

**ANS Fusion Energy Division**  
**Executive Committee Meeting Minutes**  
Monday, September 29, 2008, 7:00-9:00 pm PDT  
Stanford Court Hotel, Nob Hill Room  
San Francisco, CA

Attendees in person: Farrokh Najmabadi (Chair), Lee Cadwallader (Secretary/Treasurer), Roger Stoller (Past Chair), Mark Anderson, Patrick Calderoni, Mohamed Sawan, Alice Ying

Attendees by phone: Brad Nelson, Brian Wirth (note: Wayne Reiersen tried to attend by phone but could not get through)

FED members not attending: Art Nobile, Wayne Reiersen, John Sethian, Lance Snead (Vice Chair)

Other attendees: Jake Blanchard, Laila El-Guebaly, Jeff Latkowski, Neil Morley, Nermin Uckan

1. Farrokh Najmabadi called the meeting to order at 7:13 pm. The meeting agenda is attached as Attachment 1.
2. Lee Cadwallader stated that the minutes from the June 2008 FED meeting had been approved via e-mail and submitted to ANS HQ and to the FED web site.
3. Lee Cadwallader had distributed the Treasurer's Report and a new 4-year rolling budget for FED discussion and approval. It was noted that the stand-alone 18<sup>th</sup> TOFE has paid a significant portion of this year's planned expenses, including fusion student travel to the TOFE and the cash prizes for several professional awards to be handed out at the TOFE. These FED expenses were covered with parallel TOFE fundraising activities. There was one change to the hand-out materials - the estimated profit from the TOFE (assumed to be \$5k) would actually be double that amount if not more. The Treasurer's Report and the budget were approved with that change. The Treasurer's Report and the amended four-year rolling budget are attached as Attachments 2 and 3. The approved budget for 2009 will be submitted to ANS HQ.
4. Laila El-Guebaly (FED Newsletter editor) discussed the FED newsletter. The December 2008 issue is in preparation. Laila has articles from Mark Tillack (UCSD) about Technology Readiness Levels (TRLs) to assess fusion prospects to create a demonstration power plant, and Neill Taylor (ITER team) submitted an article on ITER licensing. There will be highlights of the SOFT conference and she asked for highlights from the TOFE as well.

Nermin Uckan (Journal editor) discussed the *Fusion Science and Technology* (FS&T) journal update. She has not prepared her report for ANS HQ thus far since it is not due until November. She gave an overview of the journal at present. The 2008 issues are all

arranged, and 2009 journal issues are sold out through October 2009. She has six parties interested in the October 2009 issue at this time. The ITER team holds nuclear analysis workshops/meetings twice per year and the organizers wish to publish some of these workshop results in the journal. They believe that nuclear analysis is a cross-cutting discipline and that this is a good time to publish more of their work, so they are interested in journal space as well. While publishing in FS&T is not free, the workshop organizers are working to see if the ITER international team will pay for publication. The 18<sup>th</sup> TOFE proceedings will be the July/August 2009 issue of FS&T. The journal is in good financial shape for 2008-2009. 2010 is further away and less certain.

5. Lee Cadwallader raised the issue of student-related items that the FED will fund or not fund. Mr. Jacob deWitte (UFI, organizer) and Mr. Christopher Perfetti (UFI, Chair of the 2009 ANS Student Conference) sent some information about the next student conference (the conference web site is <http://ans.nre.ufl.edu/conference>) to be held in Gainesville, Florida on April 1-5, 2009 (the information brochure is attached as Attachment 4). Lee assumed that there is no interest in the FED expanding its support of the student conference beyond present levels. The typical levels of student contributions have already been voted and approved with the budget in item 3 above, so disbursements will be made before the end of the calendar year.

