

**Minutes of the June 2012 ANS Fusion Energy Division
Executive Committee Meeting**
June 24, 2012, 3:00 to 5:00 pm CDT (Central Daylight Time)
Hyatt Regency Chicago, Chicago, IL
Picasso Room, on the Bronze Level, West Tower

Agenda:

1. Call to Order (Cadwallader)
2. Discussion of Winter Meeting Minutes (Anderson)
3. Treasurer's Report (Anderson)
4. FED Publications
 - 4.1 Newsletter (El-Guebaly)
 - 4.2 Fusion Science and Technology journal (Uckan)
5. Student-related Items
 - 5.1 Report on April Student Conference (student representative)
 - 5.2 Discussion of 2013 Student Conference (student representative)
6. Conferences
 - 6.1 Report on ICENES-15 (Meier or designee)
 - 6.2 Update on 20th TOFE (Lumsdaine)
7. Report on Elections (Snead or designee)
8. Discussion of FED documents (Cadwallader)
9. Discussion on FED scholarship (Cadwallader)
10. Honors & Awards Committee update (Najmabadi or designee)
11. New Business (all)
12. Close meeting (Cadwallader)

DETAILED MEETING MINUTES:

Item #1: Call to order 3:00 pm Chicago IL 0'00"

In attendance:

Mark Anderson- Secretary/Treasurer

Lee Cadwallader – Chair

Minami Yoda –Vice Chair/Chair elect

Ken Schultz - Advisor

Keith Rule – Executive committee member

Wayne Meier – ICENES meeting chair / Member

Phone

Steve Combs - Sec/Treas elect

Jacob Leachman – Executive committee member

Mark Tillack – Executive committee member

By Proxy Vote – arranged by Lee Cadwallader

Paul Humrickhouse

Yutai Katoh

Richard Kurtz

Rene Raffray

Shahram Sharafat

Item #2 Winter meeting Minutes (Anderson)

Winter meeting minutes were sent out, approved by e-mail vote, then were sent to ANS headquarters and put on the division webpage.

Item #3 Treasurer's Report (Anderson)

Summary of 2011

In 2011 we carried over \$38,416 in funds from 2010. In addition the division received \$1780 for member allocation to the FED. We also received \$10,523 in funds from the May 2011 15th ICENES topical meeting hosted by the Northern California section, the ANS FED, and Operations and Power Division of ANS. (A special thanks to Wayne Meier for his work in securing these funds for the FED to go towards the FED student scholarship fund).

Expenses for 2011 were \$59.00 for plaques and \$1008 for conference phone usage (\$424 for the July 2011 national meeting and \$584 for the 2011 winter meeting in DC). We also contributed \$500 to the annual ANS Student Conference (held in April at Georgia Tech) and \$300 for student travel support to the 2011 ANS national meetings. We also contributed \$500 (our typical donation) to the NEED scholarship fund. Lastly we spent \$84 in printing and postage fees; in July 2011 we spent \$43 to distribute a 13-page newsletter distributed to 37 members that we do not have e-mail for, and we spent \$41 in December 2011 to distribute a 20-page newsletter to 35 members.

Please note that this charge includes not only postage, but the printing of the newsletters as well. We ended the year with a \$48,268.00.

Current Status of 2012 budget

In 2012 we carried over \$48,268 in funds from 2011. We have currently received \$1794.00 in member allocation fees (\$2/member, up slightly from 2011). Our current expenses as of April 30, 2012 (the last official ANS national reporting cycle) were \$500 support to the 2012 Annual Student Conference. This leaves us with a total of \$49,562.00 in the budget. Typically we also contribute \$300.00 for student travel support to national meetings, \$3000.00 for student travel to the TOFE, \$1,500.00 for award cash prizes, and our annual NEED scholarship contribution of \$500.00. A proposal was made to maintain the \$500 student award amount and the 6 \$500 student travel assistance awards for the 2012 TOFE. The proposal was agreed upon and the budget was approved.

