

AESS Technical Operations Report to the Board of Governors October 15th, 2003

1. Budget

There are no expenses to date for Technical Operations except those for the Distinguished Lecturers Program. These expenses are reported below.

2. Technical Panel and Committee Reports

Technical Panels

Attachment 1 summarizes the present status of the technical panels.

Three (3) technical panels are very active.

The Radar Panel remains very active under the leadership of James Day. Refer to Attachment 1.A for the minutes of the May 7th, 2003 meeting in Huntsville.

The Space Systems Panel remains very active under the leadership of Marina Ruggieri. Marina's report is included as Attachment 1.B

The Gyro and Accelerometer Panel remains very active under the leadership of Randy Curey. Refer to Attachments 1.C for a status report of the GAP activities. The GAP will hold their Spring meeting next year in conjunction with the AESS sponsored PLANS 2004 Conference in Monterey and will participate in the conference.

The panel for Formal Methods in System Design continues in a state of revitalization after a period of inactivity. Refer to Attachment 1.D for correspondence from the chair, James Alpigini. James has planned a meeting in October to work on the Charter and By-Laws using the GAP material as a model.

Two (2) panels remain in the formative stage, Target Tracking & Sensor Fusion under the leadership of Dale Blair and System Engineering under the leadership of Paul Gartz.

The Integrated Avionics Panel is no longer active.

Technical Committee & Council Representatives

There are now ten (10) technical committees and councils with AESS representatives as summarized in Attachment 2. Thanks to Bob O'Donnell for obtaining reports from these representatives for the Technical Operations Report.

3. Distinguished Lecturers Program

The activity of the Distinguished Lecturers (DL) program for the full years 1999 through 2003 is summarized in Attachment 3. Six (6) lectures have been given to date. Expense reports have been received for two (2) lectures with a cost to date of \$1000. One lecture had no cost and three (3) expense reports are outstanding. An additional four (4) lectures have been approved. This yields a total of ten (10) lectures for the year with an expense obligation that is at the maximum of the \$4,500 budget.

4. PLANS 04 Conference

I attended the most recent Organizing Committee meeting of the PLANS 2004 in Coronado, CA at the Loews Hotel that is a potential site for PLANS 2006.

The surplus from the PLANS 2002 is on the order of \$36 K including an invoice of \$7.2 K due from Holloman AFB for their exhibit (AFRL in Dayton has finally been invoiced by the IEEE) and an invoice of \$1.8K due from Novatel for their exhibit (The IEEE lost the original invoice but now has billed Novatel).

I have a copy of the final report for PLANS 2002 that was submitted by the PLANS Treasurer to Mary Ann Fitzinger of the IEEE for audit on April 23rd that she has acknowledged receiving. This is a substantial document that is about 2 inches thick.

There were delays for the treasurer to ferret out what happened to the above income that was due to the conference. Note in addition there was an erroneous deposit by the IEEE of \$2.7K to an AESS account that was for the SPAWAR exhibit at the conference. This has since been corrected by the IEEE.

The committee did an excellent job of controlling costs at the Palm Springs venue given the significant challenge of low attendance due to the September 11th terrorist attack.

I recommend that the BOG consider meeting at the PLANS 04 Conference in Monterey, CA next April 26-29th. The organizing committee would appreciate the Board of Governors support. The Gyro & Accelerometer Technical panel has already committed to having their Spring meeting next year at the conference.

I plan to attend the next Organizing Committee meeting on November 7th at the Hyatt Regency Hotel in Monterey, CA, the site for PLANS 2004.

