



THE ACORN

Newsletter of the American Nuclear Society
Oak Ridge/Knoxville Section



Volume 2002-1

January 2002

Happy New Year!

Message From The Chair

Greetings for a prosperous 2002!

The local section's membership continues to be strong. Financially, we are also very healthy. We have had a number of dinner meetings for this ANS year, highlighted by a visit from ANS president Dr. Gail Marcus in November.

Our commitment to education remains very visible. Bill Hill and Julie Ezold have done a marvelous job with the continuing teacher workshops. Peggy Emmett's Sharing Adventures in Engineering and Science (SHADES) workshops for middle school female students are very well-attended. Maria LeTellier leads the effort in identifying university students for section-sponsored scholarships, which now offer a stipend of \$1000 per grantee per year.

Our planned topicals include Mathematics and Computation 2003 (Park Vista, Gatlinburg, April 6-10, 2003), and Monte Carlo 2005 (an international conference). Kevin Reynolds, our topical procurement chair, continues to look out for more opportunities.

The executive board members and chairs of each respective committee are very dedicated individuals. However, we still look toward you, the general membership, for participation in our varied activities.

— Bernadette Kirk



**VISITED OUR
WEB SITE LATELY?**

www.engr.utk.edu/org/ans

*Web site created and maintained by
Hanna Shapira. Comments and suggestions
should be directed to Hanna at
hshapira@techno-info.com*

**Total Local Section Members
as of June 30, 2001: 192**

2001-2002 Officers

Chair:

Bernadette Kirk
kirkbl@ornl.gov

Vice Chair/Chair-Elect:

Maria LeTellier
letellierms@ornl.gov

Secretary:

Kevin Reynolds
reynoldskh@y12.doe.gov

Treasurer:

Fred Peretz
peretzfj@ornl.gov

Immediate Past Chair:

Bill Hill
hillwe@ornl.gov

Board Members at Large:

Michael Dunn
John Wagner
Dennis Tollefson
Julie Ezold
Larry Miller
Lien Nguyen

Standing Committees

Arrangements: Julie Ezold

Education: Julie Ezold and
Bill Hill

Honors&Awards: Larry Townsend

Membership: Norb Grant

Newsletter: Dan Ingersoll

Program: John Wagner

Web Site: Hanna Shapira

Scholarship: Maria LeTellier

Shades: Peggy Emmett

Topicals: Kevin Reynolds and
Michael Dunn

Bylaws: Peggy Emmett

Plans Continue for M&C Topical in 2003

The Oak Ridge/Knoxville Section will be hosting the 2003 Topical Conference for the ANS Mathematics and Computation Division. The conference will be held at the Park Vista Hotel in Gatlinburg on April 7-10, 2003. Bernadette Kirk is the General Chair and Yousry Azmy is the Technical Program Chair. The conference, entitled "A Century In Review -- A Century Anew" will focus on the many applications of computational nuclear science and engineering. Plan now to attend this topical, or better yet, volunteer to help with the arrangements!

Monte Carlo in 2005?

The Monte Carlo method and its applications have been frequently addressed at several major conferences and workshops organized in recent years. Monte Carlo topics have included radiation shielding, radiation physics, medical physics, and high energy physics. Past conferences specifically devoted to Monte Carlo issues related to radiation physics and transport include one held in 1993 in Saclay, France, under the title "Advanced Monte Carlo Computer Programs for Radiation Transport". In 1997, a one-day workshop "E=mc² - Elocutions on Monte Carlo in Monte Carlo" was held in the city of Monte Carlo. Since then, significant developments have taken place in computational and data issues, resulting in state-of-the-art computer codes and tools. At the international conference "Monte Carlo 2000 - Advanced Monte Carlo for Radiation Physics, Particle Transport Simulation and Applications", held in Lisbon, Portugal in October 2000, all sessions were dedicated to Monte Carlo issues. To continue the tradition, the international organizers of Monte Carlo 2000 voted to hold the next event in the United States, with the Radiation Safety Information Computational Center (RSICC) as the host.

