

Chairman's Corner

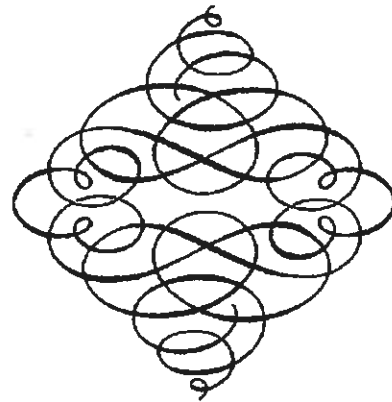
Shirley Brandt
Chairman

The Section Officers, Councillors and Committee Chairpersons have been working during the summer to prepare an exciting year of AIAA activity. Due to the momentum of the previous administration, which was led by our Immediate Past Chairman Steve Zobel, the transition to the current administration has been going smoothly and is on schedule. Many of the members of last year have volunteered to serve in new positions on the AIAA Board. We also have several new members of AIAA who have expressed the desire to serve in and/or chair a committee. It is our good fortune that Lou Livingston has agreed to continue his service as the Editor of *Horizons*.

Program Chairman Zafar Taqvi is in the process of planning a variety of interesting programs for this year's dinner meetings. The section Technical Committee Chairpersons are working on providing informative Lunch & Learn programs. Dr. Dudley Nelson, Vice-Chairman, Technical, has been organizing the staff of the Technical Committees. There are positions still available on several of the TCs. Anyone who is interested in being an active participant on a TC can get in touch with Dudley Nelson. Likewise, anyone interested in working on the Operations functions of the Section can contact Tek Shrini, Vice-Chairman, Operations, at 282-6643.

There is a lot of work involved in accomplishing our primary goal, which is to satisfy the needs of the members. All volunteers who wish to contribute their time and talents in any role are welcome to participate. It has been continual hard work of members of this Section over the years that has maintained the status of Outstanding Section for the Houston Section. All of us on the 1993-94 Section Board are looking forward to serving you through another outstanding year, and hope to see you

during the year at dinner meetings and/or as a member of one of the cadre of committees. H



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Horizons is the monthly newsletter of the Houston Section of the American Institute of Aeronautics and Astronautics. It is created by members of the Houston Section and reproduced at the Houston offices of Lockheed Engineering and Sciences Company. Please address all correspondence to the Vice-Chairman of Operations, Tek Shrini, U08C, or to the Editor, Lou Livingston, 1911 Pepper Hill, Houston, TX 77058.

Committee News

Technical Committees

Dr. Dudley Nelson
Vice-Chairman, Technical

The AIAA has 52 National Technical Committees (TCs) made up from members from industry, government agencies, and universities. The TCs meet three to four times per year and provide for meaningful technical exchange through sponsorship of seminars and conferences, highlights of key issues within each technical area in *Aerospace America*, and identification of challenges and evolving technologies.

The Houston Section carries out all of its technical activities through local Technical Committees patterned after their national counterparts. The purpose of these local TCs is to strengthen the Section's ability to serve the specialty interests of its members by distributing technical activities among discipline groups which collectively constitute the aeronautics and astronautics engineering work most widely practiced in the Section's locale.

If you would like to participate in a TC, please call the chairman identified below. Some committees do not have chairmen or co-chairmen for the 1993/94 year. If you would like to serve in either capacity, please call Dudley Nelson at 333-7054.

