



**Northeastern New York Chapter
Health Physics Society**

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

**Meeting Announcement
Wednesday, May 3, 2017**

HPS President- Elect Annual Visit

Time: 5:30 PM Access to meeting room available for gathering/socializing
6:30 PM Dinner
Presentation to follow dinner

Location: Moscatiello's Italian Family Restaurant
99 North Greenbush Road (Route 4) (south of Hudson Valley CC)
Troy (North Greenbush), NY 12180
For more details, <http://www.moscattellos.com/>

Menu: Buffet – Main Course: Ziti w/marinara sauce, meatballs/sausage, eggplant parmigiana, and Chicken Limone.
House Salad and Homemade Italian Bread
Beverages – Coffee, Tea, Decaf, Soda, Iced Tea and Lemonade
House Desert selections

A cash bar is always available in the main area of the restaurant

Cost: \$12 for current dues paid HPS Chapter members and member's spouse.
\$12 for full-time students with valid ID
\$27 for non-members/all others
If membership application received or dues paid on day of event, then member price applies. Annual dues are \$15

Presentation: Thoughts on Radiation Safety Programs if LNT Hypothesis is Abandoned
(see attached for an overview)

Speaker: Eric Abelquist, Ph. D., CHP
President-Elect, Health Physics Society
.Eric Abelquist is Executive Vice President of Oak Ridge Institute for Science and Education.
(see attached for CV)

PLEASE RSVP NO LATER THAN FRIDAY, APRIL 28, 2017 FOR MEAL
to
NENYHPSsecretary@gmail.com

An RSVP is a commitment to pay for the meal whether or not you are able to attend.
We need to know the number attending on the RSVP date and the Chapter will be charged for all meals ordered. Thank you for your understanding.

Anyone Wishing to Attend Only the Presentation Should Also RSVP for "No Cost" Attendance.

BIOGRAPHICAL SUMMARY

Dr. Eric W. Abelquist, ORAU Executive Vice President works in collaboration with the President/CEO promoting collaboration between ORAU and its university partners, DOE, ORNL, Y-12 and others. A recent UT MBA graduate, Dr. Abelquist leads entrepreneurial and innovative initiatives that develop business growth for the organization. He works with the President/CEO in formulating organizational strategic objectives, overseeing key strategic initiatives, community initiatives and best business practices. Dr. Abelquist also advises the President/CEO on scientific and engineering issues that advance scientific research and education opportunities. He received a PhD in nuclear engineering from UT Knoxville, and BS and MS degrees in radiation sciences from the UMass-Lowell.

Abelquist is President-elect of the Health Physics Society, working with the President to establish the strategic vision and direction for our Society, and looking forward to visiting our 30+ Chapters.

Abelquist began his 20+ year career at ORAU as a project leader responsible for overseeing a team of health physics technicians and conducting characterization and independent verification surveys at the Department of Energy's (DOE) and Nuclear Regulatory Commission's (NRC) sites. He later worked for many years as the survey program's associate director where, most notably, he contributed to the development and implementation of the Multiagency Radiation Survey and Site Investigation Manual (MARSSIM), and developed the first MARSSIM training course that has now been offered nearly 100 times. Abelquist continues to provide technical assistance in various aspects of decommissioning surveys and has published a textbook entitled *Decommissioning Health Physics: A Handbook for MARSSIM Users* in 2001, with the 2nd ed. recently published (2014).

PRESENTATION SUMMARY

Thoughts on Radiation Safety Programs if LNT Hypothesis is Abandoned

Health physicists are specialists in radiation safety, effectively balancing the risks and benefits from activities that involve radiation. The International Commission on Radiological Protection (ICRP) introduced the radiation protection principles of justification and optimization—i.e., no practice involving exposures to radiation should be adopted unless it produces sufficient benefit to the exposed individual (or society) to offset the detriment it causes; optimization requires that the likelihood of incurring exposures, the number of people exposed and the magnitude of their individual exposure should be kept as low as reasonably achievable (ALARA). The linear-non-threshold model (LNT) is responsible for the ALARA principle. LNT assumes a linear dose–response relationship for the induction of cancer and heritable effects, according to which an increment in dose induces a proportional increment in risk, even at low doses. As such, the LNT conveys the message that there is no safe level of radiation dose. LNT is responsible for exaggerated risks at low doses and has resulted in spending limited societal resources to reduce exposures unnecessarily.

What if the radiation safety community abandoned LNT? It likely won't happen anytime soon (if at all), but it's constructive to consider how the health physics profession would deal with this game-changer. Abandoning the LNT model radically changes our radiation protection paradigm—if a threshold exists, and low doses of radiation below the threshold are indeed safe, then there is no benefit for driving radiation doses below the threshold (dose limit). In this “no-LNT” scenario, an effective radiation safety program protects against adverse health effects via compliance with appropriate dose limits, with no additional requirement to ensure doses are as low as reasonably achievable. However, we can define a new “ALARA” concept that is used to establish the level (perhaps an administrative dose limit) below the dose limit that is reasonable to achieve—i.e., ALARA serves as a mechanism for setting administrative limit to ensure compliance with dose limits.