



Cascade Chapter



Avalanche

The official newsletter of the
Cascade Chapter of the Health Physics Society

Spring 2013 Issue

<http://www.hpschapters.org/cascade/>

E. Dale Trout Annual Meeting

This year's annual meeting will take place at the Vue in Corvallis, Oregon on Friday, May 10th. We have a number of speakers lined up for this year's annual meeting, with topics certain to be of interest to Cascade Chapter members.

The featured speaker for this year's meeting will be Health Physics Society President-Elect, Darrell Fisher, PhD. Fisher leads the Isotope Sciences Program at Pacific Northwest National Laboratory in Richland, WA. His responsibilities include medical and industrial isotope research, applications development, and new radiopharmaceutical design and testing. He received his B.A. in



biology from the University of Utah, and his PhD in nuclear engineering science from the University of Florida.

He is a member of the Society of Nuclear Medicine's special committee on Medical Internal Radiation Dose (MIRD). He has previously served as a member of the Nuclear Regulatory Commission's Advisory Committee on the Medical Uses of Isotopes (ACMUI). Additionally, he has served a two-year assignment as science advisor at the U.S. Customs and Border Protection in Washington, DC.

Fisher served as Treasurer for the Health Physics Society (HPS) from 2007-2010, and on the Board of Directors from 1988-1993, and again from 2007-2010. He was recently elected by its membership to serve as President-Elect.

The title of Dr. Fisher's presentation is *Health Physics Society 2013: An Update*. The Health Physics Society is an international professional society with a rich history and tradition of strong leadership. We have both opportunities and challenges facing us today. Dr. Fisher's talk will address the status of our professional society, including: the relevancy of the Health Physics Society in 2013 and going forward; priorities and the federal legislative agenda; revenue sources and expenses; ways to improve and grow; and opportunities for participation and service.

Student Presentations

Kevin Makinson (recently received his PhD in Radiation Health Physics) – *Preliminary Framework for the Run-Ahead Predictive Simulation Software (RAPSS)*

The Run-Ahead Predictive Simulation Software (RAPSS) is an architecture designed for faster-than-real-time decision support for operators of complex networks. To enable further development of the RAPSS methodology, the necessary proof of principle is illustrated for two applications: decision support for shift technical advisers in nuclear power plant control rooms (RAPSS-STA), and in the event of a release outside of containment, decision support for emergency operation centers (RAPSS-EOC).

Jarvis Caffrey (Nuclear Engineering PhD Candidate) – *Space Radiation Dosimetry*

The latest renewal of interest in manned exploration to the Moon and Mars has spurred development for improved instruments and techniques to protect astronauts from the serious threat of ionizing radiation outside of Earth's protective magnetosphere. Those recent developments in dosimetry are discussed, following a brief introduction of the nature of the space radiation environment. Two classes of instruments (microdosimeters and spectrometers) are compared for their relative merits and differing approaches for use in risk assessment. Technologies developed in various disciplines have made substantial contributions in this complex challenge for dosimetry, and this new generation of advanced instruments may later transform the methods of dosimetry on Earth.

Jon Napier (Radiation Health Physics PhD Candidate) – *Establishment of Concentration Ratios for Riparian and Shrub Steppe Areas of the Eastern Washington Columbia Basin*

Concentration ratios are used to determine the transfer of nuclides from soil to biota to fauna. Some nuclides have limited associated data though; this has not prevented predictions from being performed at sites without associated data. These ratios are site specific and are not

fully applicable when applied to other locations. A recent literature review for a waste repository performance assessment determined that a significant portion of the environmental data was based on recursively published material. To address this deficiency neutron activation analysis (NAA) was used to determine concentration ratios of certain biota. Three sites, two riparian and one shrub steppe, were sampled in the eastern Washington Columbia basin, near the Hanford site. Two hundred and fifty eight samples of opportunity were collected. This included 15 soil samples, 10 water and sediment samples, 40 different species of biota, and 2 terrestrial animal species and 3 aquatic animal species. These samples were prepared for NAA by drying, weighing, and in certain cases ashing to improve detection efficiency. After activation, the samples were placed in an HPGe detector to perform spectral analysis. The concentration results of 26 elements of interest are presented, along with newly established concentration ratios for all of the species sampled.