Budget funds								
Year	2010	2011	2012	2013 est.	2014	2015	2016	Comments
Carry forward	17,485	38,416	48,268	49,562	57,762	56,962	56,162	
Member allocation	1658	1780	1794	1600	1600	1600	1600	member allocation funds
Division income	23,479	10523	0	9000	4500	0	0	ANS gives the FED \$30/published TOFE paper at embedded TOFEs. Assume 19 th TOFE is embedded. \$19,114.11 from 2008 TOFE received in 2010. Assume profit from 2010 TOFE at \$4500 and \$9000 from 2012 received in 2013
Total budget	42,622	50,719	50,062	60,162	63,862	58,562	57,762	
Budget expenses								
Newsletters	0	0	0	0	0	0	0	
Awards, plaques	55	59	0	0	1500	0	1500	TOFE years, 2 Prof. awards + 1 Student paper award.
National meeting costs	324	1008	0	600	600	600	600	Est. \$300 per phone setup at June and November ExComm meetings- \$450
FED officer	0	0	0	0	0	0	0	
Student support	3,300	800	500	800	3800	800	3800	TOFE years have 6 x \$500 for fusion student travel assistance. Donate \$300 to nuclear student travel support to ANS Winter Meetings. For student conference support \$500
Scholarship/NEED funds	500	500	0	500	500	500	500	Typical \$500 NEED donation yearly.
Other expenses	27	84	0	500	500	500	500	\$500 "other expenses" are rarely used. 2007 was Landis Challenge II support for a teacher workshop at the June 2007 ANS Summer Meeting. 2011 has earmark for held for scholarship funds
Total expenses	4,206	2,451	500	2,400	6,900	2,400	6,900	
Closing balance	38,416	48,268	49,562	57,762	56,962	56,162	50,862	

Discussion of phone charges and discussion of SKYPE or internet conference calls. The cost of the phone has increased significantly.

Discussion of members that do not have email - charges for sending out information for division.

12'30"

Mark Tillack Joined:

Lee informed Excon that he had proxy voting agreements from:

Paul Humrickhouse

Yutai Katoh

Richard Kurtz
Rene Raffray
Shahram Sharafat

Move to vote on Treasurers' report
Treasurers' vote was approved.

Budget due in August- will be prepared by Steve Combs with assistance of Mark Anderson.

Item #5 Student related Items

Vanessa Sanders – UNLV
Audre Rovin - UNLV
Sheri Fay - UNLV
Nathan Gibson – MIT
Alex Mieloszyk – MIT

Review of student meeting:

The 2012 conference was at the [University of Nevada - Las Vegas \(UNLV\)](#)

The conference was held April 12-15, 2012 at the Alexis Park Resort and the UNLV Student Union.

Conference Website: <http://conference.unlvans.org>

2012 ANS Student Conference
 Hosted by the University of Nevada, Las Vegas ANS Student Section
 Summary and Facts At-a-Glance

Dates:	April 12-15, 2012
Location:	UNLV Campus and Alexis Park Resort
Attendance:	516 total attendees
Demographics/Statistics:	382 students from 40 colleges/universities 26 international students 73% male, 27% female students 134 professional attendees 43 participating companies/organizations in career fair 10 guest speakers 8 workshops
Technical Tours:	Nevada National Security Site Dense Plasma Focus Varian Medical Systems UNLV Science and Engineering Laboratories Atomic Testing Museum
Student Presentations:	118 podium presentations 40 posters 23 awards given 41% of student attendees presented (up from 33%)

We would like to extend a huge thank you to all of the
 professional divisions for their continued support of the ANS
 Student Conference!

Nathan Gibson – MIT

Alex Mieloszyk – MIT

The ANS 2013 Student Conference will be held in Cambridge by the Massachusetts Institute of Technology (MIT) student section **April 4-6, 2013.**

The conference has 3 objectives:

1. International participation
2. I am a Nuke campaign (u-tube videos and public relations)
3. Technical Programs

Nathan:

Technical tours – Reactor, Alcator C Mod, other laboratories

Involvement of professionals – capstone presentation technical plenary

MIT ANS student conference web site:

http://ans.scripts.mit.edu/ans_op/

Item #4 FED Publications

4.1 Newsletter (El-Guebaly) June Newsletter is prepared and Posted on FED Website.

Item #6 Conferences

Wayne Meier – overview of ICENES-15 – Hosted by Ed Moses and ran as ANS topical meeting with Wayne as chair.

