



2014 SPRING NEWSLETTER

From the Committee

ELECTION

The winners of the 2014 executive council election are:

Scott O. Schwahn - President-Elect

Jessica Vudragovich - Secretary-Elect

Rick Greene - 1st-Year Councilmember



2014 Council Members: L – R: Manuel Diaz, 2nd-Year Councilmember; Jeff Chapman, President; Scott Schwahn, President-Elect; Elizabeth Gillenwalters, 3rd-Year Councilmember; Cecilia Greene, Secretary; Jess Vudragovich, Secretary-Elect; Rick Greene, 1st-Year Councilmember. Not pictured are Tom Hansen, Past President and Duane Quayle, Treasurer.

Please take a moment and log in to the chapter website to update your personal information and pay your dues if you haven't yet for 2014.

Open Invitation from the East Tennessee Chapter

By Gary Kephart

Many of us "boomers" occasionally wonder where the next generation of health physicists will come from. Those of us who participated in the first and second James E. Turner Memorial Symposia share the optimism of having seen exceptional student HP research from a number of different academic programs. The East Tennessee Chapter invites members of the Society, students, and all interested researchers and scientists to participate in the Third James E. Turner Memorial Symposium in Oak Ridge, Tennessee, on May 21–22, 2014.

The symposium honors the legacy of James E. (Jim) Turner, his contributions to the health physics field and his lifelong emphasis on providing a strong radiological physics foundation to young health physics professionals and students. Accordingly, the symposium presentations emphasize high-quality submissions by both undergraduate and graduate students as well as beginning health physics professionals.

Health Physics Society members and other scientific professionals are encouraged to take advantage of this unique student-centered HP symposium. The symposium has been structured as two half-day technical sessions beginning early Wednesday afternoon (5/21) and culminating with a Thursday awards luncheon (5/22). HPS President-Elect Barbara Hamrick has graciously agreed to coordinate her East Tennessee HPS Chapter visit as our featured Wednesday evening dinner speaker. The schedule intentionally accommodates half-day travel plans on both days to encourage student participation. Attending professionals may wish to similarly utilize these "commuting" windows, or to combine other Oak Ridge networking opportunities with your Symposium plans.

An array of registration options have been devised to accommodate your availability to join with us at:

<http://hpschapters.org/etchps/2014Turner/registration.html> .

We look forward to meeting with you this May.

The flyer for this event is attached.

Chapter Nominating Committee

By Gary Kephart

On behalf of the Chapter and the Chapter Nominating Committee, I want to thank all those who assisted us in submitting nominations for HPS national awards. We are in the fortunate position of having more deserving Chapter members than we can realistically nominate. With your excellent support, we can at least claim an honest effort transpired before the 2014 nomination deadline.

Many thanks!!

CHP/NRRPT Prep Course

By Manuel Diaz 2nd year council member

CHP Preparation Course

The Certified Health Physicist Preparation Course is once again offered by the ETCHPS. The course started on Saturday, March 15th and will continue until Saturday, June 21st. The course is being conducted at Roane State Community College, Room H-237 in Oak Ridge, TN every Saturday starting at 8:00 am until 10:00 am. The course schedule has been expanded to accommodate topic-specific lectures and problem solving sessions. The topic sessions are being instructed by members of the ETCHPS that have successfully completed the CHP examination. Approximately fourteen participants are attending the course. The course participation is well diversified. Multiple attendees are pursuing Part I and/or Part II of the CHP examination in July. The remaining attendees are current CHPs. The ETCHPS applied for Continuous Education Credits, but they have not been approved as of the date of this newsletter.

On behalf of the ETCHPS, I would like to thank the Roane State Community College for allowing us to use their facilities for this course. I would also like to extend my sincere gratitude to those that have volunteered their time to make this course possible.

For additional information regarding the CHP Preparation Course visit our website, www.etchps.org, or contact me at

manuel.diaz@orau.org.

PROGRAM MEETINGS

January 2014

Mr. Alex Enders, Oak Ridge National Laboratory Deputy Program Manager, Second Line of Defense was scheduled to speak on January 28 on "Portal Monitors Deployed Around the World, and What We've Learned over the last 10 years." However, Mother Nature had other plans. Snow slick roads prevented all but the speaker and the chapter secretary from arriving to the venue.

February 2014

On February 22nd a Saturday morning “Back to School” set of lectures and discussions by the members of the Health Physics Society and American Nuclear Society was held jointly with the UT Student Branch. The auditorium was well suited for the class format and the event was well attended by chapter members and UTK branch students alike with 60 souls populating the venue. There were even a few non-ETCHPS members and high school students in attendance!