The ANS Knoxville/Oak Ridge Local Section is interested in sponsoring Monte Carlo 2005 and will seek a national ANS division to co-sponsor this conference.

ORNL Forms Nuclear Division

Effective October 1, 2001, ORNL consolidated much of its nuclear capabilities into a new division: the Nuclear Science and Technology Division (NSTD). The NSTD was created by combining nearly 400 researchers, technicians, and administrative support personnel from six former ORNL divisions and from one former Y-12 division. The NSTD is organized into 24 groups with Dr. Joe Herndon, former Director of the ORNL Robotics and Process Systems Division, as Acting Director.

The creation of this division signals strong support from the ORNL Director regarding nuclear missions at the Lab and reflects an expectation of growth in national nuclear energy programs. More information on the NSTD can be found at:

www.ornl.gov/divisions/nuclear_science_technology

New ORNL Project

As part of DOE/NE's redirection of the former Advanced Accelerator Applications (AAA) program, ORNL will be funded to establish a coated particle fuel fabrication R&D facility and will provide ORNL with \$3.5M to start the project. The initial objectives of the ORNL facility will be to fabricate small quantities of uranium and plutonium TRISO fuels, to characterize the fuels, and to perform research on techniques for improving the performance of the coated fuels.

The AAA program has been renamed the Advanced Fuel Cycle Program (AFCP), indicating a shift in R&D priorities to reactor fuel and waste management. Gordon Michaels, ORNL's Director of Nuclear Technology Programs is responsible for organizing the new project, which is expected to be a long-term activity for ORNL.

Madame Curie Exhibit at AMSE



A special exhibit "Madam Curie: One Hundred Years Of Science Innovation" was held at the American Museum of Science and Energy in Oak Ridge on March 26 through May 4, 2001. The exhibit examined the work of Madame Curie, the discovery of radioactivity, and significant contributions of other women scientists.

In conjunction with the exhibit, the local ANS section co-hosted with several other groups a special seminar presented by Dr. Alenka Brown-VanHoozer on the topic of "How We Design In Human Errors." The seminar, which was held March 27, 2001, was preceded by a reception and an opportunity to browse the Madam Curie Exhibit.



Fred Peretz inspects a display of equipment used by Madame Curie in her original research.

2001 Dinner Meetings

Thanks to the hard work of the Program and Arrangements committees, the Oak Ridge/Knoxville Local Section had a terrific lineup of speakers and dinner venues for 2001. Highlights include:

January: **Dr. Alvin Weinberg**, former Director of Oak Ridge National Laboratory speaking on "Reminiscing About the Manhattan Project."

February: Joint meeting with UTK Nuclear Engineering students. Tom Row, Larry Townsend, and Karla Elam shared their career experiences.

March: **Dr. Alenk Brown-VanHoozer**, Director of the Y-12 Center for Cognitive Processing Technology, speaking on "How We Design In Human Error."

April: **Dr. Lynne Parker**, researcher at Oak Ridge National Laboratory, speaking on "Cooperation and Learning in Multi-Robot Systems."

May: **Dr. James Lake**, 2000-2001 President of the American Nuclear Society, speaking on "The Fourth Generation of Nuclear Power."

September: **Mr. Paul Gubanc**, Oak Ridge Site Representative for the Defense Nuclear Facilities Safety Board, speaking on "The U.S. Defense Nuclear Facilities Safety Board: An Overview."

October: **Mr. James (Buddy) Conner**, Deputy General Manager of the Y-12 National Security Complex, speaking on "The Future of Y-12 - An Optimistic View."

November: **Dr. Gail Marcus**, 2001-2002 President of the American Nuclear Society, speaking on "Nuclear Developments and Initiatives."

December: **Mr. Paul Frame** from the Oak Ridge Institute of Science and Energy, speaking on "Historical Nuclear Artifacts."



Dr. Gail Marcus switches hats to indicate that she is speaking as ANS President rather than as the Deputy Director of DOE/NE.