15th International Conference on Emerging Nuclear Energy Systems

**May 15-19, 2011 – Hyatt Hotel at Fisherman's Wharf
San Francisco, California**

*A forum for developing & promoting common ground
in advancing nuclear energy systems*

The 15th ICENES is being hosted by the Northern California Section of the American Nuclear Society and two ANS Technical Divisions – Fusion Energy Division and Operations & Power Division. ICENES has a long history as a venue for sharing ideas and research results on emerging nuclear energy technologies and applications. The complete list of conference topics is given at the link to the left. The 2011 ICENES will focus on topics that intersect the interests of researchers and leaders in fusion and fission energy systems. Keynote, invited and contributed talks and poster presentations will cover:

- **Broad Interest Topics**
Energy policy, energy demand, international developments, resource utilization/sustainability
- **Fusion Systems and Applications**
Inertial and magnetic fusion energy, hybrids, waste burners
- **Fission Systems and Applications**
Evolutionary and transformational concepts, including high temperature reactors, breeders
- **Improving Technical Performance**
Energy efficiency, advanced power cycles, material performance
- **Safety and Environment**
Licensing, used fuel and waste options, recycling, reuse, clearance
- **Operations and Economics**
Construction cost and time, fuel cycle costs, O&M experience

ICENES Series Chair

Jose-Maria Martínez-Val - Instituto de Fusion Nuclear/Spain

2011 Conference Chair

Wayne Meier - Lawrence Livermore National Laboratory/USA

FED received 28% of profits. Operation & Power received 4% of Profits

This meeting is held every two years. The next ICENES will be held in Madrid and it is not associated with ANS.

6.2 Update on 20th TOFE (Lumsdaine)

Upcoming TOFE in August.

The Hutton Hotel in Nashville, Tn

August 27-31, 2012

REALIZING NEW TECHNOLOGIES FOR THE AGE OF FUSION ENERGY

ANS 20th Topical Meeting on the Technology
of Fusion Energy – TOFE-2012

The TOFE meeting provides a forum for
sharing the exciting progress made in fusion
research as well as presenting future plans
for national and worldwide fusion programs

Green light to go ahead from ANS national

185 Abstracts have been submitted

Good sponsorship to date

Exhibit from US ITER

Registration opened first week in June as of 18th we have 28 registrants

Anticipate 190-195 registrations

50% of people are from abroad

Arnie Lumsdaine has done significant amount of work. Lee sent a letter to his
management to thank him for his work.

50'22"

4.2 Fusion Science and Technology Journal (Uckan)

No major news since this is an off year for meetings.

The following is a summary of paper statistics and editorial activities for *Fusion Science and Technology*.

During the period May 1, 2011 to April 30, 2012, FS&T received a total of 247 manuscripts for FS&T regular issues and 125 camera-ready papers for FS&T Transactions. Of the 247 manuscripts, 33 were from North America, 116 from Asia, 89 from Europe (including Russia), and 9 from Others, with the following breakdown: 152 have been accepted/scheduled, 18 are under review/revision, and 77 have been rejected/withdrawn. The breakdown for 125 camera-ready papers for FS&T Transactions is as follows:

- 80 papers from the 15th International Conference on Emerging Nuclear Energy Systems (ICENES), held in San Francisco, CA, May 15-19, 2011;
- 45 papers/lectures from the 10th Carolus Magnus Summer School (CMSS2011), held in Weert, The Netherlands, September 4-16, 2011.

For the first time, a new focus for FS&T was the decision to publish manuscripts dealing with fusion materials technology issues from the 15th Int. Conference on Fusion Reactor Materials (ICFRM-15), held in Charleston, SC, 16-22 October 2011. ICFRM-15 manuscripts that focus on materials science and properties will continue to be published by the *J. Nuclear Materials*, which has traditionally been the journal associated with the ICFRM conference series.