6. Jeff Latkowski (General Chair of the 18<sup>th</sup> TOFE) spoke about the TOFE meeting in progress. Jeff stated that they had 226 paid registrants, but a few had cancelled so the paid registrant count was estimated at 220. He also expected on the order of 25-30 on-site registrants, so a good estimate of the meeting count was 250 attendees. The 'break even' count for TOFE costs was 170 persons, so the meeting was guaranteed to make a profit, and Jeff also had a contingency fund of \$17k in the budget. The need for a tent to cover the TOFE banquet tables at the Wente Sparkling Cellars winery would cost \$6,528 of the contingency funds, leaving about \$10k of contingency funds that would be profit at the end of the meeting. The estimate of the FED realizing at least \$10k from the 18<sup>th</sup> TOFE is assured.

Jeff also brought up the issue of the tradition of the FED having a TOFE embedded in an ANS National Meeting and then having a stand-alone TOFE. One of the primary reasons for this arrangement was that ANS HQ annually grades division health and since fusion does not have much support for fission issues or interaction with the rest of ANS, our division has not always had high marks. If low marks become a steady occurrence then ANS HQ could dissolve the division. However, our division has made some steps to give financial support to ANS goals, such as the Landis Challenge fundraising effort, the Nuclear Engineering Education for the Disadvantaged (NEED) scholarship, undergraduate student travel to national meetings, and the annual ANS Student Conference. While FED member participation is not high for most ANS events, the grades the division has received for participation are fair due to these contributions. Jeff pointed out that since stand-alone TOFEs benefit the FED and the FS&T journal, and due to the changes in the FED contributions that the division could take the risk of hosting a few stand-alone TOFEs before reverting back to a cycle of stand-alone and then embedded meetings.

Jeff urged that we simply try another stand-alone TOFE, propose it and see what ANS HQ says about a stand-alone meeting. This discussion initiated a second discussion of who in the fusion community would host the next TOFE, since a host institution has not been identified yet. Jeff pointed out that the ANS national meeting in November 2010 will be in New Orleans, or the ANS summer meeting is in June 2010 in San Diego. Nermin Uckan pointed out that for an embedded meeting, ANS handles registration, hotel, and the technical papers through the ANS Community of Science (COS) web site. The COS does not always perform well, it can have glitches, such as papers assigned to fission parts of the meeting – it takes more effort than initially expected to have the COS function to support an embedded conference. And, the journal needs financial support from the embedded TOFE (e.g., a donation from an institution) to break even on publishing a Proceedings from an embedded TOFE. Farrokh Najmabadi stated that running a TOFE is broken down as 25% running the meeting program, and 75% is logistics – hotel, badging, setting up to run the conference, etc. Therefore, an embedded meeting is still easier than a stand-alone meeting. A host should start two years before the meeting to plan a TOFE.

Farrokh Najmabadi surveyed the room and stated that most of the US technology programs were presently represented on the FED executive committee. Who would run the next TOFE in 2010? Perhaps John Sethian at NRL? The Georgia Institute of Technology? UCLA? INL ran the 2000 stand-alone meeting, ORNL ran the 2002 embedded meeting, University of Wisconsin-Madison ran the 2004 stand-alone meeting, Sandia National Lab ran the 2006 embedded meeting. Farrokh asked about INL, but INL seeks to host a different conference rather than a TOFE. Farrokh stated that perhaps UCSD could run an embedded meeting in San Diego (embedded in the June 2010 ANS summer meeting), but it was too much work for them to take on a stand-alone meeting. Farrokh mentioned an idea of a consortium of UCSD/UCLA/General Atomics? What about Ned Sauthoff and ORNL hosting the meeting? PPPL? Farrokh stated he would send an e-mail query to fusion program leaders to solicit a host for the next TOFE. He will strive to find an answer within one month since the host should start 2 years before the TOFE meeting to be able to plan the TOFE, attend ANS national meetings to get plans approved, etc., and the ANS winter meeting is coming in November 2008. Jake Blanchard stated he would help Farrokh to prepare for the screening committee meeting, which will be held in Reno, NV on November 9-13, 2008.