Respectfully submitted

Jim Huddle

Vice President - Technical Operations

Technical Panel Chairs ^[1] - Attachment 1

Panel	Chair	E-Mail Telephone	Status	Reports for BOG October 15 th , 2003	Web Page
Gyro & Accelerometers	Randall Curey	Randall.Curey@northropgrumman.com 818-712-7131	Active	Attachment 1.C	Yes
Radar Systems	James Day	James.K.Day@lmco.com 315-456-3843	Active	Attachment 1.A	Yes
Space Systems	Marina Ruggieri	Ruggieri@uniroma2.it +39-06-7259-7451	Active	Attachment 1.B	Yes
Formal Methods in System Design	James Alpigni	jia7@psu.edu 610-648-3357	In Process of Revitalization	Attachment 1.D	Yes
Target Tracking & Sensor Fusion	Dale Blair	dale.blair@gtri.gatech.edu 770-528-7934	Formative Stage		No
System Engineering	Paul Gartz	Paul.Gartz@PSS.Boeing.com 425-237-8172	Formative Stage		No
Integrated Avionics	Glen Logan	Glen.Logan@osd.mil 703-602-0851 Ext. 112 http://www.acq.osd.mil/osjtf/ (A Link to the Open Systems Joint Task Force Site)	Inactive		No
Satellite Navigation	Open		Inactive		Yes

^[1] Revised September 29th, 2003 – J. R. Huddle

Attachment 1.A

MINUTES OF THE IEEE RADAR SYSTEMS PANEL MEETING

7 May 2003 - Huntsville, Alabama

ATTENDEES:

Ravi Adve, Eli Brookner, Joe Bruder, Mark Davis, Jim Day, Marshall Greenspan, Hugh Griffiths, Joe Guerci, Braham Himed, Steve Johnston, Jim Kurtz, Bob McMillan, John Milan, Bob O'Donnell, John Smith, Bob Trebits, Iram Weinstein, Mike Wicks, Dave Zasada, Marvin Cohen, Joe Teti, Members of the 2003 IEEE Radar Conference Committee

OLD BUSINESS

The minutes of the November 2002 meeting of the Radar Systems Panel were approved.

NEW BUSINESS

2003 IEEE Radar Conference Report (Bob McMillan)

Dr. Bob McMillan reported that the number of paid attendees at this conference was approximately 225, with 14 complimentary students. There were 12 tutorials, each having at least 15 enrollees. Bob introduced many of his Conference team members from the Huntsville area. There were 20 exhibitors at the Conference with significant support from Raytheon and Dynetics. Based on preliminary estimates a surplus is expected.

2002 IEEE Radar Conference Close-out Report (Ed Trujillo)

Mr. Ed Trujillo presented the summary report for the 2002 IEEE Radar Conference at Long Beach, California USA for Dr. Tom Miller via telephone. The total Conference income, less advanced funding, was \$214,775, and the total amount of Conference expenses was \$173,538. The Conference surplus of \$61,237 will be split evenly between the seeding organizations, the National AESS and the Los Angeles IEEE Council. There were 325 paid attendees and 265 hotel attendees. There were 392 paid tutorials, of which 365 attended. All information will be forwarded to Dr. Mark Davis, the Panel's contact for radar conferences.

Bob O'Donnell emphasized from the Board of Governors perspective that it is critical to close the conference books on time. Fines are assessed to the societies for every month overdue.

2004 IEEE Radar Conference Report (John Smith)

The 2004 IEEE Radar Conference is scheduled for the Wyndham Franklin Plaza in Philadelphia, Pennsylvania USA, 26 – 29 April, 2004. The conference is jointly funded by the National AESS and the Philadelphia IEEE Section. Dr. John Smith commended the 2002 conference committee on their report documenting lessons learned. He indicated that they are aiming for 400 attendees and budgeting for 275. They have planned for 10 student grants and expect strong sponsorship for local companies.

Dr. Joe Teti discussed their planned technical program. They plan to encourage papers from specific sources to help bolster the quality of the program. He mentioned the idea of parallel sessions. There was a strong response from some members of the RSP against such a plan.