Following dedicated issues were published during the period 5/1/11 to 4/30/12:

- Selected papers from 2010 EC-16 – FS&T May 2011
- IAEA 1st Int. Fusion Youth Conference – FS&T Trans. (July 2011)
- 19th TOFE 2010 Proceedings– FS&T Jul & Aug 2011
- 9th Tritium 2010 Proceedings – FS&T Oct & Nov 2011
- ICENES 2011 Proceedings – FS&T Transactions (Jan 2012)
- 10th Carolus Magnus Summer School (CMSS2011) – FS&T Transactions (2012)
- Selected papers from 1st IAEA-ITER Materials 2010 – FS&T Feb. 2012

Following issues are planned for the remainder of 2012 and 2013:

- Selected papers from 15th ICFRM 2011 – FS&T Jul/Aug 2012
- Selected papers from 7th Fusion Data Validation– FS&T Regular issue (2012/2013)
- Selected papers from 20th IFE Target Fabrication 2012 – FS&T regular issue (2013)
- 20th TOFE 2012 Proceedings – FS&T regular issues (2013)
- Open Systems 2012 Proceedings – FS&T Transactions (2013)
- Selected papers from 2st IAEA-ITER Materials 2012 – FS&T regular issue (2013)
- Selected papers from Joint IAEA-NFRI TM on Data Evaluation for Atomic, Molecular and Plasma Material Interaction Processes in Fusion (Sep 2012, Korea) – FS&T Trans or regular issue (2013/14)
- Lectures from 6th Int. ITER School 2012 (Dec 2012, India) – FS&T regular issue (2013/14)

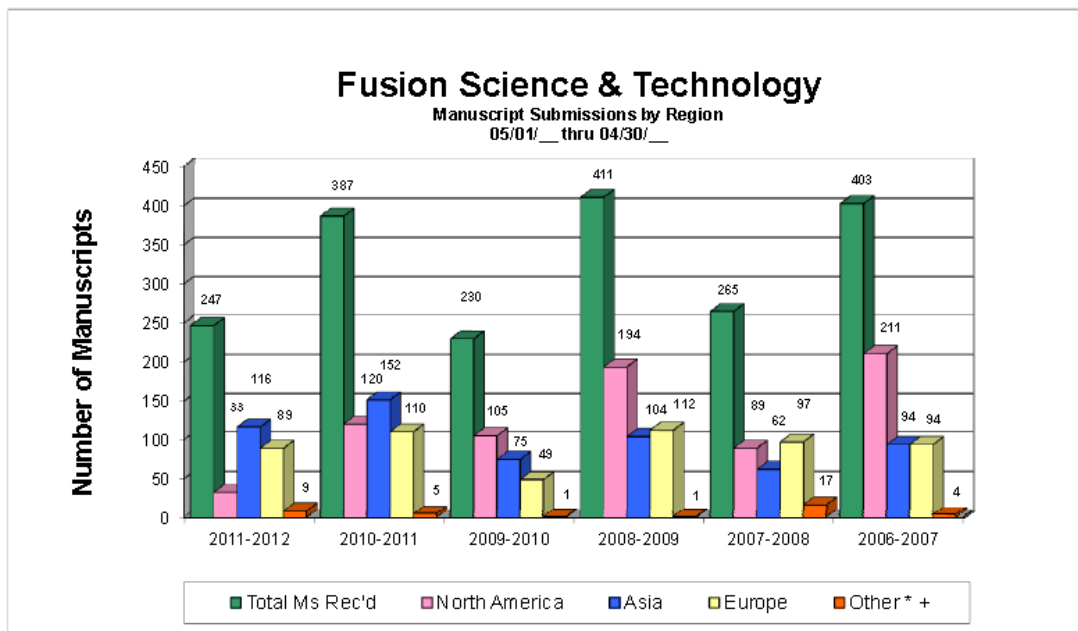
Summary of paper statistics during this and previous periods are summarized in below tables and attached charts.