7. Roger Stoller (Past Chair) announced the Slate of Candidates for officers and seats on the FED to be voted on this spring. Roger Stoller will prepare a short article for the December FED newsletter on the slate. The candidates are:

Vice-Chair/Chair Elect	Lee Cadwallader (INL)
Secretary/Treasurer	Mark Anderson (UW-Madison)
Committee seats (need 3)	Lucile Dauffy (LLNL)
	Zoran Dragojlovic (UCSD)
	Yutai Katoh (ORNL)
	Richard Kurtz (PNNL)

Keith Rule (PPPL)  
Sharam Sharafat (UCLA)

8. Neil Morley (Chair of the FED Honors & Awards committee) gave an update on awards. He first addressed the Best Student Paper award for student papers at the TOFE. There are approximately 38 student papers and grading is under way. Getting actual paper copies of the papers has not been as easy as he first thought, some authors have not brought paper or electronic copies to the meeting despite the e-mail request and web page announcements. Reviewers will see the posters and oral presentations. There should just be one student best paper award, but if there is a tie, then we can issue two awards. Note: the student who won the Best Student Paper award was Mr. Samuel J. Zenobia (UW-Madison) for his paper with G. L. Kulcinski entitled "Retention and Surface Pore Formation in Helium Implanted Tungsten as a Fusion First Wall Material". The winner was announced at the TOFE banquet on October 1, 2008.

Laila El-Guebaly asked if there would be a gift or souvenir for all the participating students? Neil did not know. It was pointed out that this is something that the TOFE committee should do; however, Jeff Latkowski had left the meeting to attend to other business and he was not available to answer Laila's question. Apparently there was no gift or souvenir for participating students.

Neil talked about the professional awards. John Sethian (NRL) had been nominated for the Professional Achievement award, and Mark Tillack (UCSD) and Joseph Minervini (MIT) were nominated for Technical Achievement awards. Ken Schultz (General Atomics) was given a Distinguished Service award by the committee (allowed by ANS as a one-time award). This award was confirmed by a unanimous vote of the FED Executive Committee. The vote was conducted at ANS HQ request. These awards were all approved by ANS HQ, so they are official ANS awards. Each award will have a plaque and a cash prize of \$500. Farrokh stated that Neil is doing a very good job as the H&A chair, there were 6 or 7 candidates nominated, all deserving people and the committee had to select the winners. These awards were conferred by Neil Morley and Farrokh Najmabadi during the 18<sup>th</sup> TOFE Banquet on Wednesday, October 1, 2008.

9. Farrokh discussed the endowment and a scholarship for a fusion student through the FED. He has learned that per ANS rules, we cannot use FED treasury funds to directly set up an endowment. We need a donor to start an endowment, and if the donor requests, we can offer FED funds to apply to an endowment. So, if we can find a wise donor who will work with the FED, we can use the funds to be obtained from the TOFE profits to start an endowment of at least \$10k, which will fund an annual scholarship of \$500. Over time, this can be increased as the endowment is increased. An initial donor or institution to provide 'seed' money is needed. Lee Cadwallader stated that the INL does contribute to such things, but makes its policy to contribute to Idaho student scholarships rather than national level scholarships. Neil Morley made a suggestion of a wealthy fusion professional who might agree to be a donor. Farrokh will look into this issue. Laila El-Guebaly suggested adding an article in the December 2009 FED newsletter on the proposed FED endowment.

Farrokh also discussed his other action item from the last meeting, the issue of Fellows in the FED. The FED has not been very active in Fellow nominations. Farrokh stated that presently we have 22 Fellows (membership classification M4) out of 805 FED members, but not all of these were nominated by our division, some were nominated for their work in other divisions. This ratio is 2.7%, and other divisions are higher (an informal query shows that some ANS divisions have ~5% Fellows). Farrokh stated that we have many talented members doing great work and that our number of Fellows should be higher as well. He had spoken with a previous FED Chair, Said Abdel-Khalik, but Said was still displeased with ANS HQ about the two Fellow nomination packages he had prepared (these had been rejected by the HQ committee over formatting and other minor issues). Said declined to continue his efforts in this area because of pressing work tasks. Nermin Uckan suggested that the FED follow the models of the IEEE, meaning the use of pre-written templates for the nomination packages, and have helpers for package preparation. She suggested that she, Gerry Kulcinski, and George Miley would serve as helpers to the person preparing a nomination package for any Fellow candidates.