<u>Technical Committee</u>	<u>Address</u>	<u>Phone</u>	<u>Fax</u>
Automation & Robotics Dr. Zafar Taqvi	LESC/C80	333-6544	333-7620
Communications & Tracking Dr. Kumar Krishen	JSC/IA4	283-5875	
Computer & Software Systems Clay Michaels	PRC/Lockheed Plaza 3	282-6550	
Fluid Dynamics Dr. Rakesh Bhargava	P. O. Box 726 Sugarland, TX 77487-0726	983-9371	
Ground Test & Simulation Dr. Sivaram Arepalli	LESC/C61	483-5910	
Guidance, Navigation & Flight Control (vacant)			
History/Heritage Ann Platoff	Hernandez/IA12	244-7066	
David Portree	Hernandez/IA12	483-6707	
Human Support Dr. Betty Goldsberry	LESC/C95	333-6265	
In-Space Imaging & Observations Dr. Kamlesh Lulla	JSC/SN15	483-5159	483-2911
Life Science & Space Processing (vacant)			
Management Dr. John Hunsucker	Univ. of Houston Houston, TX 77204-4812	743-4194	
Materials, Structures & Dynamics Don Probe	LESC/B14	333-6278	333-6278
Space Operations (vacant)			
Space Systems Richard Schremser	Grumman/A03-400	929-7235	
Thermal Physics Joseph Chambliss	LESC/C70	333-6713	333-7620

Operations Committees

Shirley Brandt
Chairman

AIAA National Headquarters provides guidelines to the sections on how to organize the administrative functions which should fulfill the needs of the majority of the membership. The Houston Section has established Operations Committees which are parallel to the goals defined by National. Each committee is headed by a chairperson or by co-chairs, and the overall operations task is managed by the Vice-Chairman, Operations. The committees use the

suggestions from National in combination with activities tailored to meet any unique requirements of the Houston Section.

For the 1993/94 administrative year, Tek Shrini is Vice-Chairman, Operations. Following is a list of the Operations Committees and their chairs.

Anyone who is interested in volunteering or would like additional information about any of the Operations Committees can contact any of the committee chairs or Tek Shrini, Vice-Chairman, Operations, at 282-4711.

<u>Operations Committee</u>	<u>Address</u>	<u>Phone</u>	<u>Fax</u>
<i>Career Enhancement</i>			
Dr. Zafar Taqvi (acting)	LESC/C80	333-6544	333-7620
<i>Honors & Awards</i>			
Al Richmond	HM77	280-7777	480-2456
<i>Membership</i>			
Jim Visentine	JSC/ES5	483-8923	483-2162
<i>Pre-College</i>			
Elizabeth Good		488-6842	
<i>Programs & Events</i>			
Dr. Zafar Taqvi	LESC/C80	333-6544	333-7620
<i>Public Policy</i>			
Audrey Schwartz			
<i>Publications</i>			
Horizons Editor: Lou Livingston	1911 Pepper Hill Houston, TX 77058	480-2086	
Printing: Chris Burmeister	LESC/C87	333-6866	
Mailing: Bill Best	RSOC/R12A	282-6970	
Dinner Flyers: William Geissler	LESC/C87	333-6863	333-6908
<i>Student Activities</i>			
Gillian Parker		333-6239	
<i>Young Members</i>			
Susan Vascoe		488-6842	

Also Noted

AIAA Student Journal

The *AIAA Student Journal* is distributed to the 7,000 student members in the United States and abroad. The Journal solicits both technical papers and non-technical articles on any relevant topic from both professionals and students.

The deadline for articles for the Winter 1994 issue is October 1, 1993. The deadline for the Spring issue is January 1, 1994. However, submissions are accepted at any time and will be reviewed for publication at the first available deadline.

For more information, call 202-646-7458 or write to the

Editorial Assistant, AIAA Student Journal
The Aerospace Center
370 L'Enfant Promenade, SW
Washington, DC 20024-2518

National Award Nominations

AIAA Headquarters reminds us that nominations for a number of national awards are due this fall. Any questions should be directed to Merrie J. Scott, Manager, AIAA Honors and Awards, at 202-646-7534.

The *Aerodynamics Award* is presented for meritorious achievement in the field of applied aerodynamics, recognizing notable contributions in the development, application and evaluation of aerodynamic concepts and methods.

The *Air Breathing Propulsion Award* is presented for meritorious accomplishment in the science or art of air breathing propulsion, including turbomachinery or any other technical approach dependent upon atmospheric air to develop thrust, or other aerodynamic forces for propulsion, or other purposes for aircraft, or other vehicles in the atmosphere or on land or sea.