FS&T Manuscripts by Regions [05/01 – thru – 04/30]					
Year	Total Ms Received	North America	Asia	Europe	Others*
2011/12	247	33	116	89	9
2010/11	387	120	152	110	5
2009/10	230	105	75	49	1
2008/09	411	194	104	112	1
2007/08	265	89	62	97	17*
<i>Reference 00/01</i>	<i>63</i>	<i>29</i>	<i>23</i>	<i>8</i>	<i>3</i>

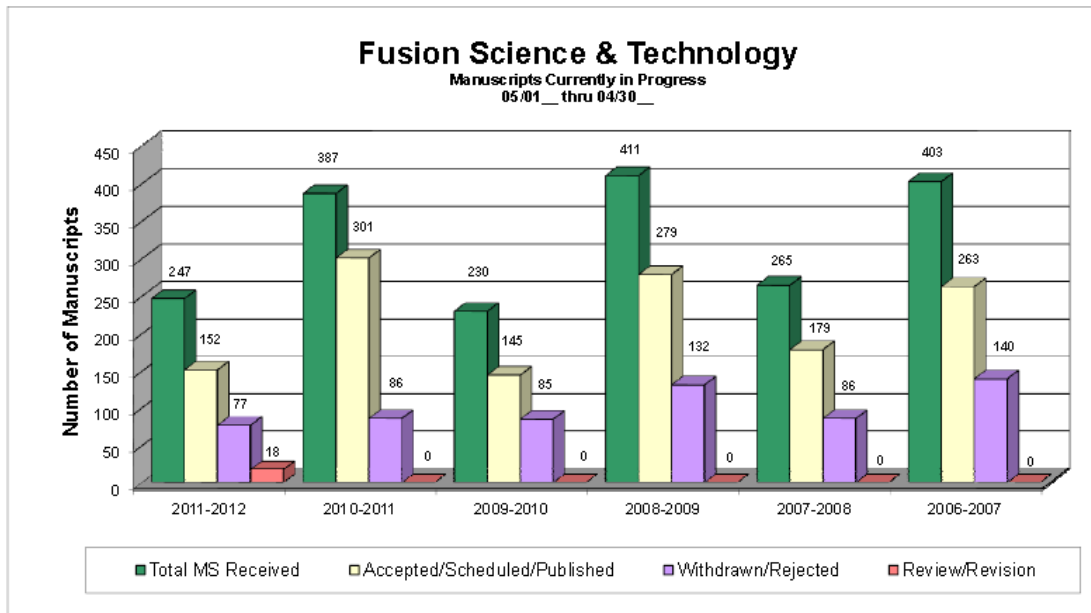
* 2007/08: some of the conference papers are included under Others –regions not sorted out in the ANS/FS&T database.

FS&T Manuscripts in Progress [05/01 – thru – 04/30]				
Year	Total Ms Received	Accepted/ Scheduled	Rejected/ Withdrawn	Review/ Revision
2011/12	247	152	77	18
2010/11	387	301	86	0
2009/10	230	145	85	0
2008/09	411	279	132	0
2007/08	265	179	86	0
<i>Reference 00/01</i>	<i>63</i>	<i>41</i>	<i>22</i>	<i>0</i>

* Papers rejected/withdrawn from pre-review/pre-selection of papers from many of the special issues are not included in paper counts and rejected/withdrawn numbers



* Other includes countries from the Middle East, South America, Africa, and Australia
+ For 2007-2008: Other includes rejected/withdrawn papers from TRITIUM 8 - regions not sorted out



Item 7: Report on Elections (Snead or designee) Lee stood in for Lance

List of Officers and Executive Committee Members, Lance Snead, Oak Ridge National Laboratory.

The election of Fusion Energy Division executive committee members was completed in May. Minami Yoda, the Vice-Chair/Chair-Elect will become Chair for her two-year term at the end of the June meeting. Susana Reyes was elected as the new Vice-Chair/Chair-Elect. Stephen Combs was elected Secretary/Treasurer; he will replace Mark Anderson who served an additional year to synchronize the terms of the officers.

