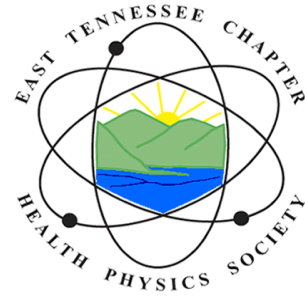


# *The James E. Turner Back-to-School Lecture Series in Nuclear Science, and Health Physics*



**January 23, 2016 (Saturday)**

7:30 am – 12:00 pm

**Min H. Kao Electrical Engineering and Computer Science Building, Room 622**

THE UNIVERSITY of TENNESSEE  KNOXVILLE

For more information, please contact:

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Scott Schwahn, President, ETCHPS ( [sschwahn@hps.org](mailto:sschwahn@hps.org) )

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You are invited to attend the 3<sup>rd</sup> annual “Back to School Seminar Series.” We have an exciting and informative agenda lined up. This year, President-Elect of the National Health Physics Society will present, as well as many scientists and engineers from Oak Ridge, TVA, Siemens, CDC, REAC/TS, ProVision, and the University of Tennessee. This year, we are planning an informal get together (meet and greet) in Old City, the evening prior, as well as attending the USC@UTK basketball game in the afternoon of January 23. Students, teachers, and members of local professional societies are invited, however, we ask you to please register from our website. The website address is: <http://www.hpschapters.org/etchps/index.html>; with registration specifically for this meeting at: <http://www.hpschapters.org/etchps/2016Turner/form.html> .

This meeting is casual, and has been traditionally billed as

## **“Contemporary Methods, Issues, and Concepts in the Radiological and Nuclear Sciences---Stuff You Should Know!”**

We encourage short presentations by members of the HPS, ANS, INMM, and WIN. The discussions are lively, informative, and relevant to modern-day issues in Nuclear Science. While a number of presenters are conducting leading-edge research and development in nuclear science, the notion for this meeting is to keep things simple, informative, educational, and if possible, entertaining---after all it is Saturday morning.

**For members**, Continuing Education Credits will be awarded for attendance to those who are registered with the American Board of Health Physics, the National Registry of Radiation Protection Technologists, or Professional Engineer’s License.

**For non-members and students**, this meeting is an opportunity to meet people who have made a career in the radiological sciences, and come to a better of understanding of what types of problems are being solved.

If you are visiting us from Nashville, Erwin, Chattanooga, Cincinnati, Columbia, Atlanta, and have any questions about accommodations, please text Jeff Chapman at 865-924-4466.

Donuts and Coffee will be available, beginning at 7:30am. We'll start the presentations at 8:00a.m., take a mid-morning break, and finish by ~ 12:00.

**What do you need to do? Please register from the ETCHPS website:**

<http://www.hpschapters.org/etchps/index.html> (information)

<http://www.hpschapters.org/etchps/2016Turner/form.html> (registration)

- *When registering, please indicate if you'd like to present on a topic, and provide a topic or multiple topics. We'll do our best to fit you in to the agenda.*

- Check back on the primary website up to January 23, to obtain information, such as:

- Draft Agenda
- Final Agenda
- Meet and Greet Friday with HPS President Elect, evening, January 22.
- USC@UTK basketball game
- Parking and Logistics

### **General Topics**

Nuclear Fuel Cycle / Spallation Neutron Source / Nuclear Power Plant  
Decommissioning/ Naturally Occurring Radioactive Material (NORM) in Oil / Used  
Nuclear Fuel Management / Radiation Detection and Measurement / Shipping of  
Radioactive Material / Nuclear Reactors – the old and the new / Watts Bar II Power Up /  
Emergency Response / Homeland Security / Uranium-Depleted and Enriched / UPF/  
Spent Nuclear Fuel On-Site Storage / Advanced Nuclear Reactors / Criticality Accidents /  
High Resolution Gamma Spectrometry / Portal Monitoring / Neutron Activation / SNF  
Pools Criticality Control/ REAC/TS / State of TN Volunteer Corp / U.S.-U.K  
Collaboration for Advanced Fuel Cycles / IAEA / Radiation Risk / Nuclear Disarmament  
/ International Safeguards

**The 2016 final agenda will be maintained in a separate file, but, for historical purposes, the agendas from 2015 and 2014 are included, as well as the abstract for the presentation by HPS President Elect, Robert Cherry.**

## **Licensing Legacy Depleted Uranium on Army Ranges**

The Army developed the M28 Davy Crockett nuclear weapon system in the late 1950s for use against Soviet armor and troops if war broke out in Europe. It was deployed from 1962 to 1968 and included the M101 spotting round, which included depleted uranium. The Atomic Energy Commission issued a license to the Army that allowed the Army to fire the M101 during training. The license did not require the Army to recover the expended M101 rounds from its ranges. In 2005, during construction on a training range in Hawaii, an Army contractor found M101 debris. The Army reported this to the Nuclear Regulatory Commission in 2006, at which time the NRC required the Army to apply for a license to possess this DU on its Hawaii ranges and on ranges at fifteen other Army installations. This presentation will discuss the Davy Crockett weapon system and the M101 licensing history.