Delvan Neville (Radiation Health Physics PhD Candidate) – Fukushima effluents & Thunnus alalunga: Applying tracers to migration & stock structure questions

The incident at the Fukushima Daiichi nuclear plant released a substantial radioactive contamination into the environment. With the predominant wind and current flow in this part of the North Pacific, these radionuclides will not spread to the US West Coast waters for several years. During the interim, radionuclides released from Fukushima may be utilized as a spatial tracer. We present findings of Cs-134 used as such a tracer for Pacific albacore (*Thunnus alalunga*), whether these findings support the current understanding of albacore migration patterns, and how these findings may aid us in determining the stock structure of albacore on the US West Coast.

Chapter News and Announcements

2013 Elections

Ballots will be emailed soon for electing Chapter Officers for 2013. The Nominating Committee has worked hard and put together an excellent slate of candidates for the open positions. Nominees are: Louie Cueva (Boeing) and Stan Addison (UW) for President-Elect; John Gough (our current treasurer) for Treasurer; and Joel Arana, CHP (Dade Moeller) for Member-at-Large. Keep an eye out for your ballot! Ballots will be counted and the new officers announced during the May 10th meeting.

2013 Chapter Dues

We are still accepting payment of chapter dues for 2013. Dues for 2013 remain the same as last year: \$25 for Plenary membership, \$20 per person for Group membership, and \$12.50 for Student and Member Emeritus membership. You can pay your dues together with your meeting registration at the May 10 chapter meeting, or mail a check payable to CCHPS to the chapter secretary at the address shown below. More information about the different membership categories and the benefits of each type of membership can be found on the [CCHPS website](#).

2013 E. Dale Trout Annual Meeting

The 2013 Cascade Chapter of the Health Physics Society E. Dale Trout Annual Meeting will be held **Friday May 10, 2013** at the Vue, 517 SW 2nd St., Corvallis, Oregon (located downtown Corvallis on the 5th and 6th floors of the Elements Building).

Agenda

- 8:45 Executive Committee Meeting
- 9:00 Breakfast, generously sponsored by Seltech
- 9:00 - 9:30 Registration and Election
- 9:30 Ballot Closed
- 9:30 Chapter Business Meeting
 - Treasurer’s Report
 - Committee Reports
 - Old Business
 - New Business
- 10:00 Student Presentations
- 12:00 Lunch
- 12:45 Featured Presentation – Darrell Fisher, PhD, Health Physics Society President-Elect, *Health Physics Society 2013: An Update*
- 1:45 Break
- 2:00 Presentation – Nancy Kirner, *Decommissioning of Indoor Legacy Thorium*
- 3:00 Meeting Adjourned
- 3:00 - 4:30 No-Host Bar Happy Hour with entertainment provided by Kevin Makinson’s jazz band, *Cadillac Lunch*

Be sure to stay for the Happy Hour after the meeting to visit with your fellow chapter members and guests and hear some great jazz.

Cost

Prices for the meeting are:

	<u>Meeting Only</u>	<u>Lunch & Meeting</u>
Member	\$10	\$25
Group Member	FREE	\$15
Non-member	\$15	\$30

Registration

Please register for the meeting by sending an e-mail to: cascadechapterhps@gmail.com. Please e-mail your registration by Friday, May 3rd, and remember to specify your lunch preference and whether you will have a guest in attendance.

Menu

Breakfast

Continental Breakfast Buffet including a fresh fruit tray with coffee, orange juice, and water service.
Assorted coffee cakes, fresh baked Danishes, and muffins.

Lunch

Fajita Bar

Features roasted chicken with peppers and onions, flour tortillas, Mexican rice, cheese, sour cream, and salsa. Green salad will also be served.
Coffee, tea, assorted beverages.
Dessert.

Afternoon Break

Fresh baked cookies and a variety of mini cupcakes, served with assorted cold beverages.

Parking

Parking is available in the lot to the South of the building.

Directions to the Meeting

From North or South on I-5:

- Take I-5 Exit # 228 for Oregon Highway 34.
- Drive WEST on Highway 34 10.2 mi. to downtown Corvallis (across the Willamette River Bridge). You will be on NW Harrison Blvd.
- Turn LEFT (SOUTH) onto NW 4th St/US-20 W/OR-34 W/OR-99W S/Pacific Hwy W. (NW 4th St is just past NW 3rd St.)
- Drive SOUTH on NW 4th St. 0.5 miles and turn LEFT onto SW Washington Ave. (SW Washington Ave. is just past SW Adams Ave.)
- Turn RIGHT onto SW 2nd St.
- The Vue is on the left at 517 SW 2nd St., Corvallis.

[Click here for a map.](#)

Cascade Chapter Officers:

President:	Charles Croft
President-Elect:	Phil Campbell
Secretary:	Emily Caffrey
Treasurer:	John Gough
Member-at-Large:	Norm Dyer

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