Conference Committee (Mark Davis)

Dr. Mark Davis reported that the Australians will host a radar conference this fall in Adelaide (3-5 September 2003). The French Radar Conference will be held in Toulouse, France next year (19-21 October 2004). The IEEE 2005 International Radar Conference will be held in Washington, D.C. USA (9-12 May 2005). Persons who wish to be on the paper review committee for RadarCon 2004 should e-mail their interest to Iram Weinstein [iweinstein@ieee.org].

Awards Committee (Mike Wicks)

Dr. Wicks reported that the Warren White award may not be selected for 2004, in part due to poor performance of the funds used to support this award. However, the plan will be to solicit nominations and make a decision at the end of the year whether to give out an award in 2004. He also discussed the Fred Nathanson Memorial Fund that supplies the grant Radar Systems Panel's Fred Nathanson award for the Young Engineer of the Year. The Fred Nathanson award foundation is interested in transferring management of the funds and award to the RSP. The RSP voted in favor of making that happen.

Radar Education Committee (John Smith)

Dr. Smith reported that student papers were supported at the Huntsville conference would also be supported for next year's conference in Philadelphia. The Panel should strive to formally notify university electrical engineering departments of this support. Dr. Smith has also requested support from the RSP in developing a list of engineering organizations that have interest in radar and should be solicited by the RSP to participate in the conferences.

There was some discussion about the programs that organizations have in place to develop young radar engineers and bring them into the industry.

Letter Band Standards (Joe Bruder)

Mr. Bruder reported that the Letter band Designation standards was approved in January 2003, culminating a year-long Panel effort to have these standards formally adopted by the IEEE. He also reported that the recertification effort for the Radar Definition standards had been initiated, with Mr. Paul Hughes taking the Panel's lead responsibility. Panel members should forward proposed new and revised definitions to Mr. Hughes for incorporation into a draft standard to be voted upon by the members of the Standards Board.

In addition, Mr. Bruder has been maintaining an IEEE Radar Conference mailing list himself. He intends to share this list with each IEEE Radar Conference chairman. There was general agreement to share this list with some other conferences assuming reciprocity. The conferences mentioned were the IEE International Radar Conference series (Hugh Griffiths) and the IEEE International Symposium on Phased Array Systems and Technology (Eli Brookner)

New Panel Members

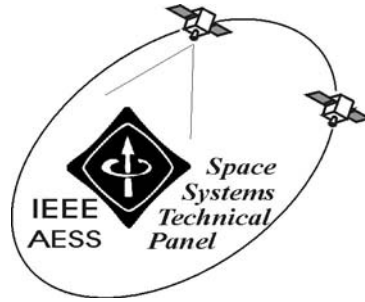
The Panel Chairman Jim Day announced his selection of Iram Weinstein and Ravi Adve as new members of the IEEE Radar Systems panel. The next meeting of the panel will be in Philadelphia, in association with the meeting of the Paper Selection Committee of the 2004 IEEE Radar Conference.

Additional Business

Dr. John Smith made a suggestion regarding Digests and Transactions. Bob Hill and Steve Johnston have significant personal collections of national and international radar conference transactions which should be scanned and recorded onto compact discs for archiving. We need someone to agree to lead this effort.

Radar conference naming – the IEEE AES Board of Governors voted unanimously to approve the radar conference naming conventions as described in the October 2002 RSP Minutes. Mr. Steve Johnston expressed concerns with that naming convention and was asked to formalize a motion to addressing this issue for consideration at the next meeting of the Panel.

Jim Day mentioned that the IEEE AES Systems Magazine is running a series of articles on the past Picard Award winners. He also emphasized comments received from the Systems Magazine that articles about the various award winners and Radar conferences are greatly desired, and need to be provided in a timely fashion as it takes months to incorporate into the magazine.