10. Regarding business on line since the last meeting, Lee Cadwallader pointed out that the Honors and Awards Committee has had some changes in its membership as announced by Neil Morley in July 2008. David Petti and Don Steiner asked to step down from the committee. The committee is now composed of: Neil Morley (committee chair), Rene Raffray, Jake Blanchard, Don Steiner (to be replaced by John Sethian), Lance Snead (FED Vice-Chair), and Nermin Uckan (Journal representative). Don Steiner has retired from Rensselaer Polytechnic Institute and asked to be replaced. Farrokh Najmabadi stated that there had not been any other new business raised between meetings or on-line decisions. Farrokh thanked the outgoing FED H&A committee members for their service to the FED.

11. Farrokh stated that there was no other business.

12. Farrokh adjourned the meeting at 8:40 pm.

Attachment 1

**ANS Fusion Energy Division**  
**Executive Committee Meeting Agenda**  
Monday, September 29, 2008, 7:00-9:00 pm PDT  
Stanford Court Hotel, Nob Hill Room  
San Francisco, CA

1. Call to Order – F. Najmabadi
2. June 2008 FED Exec. Comm. meeting minutes approval – L. Cadwallader
3. Treasurer’s Report and 4-year Budget – L. Cadwallader
4. FED Publications:
  - 4.1 Report on FED Newsletter – L. El-Guebaly
  - 4.2 FS&T Update – N. Uckan
5. Student-related items:
  - 5.1 FED support to the 2009 ANS Student Conference – L. Cadwallader
  - 5.2 2009 ANS Student Conference update – J. deWitte, U. Florida or designee
  - 5.3 Disbursements for Student activities – L. Cadwallader
6. 18<sup>th</sup> TOFE status and future TOFE discussion – J. Latkowski or designee
  - 6.1 TOFE disbursements for travel assistance and awards – J. Latkowski
7. FED Slate of Candidates for the 2009 election – R. Stoller or designee
8. FED awards update
  - 8.1 Best Student Paper Award and Judging – N. Morley
  - 8.2 Professional Awards update – N. Morley
9. Progress on establishing an endowment and scholarship through the FED – F. Najmabadi
10. Summary of FED decisions made “on-line” since last meeting – F. Najmabadi
11. Other business – F. Najmabadi
12. Adjournment

## Attachment 2

### Treasurer's Report, Lee Cadwallader, Idaho National Laboratory, Idaho Falls, ID

As of March 31, 2008, the division balance is \$19,846. Projected expenses in 2008 include \$3,000 in student travel assistance to the 18<sup>th</sup> TOFE, \$500 contribution to the upcoming 2009 ANS Student Conference, \$300 in general nuclear student support for travel to the two ANS national meetings, \$600 for telephone charges at two division meetings typically held during national ANS meetings, \$500 contribution to the NEED fund, \$500 set aside for any other expenses, and up to \$1,500 in cash prizes for up to three awards to be conferred at the 18<sup>th</sup> TOFE. These expenses sum to \$6,900. However, the 18<sup>th</sup> TOFE conference has paid the \$3,000 for fusion student travel assistance to the 18<sup>th</sup> TOFE, and for cash prizes for the five awards to be given at the TOFE, and for the telephone use at the September executive committee meeting. This leaves the projected expenses at \$2,400. Aside from telephone charges for the June meeting, no funds have been disbursed thus far in the year. Income in 2008 includes an increased member allocation from ANS HQ to \$2/division member, for a total of \$1,610. Income in the form of division profits from the 18<sup>th</sup> TOFE, being held at the end of September 2008, are not expected to be realized until conference closeout in early 2009. Given that the TOFE has paid more than \$4,500 of this year's FED expenses, the estimated profit from the TOFE meeting has been set at a realistic value of \$10,000 in 2009.

