



ANST Newsletter

June 2, 2008

Volume 3, Number 1

In this Issue...

- **A Word from the Chair**
- **ANST Student Awards**
- **Coming Events: ANS Winter Meeting**
- **2009 ANST Sponsored Meetings**
- **ANST News: Election Update**
- **Committee Reports**

***Aerospace
Nuclear
Science &
Technology***

***A Technical
Group of the
American
Nuclear
Society***

A Word from the Chair...

Dear ANST members,

I hope this newsletter finds all of you in good health and spirits. As many of you know, the ANST has been working towards attaining full division status over the past two years. Our membership has remained level over the past year. ANST provided class 4 topical sponsorship to the STAIF meeting this last February. This was the 25th Anniversary for the Space Nuclear Power Symposium track of the STAIF meeting. It was announced that this would be the last STAIF meeting. The Executive Committee of ANST has decided to organize and hold a space nuclear topical meeting in the winter time frame. Look for more information over the next few months on this topic.

I am also pleased to report that ANST membership numbers remain healthy and would like to welcome new members. We also have 3 new Executive Committee members, James Werner (INL), Jeff Halfinger (BW-NOG), and Dr. Steve Wright (SNL). These three gentlemen are strong additions to the EC and I expect will be able to provide excellent guidance and support to the ANST.

Unfortunately, Tom Larsen has informed me that he will not be able to take over the chair position of the ANST, but fortunately, Dr. Leo Bobek (Univ. Mass-Lowell) has agreed to move directly to the chair position from the vice-chair position. Dr. Bobek has served the last year as the secretary of the ANST and is a strong leader in the ANS organization.

It is my hope that we will be able to make significant progress towards achieving full division status in the next year. We will need strong commitment from all members to do this and individuals can help by submitting and attending the ANST organized tracks at national meetings and attendance at the ANST organized topical meetings.

Please also consider attending the ANST Executive Committee meeting that will be held during the ANS annual meeting on Sunday, June 8th from 12:00 PM to 2:00 PM (Disneyland Hotel, Anaheim, CA, Disney Exhibit Hall Room A). This will be a good opportunity for you to meet your ANST officers and to get introduced to our Technical Group.

We are looking forward to seeing you in the home of the Mouse!

Sincerely,

Jon Carmack
Chair ANST, 2007 - 2008

ANST Students Receive Awards

The 2008 ANS Student Conference was hosted at Texas A&M University February 28 – March 1. The conference was a rousing success, welcoming a record 375 students and 175 professionals and hosting 170 student research presentations. Two sessions were held in the Aerospace Nuclear Science and Technology Track, including presentations made by undergraduate and graduate students and a keynote presentation by a professional in the field in each session. ANST offered awards for both undergraduate and graduate presentations. Thanks to all of the conference organizers, the student presenters, and a big congratulations to the winners!

Undergraduate Category:

1st Place: Christian Farmer, University of Tennessee
LET Spectra of Iron Particles on A-150: Model Predictions for the CRaTER Detector

2nd Place: Darren Malik, Texas A&M University
Evaluation of a Gravity Independent Boiling System

Graduate Category:

1st Place: Brett Dooies, University of Florida
Radiolysis Concerns in Borated Water Shields for Fission Surface Power

2nd Place: Sergio Perillo, University of Tennessee
Experimental Two-Tank Flow Loop for Autonomous Control

Coming Events

American Nuclear Society: 2008 Winter Meeting

November 9-13, 2008 • Reno, Nevada • Grand Sierra Hotel

"Nuclear Power - Ready, Steady, Go"

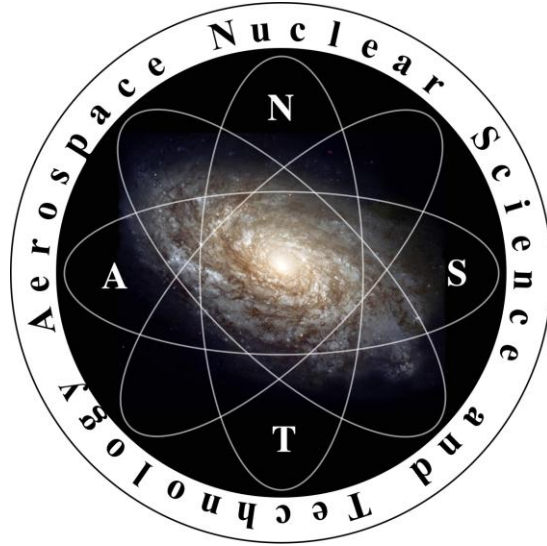
ANS General Chair: David J. Hill (Idaho National Laboratory)
ANS Program Chair: Robert Hayes (National Security Technologies (NSTec))