Attachment 1.B

REPORT OF IEEE/AESS “SPACE SYSTEMS” PANEL

September 2003

The following activities have been carried out in the period April – September 2003:

- Activities related to the co-Chairing of Track 2 *Space Missions, Systems and Architecture* of the 2004 IEEE Aerospace Conference, to be held in Big Sky (March 2004). In particular the number of European experts involved in the Conference (as session organisers and co-chairs) has been increased, covering the areas of RF technology, payload optimisation, International Space Station, space missions envisaged for the 21^o century; Furthermore, conference has been promoted in the European space community, yielding to the submission of various abstracts from Europe. The involvement of those European experts brings benefit also to the Panel.
- Intense activities related to the role of Editor of *Space Systems* of the AES Transactions, where the number of manuscripts submitted in the area has increased quite significantly. Since May 2001, **26** manuscripts and 1 correspondence have been submitted, including 3 manuscripts whose handling procedure was not completed by the previous Editor. 11 procedures have been completed, 5 are waiting for authors' final revised manuscripts and 11 are being handled at the moment. . The network of reviewers - experts in the various space systems topics and, in some cases, related to the Aerospace Conference team - that has been created, thanks to the job as Editor, is continuously increasing.
- Activities as Mentor of the Student Branch at the University of Roma Tor Vergata, Italy, particularly for space-related activities. In this frame, the possibility of training periods abroad of our students on space topics is being developed. To this respect a contribution from IEEE would be very useful and encouraging to the students who joined IEEE.
- Organisation of training and thesis activities of students at the University of Roma Tor Vergata in the field of space systems.
- Intense activities on the assessment of the technical program related to space topics for the Wireless Personal Multimedia Communications Conference *WPMC 2004*, that will be held in Italy (Abano, September 5-8, 2004). To this respect, an involvement of the AES Society in the Conference would be important, in terms of both participation to the TPC and sponsorship

- Development of activities in the field of *satellite navigation* systems. In particular a one-week exhibition at the Deputy Chamber (Roma, 12-16 May, 2003) has been performed.
- Progress in the activities of the research program *SHINES* (*Satellite and Hap Integrated Network and Services*), where key-topics in the space systems field are dealt, such as IP routing algorithms for LEO satellite networks, potentialities of integrated satellite-high-altitude platforms for stratospheric relay. The topics are being included in various publications.
- Progress in the activities of the European Program (*Asia Link NetWIC*) of high education in the area of Wireless Communications, where the group of the University Roma Tor Vergata contributes in the area of satellite communications through a teaching/technical content exchange with two Asian universities.
- Formal approval and deployment of the announced novel M.Sc Program in the University of Roma Tor Vergata entitled “*Advanced Communications and Navigation Satellite Systems*”, that will start in January 2004. This initiative will give the opportunity for an integration with the Panel activities. Possible training/stages of the M.Sc students in the frame of the IEEE should be explored.
- Development of two courses for M.Sc students on *Satellite Systems and Related Applications*. One of the two courses has been given in June 23-26, 2003, with very positive feedback from students and M.Sc organisers (University of Palermo, Italy). The other will be given in September 29-October 1, 2003 (CRES-Palermo, Italy).

Among the envisaged activities:

- Activities related to the role of Editor of *Space Systems* of the AES Transactions.
- Activities related to the various mentioned Conferences, that will be held this year and in 2004.
- Prosecution of the activities related to the on-going scientific, industrial and teaching Programs described in the report

Prepared on September 24, 2003 by: Marina Ruggieri

REPORT OF THE IEEE/AESS GYRO AND ACCELEROMETER PANEL – Attachment 1.C

September 2003

Panel Activity

Std 1293, “IEEE Standard Specification Format Guide and Test Procedure for Linear, Single-Axis, Nongyroscopic Accelerometers” was reaffirmed by electronic ballot.

P1431, “IEEE Standard Specification Format Guide and Test Procedure for Coriolis Vibratory Gyros” is complete. The balloting pool is being formed. The standards board will consider an extension of the PAR for P1431 in October. The current PAR expires December 2003. This extension is required since the balloting process will not be complete until early next year.

