



Lawrence Heilbronn

Assistant Professor of
Nuclear Engineering

Dr. Lawrence Heilbronn is currently an assistant professor at the University of Tennessee. He received his B.A. from the University of Montana (1982), M.S. from the University of Illinois (1984), and Ph.D. from Michigan State University (1990).

From 1991 to 1992 he was a postdoctoral assistant at Lawrence Berkeley National Laboratory (LBNL), and from 1992 through 2008 he was a staff scientist at LBNL.

His research there focused on the measurement of secondary neutrons produced by heavy-ion collisions, as well as assisting in the measurements of charged secondaries. This research was in support of NASA studies on mitigating the risk to radiation in long-term missions in space.

As part of that research, he also supported radiobiology experiments conducted at accelerator facilities by instrumenting and running the online dosimetry needed for those experiments.

While at LBNL, he participated in a program that transferred the radiotherapy program for AVMs (arteriovenous malformations) from the Bevelac at LBNL to the proton synchrotron at Loma Linda University. Most of the research there involved the imaging and targeting of AVMs located near critical structures in the brain. While at LBNL, he participated in over 40 experiments conducted at accelera-



tor facilities. Those facilities included HIMAC (Chiba, Japan), Bevelac (LBNL), 88-inch Cyclotron (LBNL), AGS (Brookhaven National Laboratory), NSRL (BNL), NSCL (Michigan State University), and the proton synchrotron at Loma Linda University Medical Center.

In August of 2008, he joined the faculty in the Department of Nuclear Engineering. He has continued his NASA-related research, and has begun research related to the production of isotopes and the testing of instrumentation used for detecting nuclear materials. The new research is conducted through collaborations with scientists at Oak Ridge National Laboratory. Prof. Heilbronn is the Student ANS Chapter Advisor, and has been twice selected as the Department Professor of the Year by the students (2010, 2012).

His outside interests include fishing and coin collecting. He is also an advisor for Crew 451 (Boy Scouts of America), participates in many educational outreach activities, and enjoys many outdoor activities like hiking, rafting, and running.

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More information on the UT Institute for Nuclear Security is available at nuclear.utk.edu.