Topics included: Statistical Sampling Approaches for Radioactive Waste Disposal, REAC/TS: Methods and Capability for Responding to World-Wide Radiation/Nuclear Incidents; 10 CFR 835 Internal Audits of Radiation Protection Programs; The World-Wide Tc-99 Shortage and the HEU to LEU Conversion in South Africa; Recent Advancements in Transportation Security for Radioactive Material; In the Blink of an Eye—Quick Look at Changes to Eye Dose Limits; The Fukushima Accident; “Depleted Uranium-It’s NOT JUST about Radiation!”; What You Can Learn from 2 Terabytes and 10 Years of Portal Monitors; Responding to Radiation Incidents in Tennessee; Intercomparison between the most serious nuclear accidents: TMI, Chernobyl, Fukushima; The Physics of Improving Patient Outcomes - Provision Center for Proton Therapy.

The Chapter has made application to the AAHP Continuing Education Committee for credits to be assigned. When a response is received from our colleagues on that committee, we will post the information on the Chapter web page and also distribute via e-mail to the participants.



March 2014

The East Tennessee Chapter, Health Physics Society held its annual business meeting at the Riverside Grill in Oak Ridge on March 25th, 2014. Social gathering began at 5:30 PM, with a fine meal of grouper or chicken, vegetables, potatoes, salad and rolls provided. Approximately 21 members and guests were in attendance.

The year was reviewed and many suggestions for improvements were made. Financially, the Chapter is well positioned. The year 2013 was outstanding, and the year 2014 looks every bit as promising.

FROM THE WEB

A report in Foreignpolicy.com about the efforts in Japan to repopulate abandoned towns around Fukushima

http://www.foreignpolicy.com/articles/2014/03/11/you_cant_go_home_again_fukushima_japan_radioactive_ghost_towns

A post by Sandy Perle on RADSAFE.net about doses to residents around the plant.

Cancer risk low among residents outside the Fukushima Prefecture evacuation area

March 12th, 2014, Phys.org

Research group lead by Professor Akio Koizumi (Graduate School of Medicine) and Prof. Hirohiko Ishikawa (Disaster Prevention Research Institute) conducted a study, evaluating average radiation dose among municipal residents near the evacuation area of the Fukushima Daiichi Nuclear Power Plant. The survey performed exposure assessment based on personal monitoring of external and internal radiation dose among residents. Special endeavor was made to evaluate long-time dose over time of the next few decades and predict quantitatively cancer risk. The result of this research was published in the electronic version of Proceedings of the National Academy of Sciences (February 24, 2014).

Comments from researchers

According to the radiological decay of radiocesium during next 10 years and 50 years, the average annual exposure is expected to be less than 1 millisievert per year, which is the ordinary exposure limit excluding medical and natural radiation exposure. In areas with high radiation exposure (2.51 millisievert per year in 2012), average risk of cancer incidence estimated from lifetime exposure dose of 2012 or later, is 1.06% for all solid cancers (other than leukemia) and 0.28% for breast cancer in women. However, continuous governing entrances to contaminated forest, distribution of contaminated food, and assignment of the hazardous zones is still needed to reduce radiation exposure of the population and thereby reducing cancer risk.

The novelty of this study includes:

- * Evaluation of the external exposure and internal exposure based on personal monitoring and food duplicate method, respectively.
- * Projection of the long-term exposure levels in next decades.
- * Quantification of the cancer risk.

Summary

Average radiation dose of residents living outside the evacuation zone of the Fukushima Daiichi Nuclear Power Plant (Kawauchi village of Futaba county, Tamano area of Soma city, and Haramachi area of Minamisoma city of Fukushima prefecture), ranged from 0.89 millisievert per year and 2.51 millisievert per year in 2012 (taking into account of the physical decay of radioactive cesium). The dose was close to annual exposure dose due to natural radiation in Japan, 2 millisievert. Radioactive substances were released into the environment by the nuclear accident in March 2011, and local residents near the power plant were evacuated. In this study, external exposure caused by radiation from radioactive cesium in the soil and internal exposure received from radioactive cesium in airborne dust and diet were investigated among residents of three regions which are located at 20km to 50km from the Fukushima Daiichi Nuclear Power Plant, and have borders on the evacuation area. The survey was conducted between August-September, 2012. Study participants wore personal dosimeters to survey external dose and provided food duplicate samples consisting of 24-hour meal and beverage. Airborne dust samples were collected in each area. Among three study areas, average external exposure ranged from 1.03 millisievert per year to 2.75 millisievert per year, internal exposure from the diet ranged from 0.0058 millisievert per year 0.019 millisievert per year, and internal exposure from the airborne dust was less than 0.001 millisievert per year. As a result, external exposure accounted for 99.5% or more of individual exposure.