**For Information, this was the agenda for January 24, 2015**

8:30 - 9:00 a.m.		Registration/Coffee/Donuts/Mingling/Catching Up (We moved the meeting back an hour due to snow!)
9:00 a.m.	Jeff Chapman Micah Folsom	OPENING REMARKS
9:10-9:25	Andy Worrall	How the Nuclear Fuel Cycle is Changing – a look 25 years out.
9:25-9:40	Scott Schwahn	The Spallation Neutron Source - Stuff That Might Surprise You
9:40:955	Eric Abelquist	A Decommissioning Renaissance
9:55-10:10	John Frazier	NORM in Oil and Gas Exploration and Production
10:10-10:25	Josh Peterson	Used Nuclear Fuel Storage and Disposition
10:25-10:40	Mathew Cook	How to Measure U/Pu Mass in Reprocessing Plants Using a Hybrid K-Edge Densitometer
10:40-10:55	Linda Paschal	Design, Testing, and Evaluation of a New DOT Shipping Container for SNM
10:55-11:05	BREAK	
11:05-11:15	Loong Yong	Practicing Health Physics and Nuclear Engineering in Rapidly Changing World
11:15-11:30	Steve Skutnik	What Are the Up and Coming Advanced Nuclear Reactors and How are they Different from Current Reactors at TVA
11:30-11:45	Mark McHugh	The Sarov Criticality Accident
11:45-12:00	Rod Reed	Let's Get It Straight – The Linear, No-Threshold Theory of Radiation Risk
12:00-12:10	Austin Scircle	An Application for the FALCON High Resolution Gamma-Ray Spectrometer
12:10-12:25	Anthony Hogan	Population Monitoring and the TN Radiation Response Volunteer Corps (Preparation for Radiological Accidents)
12:25-1240	David Glasgow	Interesting Applications of Neutron Activation Analysis
12:40-12:50	Steve Sugarman	REACT/S Initial Intake assessment/estimation to help guide medical management during a radiological incident
12:50- 1:00	Andy Worrall	The U.S.-U.K. Collaboration Future on Nuclear Power and the Fuel Cycle
1:00-1:10	Jeff Chapman (optional)	A look at Criticality Safety Controls in Spent Nuclear Fuel Pools

**For Information, this was the agenda for February 22, 2014**

7:30-8:00 a.m.	Registration/Coffee/Donuts	
8:00-8:10 a.m.	Welcome	Jeff Chapman Gordon Peterson
8:10-8:30 a.m.	Statistical Sampling Approaches for Radioactive Waste Disposal	Tom Rucker
8:30-8:50 a.m.	REAC/TS: Methods and Capability for Responding to World-Wide Radiation/ Nuclear Incidents	Steve Sugarman
8:50-9:10 a.m.	10 CFR 835 Internal Audits of Radiation Protection Programs	Fred Haywood
9:10-9:20 a.m.	Break	
9:20-9:40 a.m.	The World-Wide <sup>99</sup> Tc Shortage and the HEU to LEU Conversion in South Africa	Jeff Chapman
9:40-10:00 a.m.	Recent Advancements in Transportation Security for Radioactive Material	Art Palmer
10:00-10:20 a.m.	In the Blink of an Eye -- Quick Look at Changes to Eye Dose Limits	Gary Kephart
10:20-10:30 a.m.	Break	
10:30-10:50 a.m.	The Fukushima Accident	Matthew Francis
10:50-11:10	"Depleted Uranium - It's NOT JUST About Radiation!"	Rod Reed
11:10-11:30	What You Can Learn from 2 Terabytes and 10 Years of Portal Monitors	Alex Enders
11:30-11:50	Responding to Radiation Incidents in Tennessee	Norman Miller
11:50-12:10	Intercomparison between the most serious nuclear accidents: TMI, Chernobyl, Fukushima	Kevin Robb
12:10-12:30	The Physics of Improving Patient Outcomes - Provision Center for Proton Therapy	Mark Artz