



NCHPS NEWSLETTER

JANUARY 2005

President's Message

By Bill Fitzgerald

During the past ten years, at least from a North Carolina perspective, the health physics industry has dramatically changed. Gone are the days when large corporations such as Duke Power, CP&L, RJ Reynolds, Glaxo, and Burroughs Wellcome dominated the high paying employment opportunities. Through mergers, downsizing and reorganizations many of the health physics positions that existed within these and other corporations either no longer exist or have been greatly reduced. With this restructuring, the North Carolina Chapter of the Health Physics Society has also seen change. Our membership has reduced to about half of its early 1990's. Many of the dominate personalities within the Chapter during the late 1980's and early 1990's have moved on to employment opportunities outside of North Carolina, outside of the profession or have simply retired. Because of this trend, some of us were genuinely concerned about the future of this Chapter. We were losing members and the associated funds generated through dues and meeting attendance. This trend was not unique to our Chapter. Many health physics chapters found themselves in similar situations and some chapters have not or will not survive.

I am happy to report that the NCHPS appears to have curtailed the downward slide. Membership has stabilized at about one hundred forty members, including sixteen affiliates. The health physics employment opportunities at the local universities, federal research facilities,

medical facilities and regulatory agencies continue to thrive. Many of the young and once young HP's have stepped forward to participate as chapter officers and to serve on committees. The Executive Committee has worked hard to ensure that the semi-annual meeting expenses are paid for by income generated by the meeting through vendor and registration fees. Also, a great deal of work has been done to maintain a line of communication with the affiliate members and to encourage their support and attendance at the meetings

I am optimistic for the future of this Chapter. We continue to do good work disseminating information on radiation and radiation safety to middle and high school students in North Carolina through our Science Teachers Workshops. We have also continued to support HP education at the university level, this year by donating \$500 to the Skip Hendrick endowment fund at Francis Marion University. Our semiannual meetings over the last few years have been well attended with great support from our affiliate members.

I would like to close by thanking those members who have volunteered there time and talent towards the many committees within the Chapter. I would also like to encourage all members to continue to be involved by attending the Spring and/or Fall meetings or by helping with a committee. Please call (919-541-0325) or Email (fitzger5@niehs.nih.gov) me if you would like to volunteer or become an active participant in our Chapter.

Fall Meeting Review:

By Gerald Wicks

The NCHPS Fall 2004 meeting was held in Atlantic Beach, NC on September 16 & 17. The meeting was attended by approximately 45 members and supported by 12 vendors. Twelve technical presentations were made. Also, an amendment to the NCHPS by-laws was explained to the membership. Prior to the technical meeting, a training class on radioactive material packaging and shipping was conducted.

by the NC Chapter of the Health Physics Society, ANS, and the NCSU Nuclear Engineering Department.

Presenters included:

Lisa Marshall, Outreach Director for the NCSU Nuclear Engineering Department, welcomed the attendees on behalf of all the organizations sponsoring the event, as well as explaining how to get in touch with the sponsors.

Ben Edwards, Duke University Medical Center, provided the teachers with an introduction to basic radiation and radiation related health effects.

Science Teacher Workshop Review

By, Dale Dusenbury

The Science Teacher's Workshop had a new feel to it this year, with higher attendance and greater participation than ever before.

The workshop was attended by 17 teachers. Activities took place on Thursday and Friday, November 11-12, 2004 at the NC Science Teacher's Association Profession Development Institute at



Greensboro's Koury Conference Center.

The chapter shared a booth with the American Nuclear Society (ANS) and the NCSU Engineering Department on Thursday, Nov. 11, inviting teachers to attend the workshop and provide public information on radiation issues. This year's workshop on Friday was jointly sponsored

Dale Dusenbury, Radiation Protection Section, gave a presentation on the origin of radon, and health effects from radon exposure along with methods for testing and remediating homes.

Grant Mills, Radiation Protection Section, presented a talk on state and local efforts to improve Homeland Security in the area of radiological preparedness.

David Howell, Wake Forest Baptist Medical University, spoke on the Industrial and Power Generation uses of nuclear technology.

Gerry Wicks, NCSU Reactor Health Physicist, finished the session by presenting a talk on instrumentation. The topic included the use of instrumentation such as the CDV-700 and other detectors in general radiation monitoring and for specific experiments.

The teachers were given bags with survey meters, lesson plans and other resource materials on radiation related topics. Based on conversations with attendees, the workshop was useful for the attendees. There were a number of requests for copies of presentation materials from the presenters. All of the Science Teacher's Workshop presentations are online at www.ncradiation.net, at the Science Teacher's Workshop link.

External Dosimetry Calculations and Shielding Course

March 10, 2005 Time: 8 am-noon

Cost: \$50

An overview of beta, gamma, and x-ray radiation sources, external dosimetry, and shielding will be presented.