The Aerospace Nuclear Science and Technology Technical Group is seeking papers for the 2008 ANS Winter Meeting in the following topic areas:

- 19a. Application of Nuclear Power in Space Environments
- 19b. Critical Technologies for Space Reactor Development
- 19c. Aerospace Nuclear Science and Technology: General
- 19d. Lessons Learned and Knowledge Retention with Applications in Space Nuclear Power
- 19e. Novel Fuel Concepts for Advanced Reactor Systems

The complete call for papers can be found at the ANS website,
<http://www.ans.org/meetings/docs/2008/wm2008-cfp.pdf>.

Note that the deadline for summary submissions is June 13, 2008!



2009 ANST Sponsored Meetings

For 25 years, the space nuclear community has gathered in Albuquerque each February for the Symposium on Space Nuclear Power and Propulsion, which in recent years has been joined by other conferences on advanced technologies for space to form the Space Technologies and Applications International Forum (STAIF). The space nuclear community has recently become aware that STAIF will not be held in 2009. Not wishing to lose the momentum and positive collaborative environment established by STAIF for professionals working in the field of advanced space power and propulsion systems, ANST will be supporting two meetings in 2009, each of which will have a slightly different focus. The long term vision of ANST is for these meetings to be combined into a single stand-alone topical meeting.

Space Nuclear Systems Forum 2009 (SNSF-09)

When: February 10-12, 2009 **pending approval**
Where: Lunar and Planetary Institute
Houston, TX (located near NASA Johnson Space Center)

SNSF-09 will focus on establishing a productive dialogue among the technical system designers and the potential user groups; presentations that will aid in achieving that goal will be considered for inclusion in the working sessions. Prominent key speakers are invited for plenary sessions. The workshop will be small and focused, and will not include peer reviewed, published papers.

The SNSF is still in the planning stages; a website will be established shortly. Updates and a link to the SNSF-2009 website will be provided at the ANST site, <http://anst.ans.org>.

SNSF-09 is hosted by the Universities Space Research Association (USRA) and is jointly sponsored by the National Aeronautics and Space Administration (NASA) and the Idaho National Laboratory (INL).

Nuclear and Emerging Technologies for Space (NETS-09)

****formerly the Space Nuclear Conference (SNC-05, SNC-07)**

When: June 14-18, 2009

Where: An embedded topical meeting at the 2009 ANS Annual Meeting
Atlanta, GA

NETS-2009 will be the third topical meeting organized by the Aerospace Nuclear Science and Technology technical group, following the 2005 and 2007 Space Nuclear Conferences. NASA is currently developing capabilities for unmanned and manned missions to the Moon, Mars, and beyond. Strategies implementing nuclear based power and propulsion technology, as well as radiation shielding protection, will be an integral part of successful missions of these types.

The purpose of the meeting is to bring together and provide a communications network and forum for information exchange for the wide cross section of research and management personnel from government, industry, academia, and the national laboratory system that are involved in the initiative. To this end, the meeting will address topics ranging from overviews of current programs and plans to detailed issues related to space travel such as nuclear-based power and propulsion systems designs, materials, testing, safety, space environmental effects and nuclear power system radiation shielding for humans and electronic components, and human factor strategies for the safe and reliable operation of nuclear power and propulsion plants. This conference will have full-length technical papers; papers of archival quality will be recommended for publication in a special issue of *Nuclear Science & Engineering* or *Nuclear Technology*.

To best meet the needs of the space nuclear community, and to ensure that the synergistic environment established by STAIF is maintained, former sub-conferences incorporated in the STAIF umbrella are being invited to join the NETS-09 conference. Additionally, the American Institute of Aeronautics and Astronautics (AIAA) is currently reviewing a proposal to co-sponsor NETS-09.