P1554, “IEEE Recommended Practice for Inertial Sensor Test Equipment, Instrumentation, Data Acquisition, and Analysis” completed the industry survey phase. An extension of the PAR for P1554 will be considered at the December standards board meeting. The current PAR expires December 2003. P1554 should be ready for ballot early next year.

The PAR for P1559 “IEEE Standard for Inertial Systems Terminology” was extended until December 2007.

The PAR to update Std 836, “IEEE Recommended Practice for Precision Centrifuge Testing of Linear Accelerometers” to resolve the dispute of using a non-SI unit, g, and to include an informative annex on double turntable centrifuge testing was approved. The document is currently on hold waiting for Arkady Sinelnikov to provide the double turntable centrifuge annex.

AudCom reviewed the updated GAP bylaws at their March 2003 meeting. Of the 10 items previously identified by the Secretary of AudCom, five were considered closed but five were still considered open. No new items were identified. Work on the GAP bylaws continued at the May and July meetings and I am happy to announce that AudCom has agreed that the GAP bylaws are “quite satisfactory for standards development.” At the September meeting, the GAP voted to adopt the new bylaws.

The Panel continues to work on the following documents:

- P1554 “IEEE Recommended Practice for Inertial Sensor Test Equipment, Instrumentation, Data Acquisition and Analysis.”
- P1559 “IEEE Standard for Inertial Systems Terminology.”
- Std 647 “IEEE Specification Format Guide and Test Procedure for Single Axis Laser Gyros.”
- Std 836 “IEEE Recommended Practice for Precision Centrifuge Testing of Linear Accelerometers”

Officers

At the September 2003 meeting, the following nominations were made:

Panel Chair	Randall Curey
Panel Vice Chair	Cleon Barker, Jean-François Kieffer
Accelerometer Committee Chair	Dr. Michael Ash
Gyro Committee Chair	Cleon Barker

Nominations remain open until the vote at the November meeting.

Lee Thielman (the current Gyro Committee Chair) announced his plans to retire in 2004 and as such did not wish to be re-nominated.

Meetings

Since March 2003, the Panel has held three meetings:

Dates	Location	Attendance
5/6 May 2003	Cambridge, MA	7
17/18 July 2003	Minneapolis, MN	5
22/23 September 2003	Piscataway, NJ	8

The November 2003 meeting will be in Albuquerque, NM.

Membership

Since March 2003, one new member and two new info-only have joined. Current membership is as follows:

33 Members (12 Producers, 12 Users, and 9 General Interest)
38 Info-Only (13 Producers, 11 Users, and 14 General Interest)

Other

The decision was made to not hold a meeting outside of the US this year and likely next year, due to the current economic and political situation.

A letter was sent to the GPS JPO via Steve Saks of Aerospace Corporation. The purpose of the letter was to determine if they were interested in developing GPS/INS specifications to be published by the IEEE.

The May 2004 meeting will be held in April in conjunction with the IEEE PLANS Symposium. It is hoped that this will lead to new members. In the past this has not happened, but we plan on getting the GAP meeting into the PLANS program so that people can schedule time to attend the meeting.

Respectfully submitted,



Randall Curey

Chair, IEEE/AESS Gyro and Accelerometer Panel

From: Dr. James Alpigini [jja7@psu.edu]
Sent: Thursday, September 25, 2003 2:30 PM
To: Huddle, James
Subject: Re: Formal Systems in Design Technical Panel Report

At 05:56 PM 9/9/2003 -0700, you wrote:

>Tuesday September 9th, 2003

>

>James

>

>I am requesting a report from you on recent activities of the Formal Methods

>

>in System Design Technical Panel for the next AESS Board of Governors

>meeting.

>

>I would appreciate your report by return E-Mail

>by Friday, September 26th, 2003.