Regulatory requirements will be discussed. Examples will be provided. An application for Continuing Education Units by the American Board of Health Physicist will be submitted.

Presented by: V. Vylet, Ph.D., CHP & G. Wicks, CHP

***NOTE:** If there is an insufficient number of registrant for the course as of February 28, 2005, the NCHPS reserves the option of canceling the course.*



Call for Student Papers

By Flex Fong

The 2005 student paper competition sponsored by our Society is calling for papers from any students (undergraduates, graduates or postdoctorates) who are enrolling in an accredited institution of higher learning and researching. The competition is an oral presentation on any subject applicable to the field of health physics, radiological health or bio-radiological health. The student may report

on completed original research or work in progress.

Rewards/ Rules:

- A cash award (\$150 for first, \$100 for second, \$50 for third) and a certificate will be given to each winner. If there are less than three participants, the committee reserves the right to award only one or no winners depending upon the work and quality of the presentation.
- The first place winner will be reimbursed 100% of reasonable out-of-pocket expenses to participate in the NCHPS Chapter's Spring meeting at Asheville, N. C. on March 10, 2005.
- Reimbursement of expenses, up to \$750, if the first place student is selected to present their paper at the 2005 National Health Physics Society meeting to be held in Spokane, WA from July 10 -14, 2005.

How to Enter:

Submit an abstract of their paper (of not more than 150 words) before February 25, 2005 to:

S. W. (Felix) Fong, Ph.D.
N. C. Radiation Protection Section
3825 Barrett Drive
Raleigh, N. C. 27609-7221

If the number of papers presented is less than five, students will be asked to make an oral presentation of their papers during the Chapter's spring meeting.

Each student's presentation will be limited to 20 minutes. The competition winner will be announced on the same evening.

In Memory of Dan Caulk

Dan Caulk passed away on Oct. 20, 2004. He was a charter member and long time supporter of the Chapter. As the owner and later a representative of RSO, Inc., Dan and Gerry attended at least one and many times two of the NCHPS Chapter meetings each year. We will miss him.



A Message from Gerry Caulk

To all the members of NCHPS.

Thank you so much for the basket of flowers you sent to us to honor Dan. He loved to attend your Spring and Fall meetings and visit with all of you. Thank you for inviting us back each year. Thank you for your support of us and RSO. Thank you, Gary, for your phone call - that really meant a lot to me. I trust your chapter will continue to be very successful.

*Kindly,
Gerry Caulk*

SPRING MEETING

The NCHPS Spring 2005 meeting is scheduled for March 10 & 11 at the Great Smokies Holiday Inn Sunspree Resort in Asheville, NC. Four invited presenters have been scheduled; Ruth McBurney, Ph.D., President-elect of the National HPS, Kevin Nelson, Ph.D., National HPS Liaison to our chapter, Albert Wiley, M.D., REACTS, Julian Preston, Ph.D. USEPA, Kevin Taylor, Roger Sit, and W. Fitzgerald.

Presenters are still being sought.



DUKE UNIVERSITY MEDICAL PHYSICS GRADUATE PROGRAMS

From James Dobbins, PhD.
Director of Medical Physics Program

Duke University has just started a new graduate program in Medical Physics, offering both M.S. and PhD degrees. Medical Physics is a field of study that applies physics to the needs of medicine, and has garnered two Nobel Prizes (the most recent for Magnetic Resonance Imaging in 2003). Medical Physics is a very rewarding field for students who love physics but would like to solve real-world problems related to health care. There are a number of career paths for medical physics graduates: academia, clinical work, industry, and government labs. There is a strong demand for both M.S. and PhD graduates. Projects in medical physics often involve physics, math, and computer science, and use theoretical, experimental, and clinical methods.

Duke's Medical Physics Program offers four academic tracks: diagnostic imaging physics, radiation oncology physics, nuclear medicine physics, and health physics. There are over 30 faculty involved in the program, many being internationally recognized experts in their fields. Examples of medical

physics research underway at Duke include magnetic resonance angiography, magnetic resonance microscopy, advanced digital imaging algorithms, digital mammography, detector and display characterization, computer-aided diagnosis, ultrasound, monoclonal antibody imaging and therapy, hyperthermia coupled with radiation therapy, SPECT and PET imaging, neutron-stimulated imaging, intensity modulated radiation therapy, image-guided radiation therapy, treatment optimizations, brain and body stereotactic radiosurgery, 3-D dosimetry, real-time organ dosimetry in interventional radiology and cardiac cath laboratory, and development of motion heart phantom for coronary CT angiography.

The program is currently enrolling students for the **Fall 2005 semester**. The application deadline is **February 28, 2005**. Students interested in learning more can visit the website www.medicalphysics.duke.edu.

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If you have note-worthy information you would like to share about health physics and the North Carolina Chapter members, please contact:

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THE NEWSLETTER

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