Attachment 3 ANS FED Proposed Estimate for 4-year rolling budget, 2009-2012

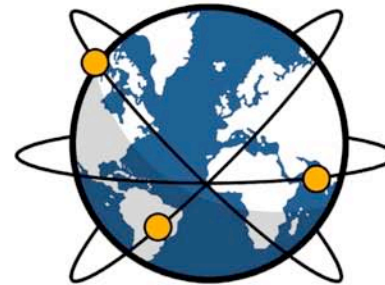
<b>Budget funds</b>						
Year	2008	2009	2010	2011	2012	Comments
Carry forward	18,236	17,446 est	26,646	25,846	25,046	
Member allocation	1,610	~1,600	~1,600	~1,600	~1,600	
Division income	0	10,000 18 <sup>th</sup> TOFE est	4,500 embedded TOFE profits post in the same year	0	0	ANS gives the FED \$30/published TOFE paper at embedded TOFEs. Assume 19 <sup>th</sup> TOFE is embedded. 2012 stand-alone TOFE profit in 2013, estimate = \$9,000.
<b>Total budget</b>	<b>19,846</b>	<b>29,046</b>	<b>31,746</b>	<b>27,446</b>	<b>26,646</b>	
<b>Budget expenses</b>						
Newsletters	0	0	0	0	0	
Awards, plaques	1,500 <i>TOFE paid for 5 awards</i>	0	1,500	0	1,500	Even number years are TOFE years, 2 Prof. awards + 1 Student paper award.
National meeting costs	600	600	600	600	600	Est. \$300 per phone setup at June and November ExComm meetings
FED officer expenses	0	0	0	0	0	
Student support	3,800  <i>TOFE paid \$3000 travel money</i>	800	3,800	800	3,800	Each year incl. \$500 for upcoming annual ANS Student Conference support. TOFE years have 6 x \$500 for fusion student travel assistance. Donate \$150 to nuclear student travel support to each ANS Nat'l meeting.
Scholarship/ NEED funds	500	500	500	500	500	Typical \$500 NEED donation yearly.
Other expenses	500	500	500	500	500	\$500 "other expenses" are rarely used.
Total expenses	6,900 <i>minus~ 4.5k</i>	2,400	6,900	2,400	6,900	
<b>Closing balance</b>	<b>17,446 est</b>	<b>26,646</b>	<b>25,846</b>	<b>25,046</b>	<b>19,746</b>	

Note: Embedded TOFEs generate less income for the FED. 17<sup>th</sup> TOFE in November 2006, 157 papers, gave \$4,710 in Dec. 2006. Assume stand-alone TOFEs in the fall cannot close their books until spring of the following year after publication costs are paid. Embedded TOFEs can close their books by the end of the calendar year that they are held.

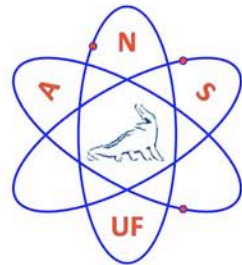


Attachment 4 Brochure for the 2009 ANS Student Conference

## 2009 American Nuclear Society Student Conference



**Reacting to Power the Future**



UNIVERSITY OF FLORIDA  
AMERICAN NUCLEAR SOCIETY  
STUDENT SECTION

### For More Information

**Please Contact:**

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University of Florida  
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P.O. Box 118330  
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University of Florida  
Gainesville, Florida  
April 1 – 5, 2009



