

## **Andrew Holcomb, Ph.D.**

Nuclear Data and Criticality Safety Postdoc  
Oak Ridge National Laboratory  
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### **Education**

**Georgia Institute of Technology**, Atlanta, GA

Ph.D., Nuclear Engineering, December 2015 (expected)

Dissertation: *A New Unresolved Resonance Region Methodology*

Minor: Mathematics

Advisors: Dr. Farzad Rahnema, Dr. Luiz Leal

**Georgia Institute of Technology**, Atlanta, GA

M.S., Nuclear Engineering, December 2013

Thesis: *Development of a Graphical User Interface for the Coarse Mesh Radiation Transport Code COMET and Cross Section Generation with HELIOS*

Advisor: Dr. Farzad Rahnema

**University of Florida**, Gainesville, FL

B.S., Nuclear and Radiological Engineering, May 2011

### **Skills & Abilities**

- Proficient in C++ and Python, with experience in FORTRAN and MATLAB
- Experience in developing production-level code in large-scale, scientific software systems
- Strong background in iterative methods for linear and nonlinear systems and Monte Carlo methods

## **Experience**

### **Graduate Research Assistant, Georgia Institute of Technology**

**August 2011 - present**

- Constructed a graphical user interface (GUI) to create input files for the coarse mesh radiation transport (COMET) code
- Created a graphical user interface that post-processes COMET output files to generate Tecplot input files for plotting
- Used HELIOS to generate six-group cross-section libraries for a modular high temperature gas reactor benchmark problem
- Interned at Oak Ridge National Lab (ORNL) through the Nuclear Engineering Science Laboratory Synthesis (NESLS) program and updated the legacy SAMRML FORTRAN code to a modern C++ implementation in AMPX to reconstruct angular-differential and energy-differential cross sections directly from evaluated resonance parameters
- Worked full-time at ORNL while developing a new AMPX module that uses a Reich-Moore based methodology to construct the probability tables for the unresolved resonance region

### **UFTR Digital Upgrade Fellow, University of Florida**

**October 2009 – July 2011**

- Assisted in licensing a digital control system upgrade to the University of Florida Training Reactor (UFTR).
- Generated reactor safety system layouts using Areva's SPACE program
- Assisted in the UFTR's rebuild, including fuel storage and refueling activities

## **Publications and Presentations**

**A. Holcomb**, L. Leal, F. Rahnema, D. Wiarda, and G. Arbanas, "Reconstructing Double-differential and Energy-differential Resonance Cross Sections Using the R-Matrix Limited Formalism in the AMPX Code," *Trans. Am. Nucl. Soc.* (2014).

**A. Holcomb**, L. Leal, F. Rahnema, D. Wiarda, and G. Arbanas, "Development and Testing of a New Unresolved Resonance Region Analysis Methodology," Nuclear Criticality Safety Technical Program Review (2015).

**A. Holcomb**, L. Leal, F. Rahnema, and D. Wiarda, “Development of a New Unresolved Resonance Region Analysis Methodology,” Nuclear Criticality Safety Technical Program Review (2016).