>

>Regards and thanks for your timely response,

>

>Dr. Jim Huddle

>VP Technical Operations

>Aerospace & Electronics Systems Society

Hi Jim,

I am afraid the meeting is about 3 weeks ahead of us. The local folks are meeting in October to finish sorting out the charter and bylaws, and we are working on using the UML as a standard design vehicle. So, there is some progress, but it is not earth shattering.

All my best,

James

James Alpigini, Ph.D., CEng, MIEE
Professor In Charge, Information Science
Assistant Professor of Systems Engineering
Penn State Great Valley School of Graduate Professional Studies
30 E. Swedesford Rd., Malvern, Pa 19355
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Technical Committee & Council Representatives ^[1] - Attachment 2

Committee or Council	Representative	E-Mail Telephone
Energy Policy (IEEE USA)	Henry Oman	h.oman@ieee.org 206-878-4458
R & D (IEEE USA)	Russ Lefevre	r.lefevre@ieee.org 310-954-2200
International Affairs (IEEE TAB)	Zafar Taqvi Hugh Griffiths	z.taqvi@ieee.org 281-244-4436 h.Griffiths@eleceng.ucl.ac.uk
Communication & Information Policy (IEEE USA)	Mike Cardinale	cardinal@ieee.org 703-642-3538
Transportation & Aerospace Policy (IEEE USA)	Cary Spitzer Phil Holmer	cspitzer@avionicon.com 757-221-8031 pholmer@ieee.org
Standards Coordinating Committee SCC-20	Arnold Greenspan	a.greenspan@ieee.org 410-366-5411
PACE (IEEE USA)	Mike Cardinale	cardinal@ieee.org 703-642-3538
Intelligent Transportation Systems Council (IEEE TAB)	Paul Kostek Bob Trebits	p.kostek@ieee.org 206-915-6645 bob.trebits@gtri.gatech.edu 770-528-7915
Nanotechnology Council (IEEE TAB)	Alphonso Centuori	alfonso@centuori.net
Sensors Council (IEEE TAB)	Myron Greenbaum	m.greebaum@ieee.org 973-284-3328

^[1] Revised September 29th, 2003 – J. R. Huddle

Summary of Distinguished Lecturer Activities – Attachment 3

Lecturer	Lecture	2003	2002	2001	2000	1999	1998 From July
Jim Peters	Formal Methods in Design					Note 14	Notes 1,2
Bob Hill	Advances in Radar						
Dick Wiley	Electronic Warfare & Modern Radar Signals	Note 41		Note 23	Notes 16, 17		
Pramod Varshney	Multi-Sensor Data Fusion		Note 33				
Myron Kayton	Navigation – Land, Sea, Air		Note 36		Note 20	Note 11	Notes 3,4,5,6,7
Myron Kayton	Avionics for Manned Spacecraft						
Myron Kayton	Practicioners View of System Engineering	Notes 37, 38	Notes 34, 36	Note 27		Notes 12, 13	Note 3
William Ward	Planetary Exploration	Notes 40,42		Note 25, 28 (4 Lectures)	Note 15 (2 Lectures)	Note 9	
Eli Brookner	Radar – Past, Present, Future			Note 22			
Saj Durrani	Satellite Communication Systems			Notes 21, 26	Notes 18, 19	Note 8	
Paul Gartz	System Engineering for International Development	Note 39	Notes 32,35	Notes 24,30			
Yaakov Bar-Shalom	Target Tracking						
Larry Chasteen	National Missile Defense and Early Warning Radars		Note 31	Note 29			
I. Y. Bar-Itzhack	Evolution of Inertial Navigation						
	Total	6	7	12	7	6	7