#### 2009 ANS STUDENT CONFERENCE HIGHLIGHTS

- PREMIER VENUE TO REACH STUDENTS IN NUCLEAR SCIENCE AND TECHNOLOGY
- 500 STUDENT ATTENDEES, CLOSE TO 25% OF ALL NUCLEAR ENGINEERING STUDENTS IN THE NATION
- LEADING INDUSTRY KEYNOTE SPEAKERS FROM NATIONAL AND INTERNATIONAL BACKGROUNDS.
- MULTIPLE EVENT SPONSORSHIPS
- BROAD AUDIENCE FOR RECRUITING AND ADVERTISING EXPOSURE



### ANS STUDENT CONFERENCE

The annual American Nuclear Society Student Conference is the nation's premiere venue for student professional development in nuclear science and technology. Close to 500 students in nuclear science and technology related disciplines gather with industry professionals to share and exchange research and ideas that are critical to the growth of the industry. The conference is an ideal occasion for students to interact with professionals, hear world-class speakers, network with recruiters, and gain real world perspectives.

## 2009 ANS Student Conference

### Reacting to Power the Future



### INVITATION TO PARTICIPATE

ANS Student Conferences have enjoyed remarkable success in recent years and have been hosted by universities around the nation, with the two most recent conferences hosted by Oregon State University and Texas A&M University in 2007 and 2008 respectively. Student and professional involvement has risen on par with the recent growth in interest in nuclear technology and the 2008 conference attracted a record 560 participants. These conferences have grown to become professional undertakings demanding the maximum of available resources at the host university. In light of these trends and the University of Florida's determination to redefine the standard, the University of Florida cordially invites you to participate in the 2009 ANS Student Conference in Gainesville, Florida.

Opportunities for involvement include:

- Professional keynote presentations
- Judging
- Golf Tournament
- Workshops and Seminars
- Recruitment
- Tours
- Sponsorship

### CONFERENCE EVENT PROFILES

The University of Florida American Nuclear Society Student Section aims to continue to raise the bar for ANS Student Conferences. We plan on building on the successes of previous conferences by incorporating traditional events and infusing new ones. A preliminary event breakdown is given below:

- **Beach Retreat**—Attendees will have the opportunity to enjoy the beautiful Florida beaches by staying at an oceanfront resort in Cocoa Beach on Wednesday night.
- **Golf Tournament**—Students will be paired with recruiters and have the opportunity to play UF's Golf Course while gaining real-world perspective from industry members.
- **Seminars and Workshops**—Various workshops will be offered throughout the conference focusing on a variety of topics.
- **Career Fair**—The best venue to reach potential recruits is the student conference career fair. We hope to attract over 50% of the nuclear engineering student body across the nation as well as engineers from other disciplines.
- **University Fair**—Same venue as the career fair, but for universities, allowing them to showcase their departments.
- **Engineering Design Competition**—Engineering competition for students and professionals.
- **Student Research Presentation**—Students will showcase their research through various presentations tracks.
- **Professional Keynote Track Presentations**—20 minute concluding presentations in each track given by industry leaders to promote awareness of the specific field.
- **Student Socials**
- **NASA Kennedy Space Center Tour**

### SPONSORSHIP OPPORTUNITIES

#### Plutonium: \$35,000

- Premium presentation opportunities
- Priority interview rooms
- Advertising and recognition at all major events
- Premium booth at career fair
- Logo on all conference publications
- Two full page ads in conference program
- Logo and link on website
- Logo on t-shirt

#### Neptunium: \$15,000

- Advertising and recognition at major events
- Premium booth at career fair
- Logo on major conference publications
- Full page ad in conference program
- Logo and link on website
- Logo on t-shirt

#### Uranium: \$10,000

- Booth at career fair
- Logo on major conference publications
- Half page ad in conference program
- Logo and link on website
- Logo on t-shirt

#### Protactinium: \$5,000

- Booth at career fair
- Half page ad in conference program
- Logo and link on website
- Logo on t-shirt

#### Thorium: \$1,000

- Quarter page ad in conference program
- Logo and link on website
- Logo on t-shirt

Event sponsorships and co-sponsorships are also available. Please inquire for further details.