Three new members were needed to fill the seats of those members whose terms are ending. The three elected committee members are Prof. Satoshi Konishi (Kyoto U.), Dr. Jacob Leachman (WSU), and Dr. Juergen Rapp (ORNL). The new Committee will be

Chair

Minami Yoda (GIT) (12-14) minami@gatech.edu

Vice-Chair/Chair-Elect

Susana Reyes (LLNL) (12-14) reyessuarez1@llnl.gov

Secretary/Treasurer

Stephen Combs (ORNL) (12-14) combssk@ornl.gov

Executive committee members:

Paul Humrickhouse (INL)	(10-13)	paul.humrickhouse@inl.gov
Yutai Katoh (ORNL)	(11-14)	katohy@ornl.gov
Satoshi Konishi (Kyoto U.)	(12-15)	s-konishi@iae.kyoto-u.go.jp

Jacob Leachman (WSU)	(12-15)	jacob.leachman@wsu.edu
Arnie Lumsdaine (ORNL)	(11-14)	lumsdainea@ornl.gov
Rene Raffray (ITER)	(11-14)	rene.raffray@iter.org
Juergen Rapp (ORNL)	(12-15)	rappj@ornl.gov
Keith Rule (PPPL)	(10-13)	krule@pppl.gov
Mark Tillack (UCSD)	(10-13)	mtillack@ucsd.edu

Past Chair:

Lee Cadwallader (INL)	(12-14)	lee.cadwallader@inl.gov
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FED Standing Committee Chairs:

Nominating: Lee Cadwallader (INL)
Honors and Awards: Farrokh Najmabadi (UCSD)
Program Committee: position open

FED representatives on National Committees:

ANS Public Policy: Lee Cadwallader (INL)
ANS Publications: position open
ANS Program Committee: Lance Snead (ORNL)/Lee Cadwallader (INL)

Editors:

Newsletter: Laila El-Guebaly (UW), Dennis Bruggink (UW)
Fusion Science and Technology journal: Nermin Uckan (ORNL)

Liaisons to other organizations and ANS divisions:

ANS Board of Directors: Ken Schultz (ret.)
MS&T: Lance Snead (ORNL)
IEEE: George Miley (UIUC)
RPS: Paul Wilson (UW)

FED Webmasters:

Mark Tillack (UCSD) – FED website
Dennis Bruggink (UW) – UW website

We thank the outgoing committee members Lucille Dauffy, Rick Kurtz, and Shahram Sharafat for their service to the FED.

Item #8 Discussion of FED documents (Cadwallader)

Division Rules were given to Hans Gougar of the Bylaws and Rules Committee
Sucession, Strategic and Tactical Plans - given to Professional Divisions Committee
chair, Mikey Brady-Raap. She asked to use them as examples to the other divisions. We
are pleased these will be used as training examples for incoming officers)

Item #9 Discussion on FED Scholarship (Cadwallder)

Lee stated that he heard that ANS is standardizing the process for scholarships. We are getting close to endow the \$60k scholarship after the August TOFE meeting.

Question on typical operating funds needed.

Member allocation – is around \$2000. It was suggested that we keep at least a minimum reserve of \$4000k for operations of FED.

Lee and Minami are going to try to figure out the process for selection for scholarship.

Initial thought was that student could get 5% payout ~\$3000 and student could get this for two years.

TOFE embedded in national ANS meetings started with Carl Henning... Carl passed away in June. There was significant discussion of how to honor Carl at the TOFE.

Nermin will try to find some information on his background so that someone can say a few words at the TOFE. FED was the first group to do a stand-alone topical meeting.

Steve was going to see if this was possible to do at the TOFE. There was some discussion of who could say something and if we should to a toast or plaque in his honor.