More information:

Kouji H. Harada, Tamon Niisoe, Mie Imanaka, Tomoyuki Takahashi, Katsumi Amako, Yukiko Fujii, Masatoshi Kanameishi, Kenji Ohse, Yasumichi Nakai, Tamami Nishikawa, Yuuichi Saito, Hiroko Sakamoto, Keiko Ueyama, Kumiko Hisaki, Eiji Ohara, Tokiko Inoue, Kanako Yamamoto, Yukiyo Matsuoka, Hitomi Ohata, Kazue Toshima, Ayumi Okada, Hitomi Sato, Toyomi Kuwamori, Hiroko Tani, Reiko Suzuki, Mai Kashikura, Michiko Nezu, Yoko Miyachi, Fusako Arai, Masanori Kuwamori, Sumiko Harada, Akira Ohmori, Hirohiko Ishikawa, and Akio Koizumi. "Radiation dose rates now and in the future for residents neighboring restricted areas of the Fukushima Daiichi Nuclear Power Plant." PNAS 2014 111 (10) E914-E923; published ahead of print February 24, 2014, doi:10.1073/pnas.1315684111 Provided by Kyoto University

CHAPTER ACTIVITIES

Upcoming Events

18th Topical Meeting of the Radiation Protection & Shielding Division of ANS

This conference explores the scientific, technological and engineering issues associated with particle and ionizing radiation shielding in its broadest context, including nuclear energy systems, accelerator facilities, space and other radiation environments. It is one of the premier international radiation shielding events, regularly drawing hundreds of the world's top scientists and engineers. September 14-18, 2014.

<http://www.rpsd2014.org>

Radiobioassay & Radiochemical Measurements Conference

RRMC 2014

October 27 through October 31, 2014

Holiday Inn World's Fair

Knoxville, Tennessee

FROM OUR AFFILIATES

Michael G. Stabin, PhD, CHP

We have noted that many Health Physics Society local chapters have members that are not members of the national society. We would like to make those members aware of the new membership categories recently approved by the society leadership and ask these members to consider joining the national HPS. In particular, Student, 'Early Career' and 'Early Associate' categories have lower membership fees, and may be attractive to many chapter members. The 'early' categories may be used for up to three years.

Tangible benefits of Health Physics Society membership include:

- A subscription to the monthly Health Physics Journal.
- A subscription to the monthly Health Physics News.
- A subscription to the quarterly Operational Radiation Safety.

- Complimentary copies of the ANSI/HPS standards, downloadable from the Members Only section of the HPS website.
- A listing in and access to our Online Membership Directory.
- Access to the Members Only area of the Health Physics Society website, which contains News, Employment Information, a Legislative Action Center, and online access to full texts of the Health Physics Journal, Health Physics News, and Operational Radiation Safety.
- Reduced registration fees at meetings of the Society.
- Reduced fees to join sections of the Society.
- Opportunities to participate on Society committees.
- The right to vote and hold office (other than Associate and Affiliate members).

James E. Turner Memorial Symposium



Picture from Turner II Symposium

Open Invitation

The Third James E. Turner Memorial Symposium
East Tennessee Chapter – Health Physics Society

May 21 – May 22, 2014

Oak Ridge Associated Universities
Pollard Auditorium

Oak Ridge, Tennessee

Operational Health Physics

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Health Physics Society members and other scientific professionals, *particularly our colleagues from adjoining areas of the southeastern US*, are encouraged to take advantage of this unique student-centered HP symposium.

The symposium has been structured as two half-day technical sessions beginning early Wednesday afternoon (5/21) and culminating with a Thursday awards luncheon (5/22). HPS President-Elect Barbara Hamrick has graciously agreed to coordinate her East Tennessee HPS Chapter visit as our featured Wednesday evening dinner speaker. The schedule intentionally accommodates half-day travel plans on both days to encourage student participation. Attending professionals may wish to similarly utilize these “commuting” windows, or to combine other Oak Ridge networking opportunities with your Symposium plans.

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We look forward to meeting with you this May and teaming together to continue and expand this symposium.