

ROBERT ALEXANDER LEFEBVRE

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Education

- May 2009** **University of Tennessee – Knoxville**
Master of Computer Science
Final GPA: 3.86/4.0
- Fall 2007** **University of Tennessee – Knoxville**
Bachelor of Science, Computer Science
Overall GPA: 3.73/4.0 Magna cum Laude

Work Experience

05/2009-Present **Oak Ridge National Laboratory, Reactor and Nuclear Systems Division,
Design, Safety and Simulation Integration Group, SCALE Code System,
Research and Development Staff**

Responsibilities include:

- working with SCALE code managers to maintain and enhance existing tools used to input and visualize data to SCALE code modules
- developing state-of-the-art graphical user interface and visualization software

05/2008-05/2009 **Oak Ridge National Laboratory, NESLS Intern**

Responsibilities included:

- working with SCALE code managers to maintain and enhance existing tools used to input and visualize data to radiation transport codes
- developing prototypic FJORD (Fortran Java Optimized Ray-traced Display) to interactively visualize geometry models from Monte Carlo radiation transport codes using 2D and 3D ray tracing techniques coupled directly with FORTRAN through a unique interface
- combining a multi-threaded Java driver program and parallel FORTRAN programs
- completing SCALE 6 upgrades of GeeWiz interface by adding items to existing dialogs creating new dialogs to enable use of SCALE 6 input features
- programming languages include Visual C++, MFC, and Java

08/2007-05/2008 **Daxor Corporation, Software Engineering Consultant**

Responsibilities included software and technical document consultation for FDA regulated nuclear medicine instrumentation suite. Programming languages included Visual C++, C# .Net.

01/2007-05/2009 University of Tennessee Knoxville, Computer Science Teaching Assistant
Responsibilities included instructing students in graphical user interface development and scripting languages (PHP, JavaScript, Python, XETML, XML, PERL, etc.)

Publications

B. T. Rearden, L. M. Petrie, D. E. Peplow, M. A. Jessee, D. Wiarda, M. L. Williams, R. A. Lefebvre, J. P. Lefebvre, I. C. Gauld, and S. Goluoglu, "Enhancements in SCALE 6.1," *Proc. PHYSOR 2012*, Knoxville, TN, April 15-20, 2012.

B. T. Rearden, D. A. Reed, R. A. Lefebvre, D. E. Mueller, and W. J. Marshall, "SCALE/TSUNAMI Sensitivity Data for ICSBEP Evaluations," *Proc. ICNC 2011*, Edinburgh, U.K., September 19-22, 2011.

B. T. Rearden, L. M. Petrie, D. E. Peplow, M. A. Jessee, D. Wiarda, M. L. Williams, R. A. Lefebvre, J. P. Lefebvre, I. C. Gauld, and S. Goluoglu, "SCALE 6.1 Enhancements for Nuclear Criticality Safety," *Proc. ICNC 2011*, Edinburgh, U.K., September 19-22, 2011.

B. T. Rearden and R. A. Lefebvre, *Getting Started with VIBE as a DICE Plug-in Module*, ORNL/TM-2010/60, Oak Ridge National Laboratory, Oak Ridge, Tenn., August 2010.

B. T. Rearden, R. A. Lefebvre, A. Thompson, Y. Rugama, N. Soppera, and M. Bossant, "The VIBE Tool of SCALE--Validation, Interpretation, and Bias Estimation," *Proc. NCSD 2009*, Richland, WA, September 13-17, 2009.

Professional Activities

08/2008-08/2010 SARRC Corporation, Founder and Vice President

Students for Academic Recruitment and Retention in Computing (SARRC), an organization dedicated to increasing enrollment and retention of individuals in the computing field at the undergraduate and graduate level. Responsibilities include technical documentation, personnel management, fund raising and development and maintenance of computing curriculum.