CARL HENNING

Obituary



Carl Douglas Henning Feb, 28, 1939 - June 13, 2012 Residence of Livermore, CA Carl was a mechanical engineer, having received his BS from Ohio University and his PhD from the University of Michigan. He spent most of his career at the Lawrence Livermore National Laboratory where he held many senior management and technical

leadership positions in research toward controlling nuclear fusion as an energy source. Carl was responsible for building the world's largest magnet at that time and designing massive containment vessels for stemming the oil fires in Kuwait. He spent two years on assignment in Germany as a member of the US contingent of scientists designing the International Thermonuclear Experimental Reactor, ITER, intended as a small fusion energy source. Carl spent three years at Intermagnetics General Corporation as VP for Technology Development where he contributed to the development of an MRI machine for General Electric. In 1976-1978 he worked at the Dept. of Energy as Branch Chief in the Office of Magnetic Fusion. The author of many technical papers and presentations, Carl held five U.S. patents, and received numerous honors and awards, including being elected as a Fellow of the American Nuclear Society. In 2011 he was elected to the Fairview High School Hall of Fame in Cleveland, Ohio, where he was raised. Carl was an adventurer, rebuilding and flying his own airplanes, and in retirement, sailing a large catamaran which he and his wife, Judy, lived on in the Caribbean for several months of each year. In 1988 Carl flew solo across the Atlantic Ocean in his Cessna 337 which he had rebuilt. While in Europe, he and Judy flew to Germany, London and Egypt, and along the Nile River. Carl returned home solo flying via Iceland, Greenland and Nova Scotia, a 2600-mile journey in all. His hobby was flying the rivers of the world with Judy; they have been to the headwaters of the Amazon, Angel Falls in Venezuela, along the Orinoco, Colorado, Mississippi and other great rivers. Often they would fly the Caribbean, and to the island of Roatan (off of Honduras) where they owned a second home for ten years. Carl, with his infectious laughter, will be remembered by his many friends as a confident, self-sufficient man who relished daunting challenges. He will be greatly missed by his wife of fifty years, Judy, and his two daughters, Kirsten Baca of Walnut Creek and Lisa Low of Danville, his lovely granddaughters, Brooke Baca and Lexie Low, and his sister, Joy Arndt of Cleveland, OH. Friends are invited to a celebration of Carl's life at his home in Livermore on Friday, June 22 at 3 PM. Those wishing to honor Carl's memory may send a donation to Hospice of the East Bay.

Published in Contra Costa Times on June 19, 2012

Guest Book

- Dick & Seve Schaa

[View](#)

[Sign](#)

Item #10 Honors & Awards Committee up-date (Najmabadi or Designee)

No input: Assumed that Najmabadi has identified people for professional awards at TOFE. Past nominees from 2010 are to be reconsidered.

Minami suggested possibility of giving 2 awards for best student paper

Steve Combs: Student travel & papers – The student must be the 1st author for any travel assistance

Minami is working with Arnie Lumsdaine on the student paper award.

We typically give \$500 for a best paper and the thought is that we can give two for \$250.

It was agreed that ~~the~~ a student could get both best paper and travel awards.

Student must be Lead Author for best paper award.

Mark Tillack questioned if the Honors and Awards committee was public.

Honors and Awards committee – Lee has a list of people that are on the committee (FED editor always serves on the honors and award committee (non-voting). The list of H&A committee members is not public at this time.

Item #11 New Business (all)

Statement on Fusion to members of the senate drafted by Lee and sent to key senators on April 10th, this letter is posted was posted on the ANS Nuclear Café Blog by ANS President Eric Loewen and published in the June FED Newsletter. Thank you notes were sent to Lee for drafting this letter including Martin Greenwald the chair of the FESAC committee.

Wayne – Chair for the 2013 IEEE symposium on fusion engineering - discussion of giving member registration rate to ANS members; this has to be approved by IEEE HQ. The TOFE is also giving IEEE members member rate.

Lee will verify people seeking the membership registration rate due to ANS membership for SOFE 2013.

ANS membership can be seen on the ANS national Website

Lee Cadwallader presented Mark Anderson with an ANS Certificate of Appreciation for serving an additional year as Secretary/Treasurer to allow the FED to synchronize the terms of office for the executive committee officers.

Item #12 Close meeting (Cadwallader)

Motion to adjourn

Meeting Closed 4:45pm

AUDIO ARCHIVE FILE is available upon Request.