(Note: NETS-09 is currently pending approval of the ANS National Program Committee.)

Future ANST Meeting Plans

NETS-09 and the SNSF workshops, currently planned for February 2009 and February 2010, represent part of a larger transitional plan to support the space nuclear and advanced power and propulsion community – filling the gap left by the highly successful STAIF conferences. The planned format will incorporate both ANS and AIAA - reaching out to both the nuclear and the space communities. In 2011, ANST expects to hold a stand-alone topical meeting that incorporates the SNS Forum and the previously embedded SNC / NETS to ensure a strong technical component to the meeting and to address the needs of the space nuclear community.

ANST News

Election Updates

ANST would like to welcome the newly elected Officers and Executive Committee members who will be joining the ANST leadership following the ANS Annual Meeting in June.

EXECUTIVE COMMITTEE

OFFICERS (2008 - 2009)

Jon Carmack

Idaho National Laboratory
E-Mail: Jon.Carmack@inl.gov

Past Chair

Leo Bobek

University of Massachusetts Lowell
E-Mail: Leo_Bobek@uml.edu

Chair

***To be determined by ANST Executive Committee**

Vice-Chair/Chair-Elect

Martin Sattison

Idaho National Laboratory
E-Mail: Martin.Sattison@inl.com

Secretary

Dion Sunderland

Anatech, Inc.
E-Mail: Dion@anatech.com

Treasurer

Additionally, ANST welcomes three new members to the Executive Committee. These include: Jeff Halfinger, Jim Werner, and Steve Wright. Continuing Executive Committee members include Melissa Vandyke, Heather MacLean, Paul Edelman, Boise Pearson, and Eric Alderson.

While we congratulate and welcome our incoming leadership, ANST would like to thank the outgoing Chair, Jon Carmack, and outgoing executive committee member, Mike Zerkle, for their dedication and commitment to the development and success of ANST.

Get Involved!

ANST continues to solicit volunteers for its committees. Committee descriptions and contact information can be found on the ANST website, <http://anst.ans.org/>, at the Officers & Committees link. For additional information on a specific committee, please contact the indicated committee chair.

Committee Reports

Technical Program Committee Report:

The ANST technical program committee has been busy supporting technical track 12 (Innovative and Space Reactor Systems) in ICAPP 2008, which includes 4 sessions. Other upcoming activities, including ANST sessions at the ANS Winter Meeting in Reno, the Space Nuclear Systems Forum in February 2009, and the planned Nuclear and Emerging Technologies for Space embedded topical meeting in June 2009 will continue to keep the technical program committee busy. Getting involved in organizing sessions, reviewing papers, and giving technical presentations is a great way to support ANST!

Visit <http://anst.ans.org/ProgramCommittee.html> to learn more about the committee and contact the committee chair to volunteer to help out as we plan the coming meetings (Chair: Boise Pearson, j.boise.pearson@nasa.gov).

Membership, Honors & Awards Committee Report:

Membership numbers remains healthy, with a current total membership of 542 at the end of 2007. Welcome to the new members and thanks to those that have renewed their membership. We need your support!

Communications and Public Information Committee Report:

We need contributions, particularly feature articles on any aspect of aerospace-nuclear technology, for our newsletter and suggestions/recommendations on the website.

Treasurer's Report:

The ANST treasury has a current balance of \$4384, having received \$1084 based on a \$2/member allocation for y2008. ANST provides awards for best papers presented in the ANST topic area at the ANS Student Conferences as well as travel support for students to the student conference and national meetings; the current balance reflects disbursement of \$300 for best paper awards at the 2008 ANS Student Conference.

Aerospace Nuclear
Science & Technology
American Nuclear
Society
555 N. Kensington
Ave.
La Grange Park, IL
60526

E-mail:
anst@ans.org

We're on the Web!
<http://anst.ans.org>

Articles to Contribute?

Would you like to contribute an article to a future edition of the ANST Newsletter? Just send your draft article in a text or Microsoft Word file to dion@anatech.com. Articles should be ~500 words. Accompanying photos and figures are welcome, and should be sent as separate JPEG files.