

**George Tabatadze, Ph.D.**

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**Academic Degrees**

Ph.D.	Health Physics	2007 – 2012	Idaho State University
M.S.	Health Physics (Medical Physics)	2004 – 2007	University of Nevada Las Vegas
B.S.	Physics / Computer Science	1999 – 2003	Tbilisi State University

**Experience**

- Aug. 2014 – Present      Research Associate. United States Transuranium and Uranium Registries, Washington State University.
- Radiation Instrumentation,
  - Data QA/QC,
  - Quantitative Analysis.
- Aug. 2012 – May 2014      Visiting Assistant Professor. Idaho State University. Department of Nuclear Engineering and Health Physics.
- Classes taught:
- Quantitative Methods in Physics,
  - Radiation Physics,
  - External Dosimetry,
  - Radiation Regulations,
  - Topics in Health Physics (2-semester course),
  - ABHP Review,
  - Medical Applications in Engineering and Physics (Medical Imaging Physics).
- June 2013 – Aug. 2013      Idaho National Laboratory (U.S.DOE) Subcontractor: NNSA Grant Proposal – Support the development of the U.S. Department of Energy National Nuclear Security Administration grant proposal to include:
- Development of the consortium team;
  - Coordination of all grant proposal activities, including: communicating with team members, writing the program description, developing the budget, coordinating sub-award agreements, contacting the program manager, working with the ISU Office of Research to ensure successful submission of the proposal;
  - Coordination of meetings among team members; and
  - Travel to CAES and INL on a weekly basis, if needed.

- May 2008 – Aug. 2012 Research Assistant. Idaho State University, Department of Nuclear Engineering and Health Physics.  
ISU/USTUR Internal/External Dosimetry Research Team.  
Primary duties:
- Development of the USTUR case 0102 Voxel Phantom for external radiation detector response simulation.
  - Study of various CT image processing techniques to create optimized/detailed voxelized geometry.
  - Implementation of voxelized phantom into the Monte Carlo code (MCNPX) for counting efficiency calculations.
- May 2008 – Aug. 2012 Research Assistant. Idaho State University, Environmental Assessment Laboratory (EAL).  
Primary duties:
- Preparation and radioanalysis of various environmental samples.
  - Operation and maintenance of gamma-spectroscopy detectors, gas-flow proportional counters, and liquid scintillation counters.
  - Development and revision of laboratory procedures. Laboratory Quality assurance (QA) and quality control (QC) and participation in: the DOE Mixed-Analyte Performance Evaluation Program (MAPEP); and the IAEA World-Wide Proficiency Test.
  - Training of new personnel.
- Aug. 2007 – May 2008 Teaching Assistant. Idaho State University, Department of Physics.  
Classes taught:
- Engineering Physics and Astronomy.
- Aug. 2004 – May 2007 Graduate Assistant. University of Nevada Las Vegas, Department of Health Physics.  
Primary duties:
- Development of a microCT image import and characterization method for the trabecular bone region for direct use in Monte Carlo radiation transport simulations.
  - Development of an “in-house” Monte Carlo code for “Alpha Particle Transport in Trabecular Bone Regions”.

## Training and Professional Development

- July 2010 Professional Development School in Internal Dosimetry ,  
Health Physics Society, Idaho State University,  
Pocatello, Idaho.
- Nov. 2009 SLAC Geant4 Tutorial,  
SLAC National Accelerator Laboratory,  
San Francisco, California.

## Honors and Awards

Health Physics Society Fellowship (Richard J. Burk, Jr. Fellowship award).

## Professional Society Membership

Health Physics Society (USA), 2005; International Collaboration Committee, 2014  
Georgian Health Physics Association (Rep. of Georgia), 2007  
Columbia Chapter of Health Physics Society, 2014

## Computer Skills:

Programming languages: C, C++, and Visual Basic.  
Monte Carlo (Radiation Transport) codes: Geant4, MCNPX.

## Language Proficiencies:

Fluent in Georgian and Russian languages.

## Selected Papers, Abstracts, and Presentations

**Tabatadze G.**, Thomas EM, Tolmachev SY. Analysis of High-Fired Plutonium Oxide and Other Actinides in MAPEP Soil Samples; *Podium Presentation*, 61st Annual Radiobioassay and Radiochemical Measurements Conference, Iowa City, IA, TS7 October 2015.

Miller B., **Tabatadze G.**, Dion M., Frost S., Orozco J., Press O., Sandmaier B., Miederer M., Brochhausen C., Tolmachev S. Quantitative Single-Particle Digital Autoradiography With Ionizing-Radiation Quantum Imaging Detector; *Abstract*, Health Physics, Vol. 109, No. 1, F9 July 2015.

**Tabatadze G.**, Miller B., Tolmachev S. Radionuclide Distribution Measurement Within Anatomical Bone Structures Using Digital Autoradiography; *Abstract*, Health Physics, Vol. 109, No. 1, F9 July 2015.

Khalaf M, Brey RR, Harris JT, Derryberry D, **Tabatadze G.** Monte Carlo Simulation of In-Vivo Measurement of the Most Suitable Knee Position for the Optimal Measurement of Activity. *Paper*, Health Physics, 104(4):405-412, April 2013.

**Tabatadze G.**, Brey RR, Kramer GH, Capello K, Meldrum DJ. Re-evaluation of  $^{241}\text{Am}$  Content in the USTUR Case 0102 Leg Phantom. *Paper*, Health Physics, 104(1):1-8, January 2013.

**Tabatadze G.**, Brey RR.  $^{241}\text{Am}$  Whole Body Counting Efficiency Dependence on Bone Density Variation. *Abstract*, Health Physics, Vol. 103, No. 2, S16, August 2012.

**Tabatadze, G.**, Brey, R., James, T; Modeling Am-241 Distribution in Bones of the USTUR Case 0102 Human Leg Phantom; *Abstract*, Health Physics, Vol. 101, No.1, S14 June 2011.

**Tabatadze, G.**, Brey, R., James, T., Theel, D., Todd, S; USTUR Case 0102 CT Image Processing Techniques for Voxel Phantom Development; *Abstract*, Health Physics, Vol. 97, No. 1, S11, July 2009.

**Tabatadze, G.**, Brey, R.R., James, A.C., Neba, N.R; USTUR Case 0102 Voxel Phantom for External Radiation Detector Response Simulation; *Abstract*, Health Physics, Vol. 95, No. 1, S10, July 2008.

**Tabatadze, G.**, Patton, P; Alpha Particle Transport in Voxelized Trabecular Bone Images; *Poster Presentation*, 51<sup>st</sup> Annual Meeting of the Health Physics Society, Providence, RI, P26 June 2006.