SPRING DINNER SCHEDULE

January 8 -- Garden Plaza
 February 5 -- Fox Den
 March 12 -- Garden Plaza
 April 9 -- UT Faculty Club
 May 14 -- Fox Den

January program:

Dr. Larry Satkowiak speaking on
 "Oak Ridge Nonproliferation
 Programs and Nuclear Security"

Social starts at 6:00 p.m.
 Dinner at 6:45 p.m.

Contact Julie Ezold to make reservations:
 ezoldjg@ornl.gov • 574-3307

2001 Teachers' Workshop

The Local Section and the University of Tennessee Nuclear Engineering Department presented its annual eight-hour Teachers' Workshop at the American Museum of Science and Energy on July 16th. As befitting such a distinguished occasion, the Museum kicked off the affair by mustering everyone outside and saluting the teachers with flashing lights and sirens from Oak Ridge's fire engines, which had co-incidentally responded to a low pressure event in the Museum's fire header caused by a ruptured water line. Despite the concurrent loss of drinking water, air conditioning, and TOILET FACILITIES; the workshop was very successful and attended by 42 teachers.

Lectures were provided on basic nuclear science, charts of the nuclides, and other nuclear-related subjects. Each attendee was given an operable Geiger counter, a chart of the nuclides, and their choice of one of the following books:

- "Marie Curie - A Life" by Quinn
- "City Behind the Fence - Oak Ridge 1942-1946" by Johnson and Jackson
- "Their Day in the Sun" by Herzenberg and Howes.

During the afternoon, the teachers attended one of three tours. These were: Tour 1: the National Transportation Research Center and CTI, Inc.; Tour 2: the High Flux Isotope Reactor, the Holifield Heavy Ion Facility, and the Graphite Reactor; Tour 3: The Graphite Reactor, the Buildings Technology Center, the High Temperature Materials Laboratory, and the Aquatic Ecology Laboratory.

This workshop completes the series of three rotational subject workshops consisting of nuclear medicine (held in 1999 at UTK), nuclear energy (held in 2000 at Watts Bar Nuclear Plant), and science (AMSE/ORNL). The next eight-hour workshop will restart the series and is tentatively scheduled for July 15th, 2002. The workshop will feature nuclear medicine facilities at UT Hospital.

Memphis Workshop

The Local Section presented a Teachers' Workshop at the National Science Teachers Association Southern Regional Convention held in Memphis on December 8th. The session featured lectures on basic nuclear science, Geiger counters, and other nuclear-related subjects. Each teacher-attendee was given an operable Geiger counter, handbooks, and other nuclear-related materials. Although exhibitions such as lying on a bed of nails and having a concrete block broken over your chest or walking on hot coals barefoot are specifically excluded by the safety guidelines, we nevertheless enjoyed another opportunity to share our technology with the attendees.



Kudos



Congratulations go out to several local section members, including the local student chapter:

Recipients of ANS National scholarships:
Thomas Harrison, Jennifer Hoff, Andrew James, Cindy Jones, Mohammad Khan, Thomas Miller, Brandon Rasmussen, Daniel Stephens, and Allan Wollaber

Recipients of ANS Local Section scholarships:
Trey Johansen and Allan Wollaber

Peggy Emmett was elected as an ANS Fellow

Larry Townsend received a UT Research and Creative Achievement Award and the Moses E. And Mayme Brook Distinguished Professor Award

Oak Ridge/Knoxville Local Section received the Best Small Section Award from ANS

MEMBERSHIP APPLICATION/RENEWAL

Name: _____

Affiliation: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-mail: _____

I am interested in serving on the following committee(s): _____

Annual membership dues are \$10.00 and are for the fiscal year beginning each June. Checks should be made payable to "ANS Oak Ridge/Knoxville Section" and mailed with this form to the return address shown below. The expiration date of your current membership is shown in the upper corner of your mailing label.

American Nuclear Society
Oak Ridge/Knoxville Section
P. O. Box 5075
Oak Ridge, TN 37831-5075

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