

during the afternoon. The projects covered a wide variety of topics, including the use of statistical methods to improve detection of radioactive materials, environmental measurements, and modeling and occupational protection issues. Following some very difficult judging, the following student presentations were selected as the top three and the students were awarded cash prizes:

- John Brogan—"Benchmarking Computations Using the Monte Carlo Code RITRACKS With Data From a Tissue Equivalent Proportional Counter (TEPC)"
- Brett Rosenberg—"Rapid Isolation of Neptunium From Solutions and Soil"
- Justin Bell—"Internal Dosimetry of ^{64}Cu -ATSM in Canine Patients"

Following the student presentations, a lively social hour and western buffet dinner was held. Our evening guest speaker, HPS President-elect Nancy Kirner, presented "Ten Things I've Learned as a Health Physicist."

North Central Chapter

Sam Hays, Councilor

The North Central Chapter of the Health Physics Society (NCCHPS) held its spring technical meeting on 9 April 2015 at Iowa State University (ISU) in Ames, Iowa. Presentations were given on a broad range of topics that covered material from laser safety to an innovative method of conducting solid-state nuclear magnetic resonance (NMR) spectroscopy.

The first presentation was given by NCCHPS President-elect Shari Mask, who covered the history and culture surrounding challenge coins. While the origin of challenge coins is guessed at, but not known, the coins today represent proof of membership and camaraderie among people in an organization. Mask brought along challenge coins featuring the NCCHPS logo and these were issued to everyone who presented that day.



Marek Pruski
Photo courtesy of
Barb Hodge

Following Mask's presentation, Marek Pruski, PhD, of the Chemistry Department at ISU gave the talk "Dynamic Nuclear Polarization—Nuclear Magnetic Resonance Spectroscopy." Pruski explained how the field of solid-state NMR is changing with more research using dynamic nuclear polarization to increase the sensitivity per scan. The method involves harnessing microwave radiation to set up a transfer of unpaired electrons to nuclei. Using this technique, along with tailored chemical molecules and temperature, the signal-to-noise ratio can be enhanced, allowing for far greater sensitivity than previously seen.

The next talk was given by Robert McTaggart, PhD, a professor of physics at South Dakota State University. His presentation, "Characterization of an Isotopic Neutron Source and Other Irradiation Studies," discussed his ongoing research on irradiating samples of concrete and looking at peak strength vs. radiation dose. McTaggart also talked about a collaboration developing to study the environmental effects on three-dimensional printed components for use in space.

Jeff Eaton, a health physicist with the radiation safety group at ISU, gave a presentation covering his department's efforts to track down and abate radon emissions found on campus. Organizing a large group of people across different departments, the radiation safety group was able to deploy almost 1,500 testing kits across the ISU campus in the effort to mitigate and verify that radon concentration levels were below the action limit.

Kyle Underwood, a health physics associate with the Mayo Clinic at Rochester, was up next with the informative "Skin Contamination and Radiation Dose Associated With Research Radionuclides." Underwood started with a hypothetical situation, putting the audience in the position of a radiation safety officer who gets a late-night call about a researcher with skin contaminated with ^{14}C . How would you go about quantifying and addressing the dose? Underwood described how a spreadsheet was created using the dose-modeling code VARSKIN 5, which needs just a few data points to calculate skin dose.

Presenting next was Marek Mikulski, PhD, coprincipal investigator for the Former Nuclear Weapons Workers Medical Screening. This epidemiology study looks at former nuclear weapons workers who were exposed to dangerous materials during their time at the Iowa Army Ammunition Plant in Burlington, Iowa. The program screened former workers for lung diseases and abnormalities along with sensitivities associated with exposure to beryllium, barium, asbestos, and high explosives, among other dangerous materials.

After lunch, Amanda Weinstein, PhD, presented work regarding her current project with the Very Energetic Radiation Imaging Telescope Array System (VERITAS). Weinstein, who is an assistant professor of astronomy at ISU, described how the VERITAS telescopes observe Cherenkov radiation created by high-energy gamma rays incident on Earth's atmosphere. The telescopes use this data to reconstruct the incident gamma ray and its path of arrival. This information helps Weinstein and her colleagues study a range of astronomy topics that include black holes, pulsars, supernova remnants, and dark matter.

The last presentation of the day was given by Gordon Tannahill, CHP, a health physicist with the Mayo Clinic at Rochester. Tannahill's presentation was about laser safety and best practices. It was a great overview on laser classification, labeling, controls, and deployment of a safety program.

Section News

Academic, Industrial, and Research Radiation Safety Section

Catalina Kovats, AIRRS Board of Directors

Hear ye, hear ye . . . it's official! The Academic, Industrial, and Research Radiation Safety Section (AIRRS) is the new name of the former RSO Section. The interim section officers and board of directors renamed the section to reflect the health physics subspecialties of our membership. The AIRRS officers have been busy revitalizing the section. We will be holding a special topical session at the 2015 Health Physics Society (HPS) Annual Meeting on Thursday morning, 16 July, with numerous presentations of interest on operational health physics. The business meeting will immediately follow.

The AIRRS Section approved a number of endeavors:

- AIRRS provided funds for the Nonionizing Radiation Section to get off the ground and hold a special session at the annual meeting.
- The inaugural HPS Science Camp was provided funds to purchase laboratory supplies and flash drives for use by participating science teachers for their classroom instruction.
- Five \$1,000 scholarships were provided to support health physics student attendance at the annual meeting.
- Science Teacher Award and Fellow Award recipients were nominated.
- The AIRRS Section will be hosting a special session and holding its business meeting at the 2015 HPS Annual Meeting.

There is still plenty of work that needs to be done. Volunteers are needed to run and serve (officers and board of directors). We have the momentum, so let's progress to an exciting future!

Membership Handbooks Needed

Do you have copies of the Health Physics Society Membership Handbooks from 1958 to 1962 on your shelves? Are you looking for a new home for them? If yes, please send them to Heide Rohland, HPS Secretariat, 1313 Dolley Madison Boulevard, Suite 402, McLean, VA 22101, or email Heide at hrohland@burkinc.com.