2004).