Details on the Locations of the Lectures

Note	Location	Date
1	Nagoya University, Japan	10-22-98
2	Thomson CSF Labs, France	7-98
3	Instituto Militar de Engenharia, Rio de Janeiro, Brazil	10-19-98
4	Instituto Tecnológico de Aeronautica, San Jose dos Campos, Brazil	10-8-98
5	Embraer Company, San Jose dos Campos, Brazil	10-8-98
6	Escuela Technica del Buceo, Montevideo, Brazil	10-13-98
7	Military Academy, Montevideo, Brazil	10-14-98
8	Section Meeting in Lahore, Pakistan	1-23-99
9	Swarthmore College Student Branch	3-23-99
10	Electrical & Computer Engineering, Villanova & Philadelphia Section (Al Gross)	11-4-99
11	Communications Research Center, Ottawa Section	8-26-99
12	Laval University, Quebec City	8-30-99
13	Dallas Chapter	10-26-99
14	Penn State University	6-8-99
15	Boston Chapter Providence Section	2-3-00 10-10-00
16	Atlanta Chapter	5-23-00
17	Central Georgia Section	7-26-00
18	Technical University of Finland, Helsinki Section	9-22-00
19	Electro Technical University, St. Petersburg, Russia, AESS Chapter	10-2-00
20	St. Louis University & the Missouri Conference	11-2,3-00
21	IEEE Panama Section	3-23-01
22	IEEE Section in Cairo – National Radio Science Conference	3-27-01
23	Dayton Section	3-8-01
24	AESS Dallas Chapter	4-24-01

Note	Location	Date
25	RadarCon 2001	5-1-01
	Boston Section	3-18-01
	IEEE Student Branch, Boston University	2-1-01
26	AESS Chapter, Aristotle University of Thessaloniki, Greece	4-25-01
27	IEEE/INCOSE Meeting at NASA, Houston	5-16-01
28	Birmingham, Alabama Section	9-10-2001
29	Atlanta AESS Chapter	10-25-2001
30	University of Southern California	11-20-2001
31	Seattle Chapter	2-25-2002
32	University of Southern California	3-26-2002
33	Atlanta Chapter	5-30-2002
34	Connecticut Section	10-23-2002
35	Dallas Chapter	11-19-2002
36	Vancouver Chapter	11-19,20-2002
37	San Diego Section	1-2003, No Cost
38	Halifax & Ottawa Section	2-4, 2-6-2003
39	University of Southern California	3-18-2003
40	Canaveral Chapter	3-20-2003
41	Eglin Chapter	3-27-2003
42	Maine Section	5-9-2003

Distinguished Lectures in Planning Stage

Date: September 29th, 2003 - JRH

Lecturer	Lecture	Location and Tentative Time	Expense Status
		Unspecified DL request by Zafar Taqvi for AESS Chapter in Galveston Bay, TX in October or November	
Jim Peters	Formal Methods in Design		
Bob Hill	Advances in Radar		
Dick Wiley	Electronic Warfare & Modern Radar Signals		
Pramod Varshney	Multi-Sensor Data Fusion		
Myron Kayton	Navigation – Land, Sea, Air		
Myron Kayton	Avionics for Manned Spacecraft		
Myron Kayton	Practitioners View of System Engineering	Long Island AESS Chapter – October 20 th	
William Ward	Planetary Exploration	Canaveral Section, March 20 th Maine Section, May 9 th	None Filed None Filed
Eli Brookner	Radar – Past, Present, Future		
Saj Durrani	Satellite Communication Systems		
Paul Gartz	System Engineering for International Development	USC, March 18 th AESS Connecticut Chapter – November 12 th , 2003	None Filed
Yaakov Bar-Shalom	Target Tracking	New Delhi Chapter –December, 2003 On hold until expense reports for approved lectures clear	
Larry Chasteen	National Missile Defense and Early Warning Radars	Long Island AESS Chapter – November 4th	
I. Y. Bar-Itzhack	Evolution of Inertial Navigation		

Lectures Given & Approved to Date = 10 Expense Reports Filed = 2 Maximum Expense Exposure = \$4,500 as 1 was “free” FY03 Budget = \$4500