The *Chanute Flight Award* is presented for an outstanding contribution made by a pilot or test personnel to the advancement of the art, science, and technology of aeronautics.

The *Fluid Dynamics Award* is presented for outstanding contributions to the understanding of the behavior of liquids and gases in motion as related to needs in aeronautics and astronautics.

The *Ground Testing Award* is presented for outstanding achievement in the development or effective utilization of technology, procedures, facilities, or modeling techniques for flight simulation, space simulation, propulsion testing, aerodynamic testing, or other ground testing associated with aeronautics and astronautics.

The *Plasmadynamics and Lasers Award* is presented for outstanding contributions to the understanding of the physical properties and dynamical behavior of matter in the plasma state and lasers as related to need in aerodynamics and astronautics.

The *Propellants and Combustion Award* is presented for outstanding technical contributions to aeronautical or astronautical combustion engineering.

The *Thermophysics Award* is presented for an outstanding singular or sustained technical or scientific contribution by an individual in thermophysics, specifically as related to the study and application of the properties and mechanisms involved in thermal energy transfer and the study of environmental effects on such properties and mechanisms.

The *Wyld Propulsion Award* is presented for outstanding achievement in the development or application of rocket propulsion systems.

The nomination deadline is September 18, 1993, for the Fluid Dynamics Award and November 15, 1993 for the others listed above.

Call For Papers

Technology Transfer Conference

The Dual-Use Space Technology Transfer Conference and Exhibition will be held February 1-4, 1994, at the JSC Gilruth Center. The conference is intended to inform industry about NASA's existing programs and available mechanisms for technology transfer.

You are invited to submit abstracts (via fax) on the following topics to the designated Technical Track Chairperson. Abstracts on other topics should be faxed to Dr. Kumar Krishen at 244-8589. The deadline for submission of abstracts is October 20, 1993.

Software and Computer Technology	Dr. Troy Henson (IBM)	282-8076
Human Support Technology	Mr. John Schuessler (McDonnell Douglas)	244-4732
Avionics, Guidance and Control	Mr. Don Brown (JSC)	483-6120
Propulsion and Power	Mr. Chester Vaughn (JSC)	483-3204
Communications and Data Processing	Mr. Sidney Novosad (JSC)	483-6297
Robotics and Automation	Mr. Norman Chaffee (JSC)	483-3204
Materials Technology	Dr. Lubert Leger (JSC)	483-2162
Medical and Life Sciences	Dr. John Rummel (JSC)	483-6089
Technology for Technology Transfer	Mr. Robert Brown (Intermetrics, Inc.)	480-6328

Events

Space Avionics Technology at September Dinner Meeting

Dr. Zafar Taqvi
Program Chairman

Our first dinner meeting of the 1993/94 year will be held on Thursday, September 30 at the Gilruth Center. Please note that this is a changed date from that announced earlier. Traditionally this is a joint meeting of the AIAA Houston Section, the IEEE Galveston Bay Section and the ISA Clear Lake Section, and is hosted by us.

"A Look at Space Avionics Technology" will be presented by Dr. Ken Cox, Chief of the Navigation, Control and Aeronautics Division of JSC. Dr. Cox is a member of the Space Avionics Technology Working Group.

Social hour will be at 5:30 PM, dinner at 6:30 and the program at 7:30. Details of the program are included in the attached flier.

October Meeting at Space Center Houston

Dr. Zafar Taqvi
Program Chairman

In order to provide a little change in setting and environment, our October dinner meeting will be held at the Space Center Houston facilities on Thursday, October 21, 1993. As usual, social hour will be at 5:30 PM, dinner at 6:30 and the program at 7:30.

The program and speaker are to be announced.

AIAA Calendar

The AIAA Calendar is intended to encompass all Houston Section events and significant dates. This includes Executive Council meetings, which are open to interested members, and *Horizons* deadlines. It will also include committee meetings, Lunch & Learns and similar events if *Horizons* hears about them in time for inclusion. Please send pertinent details either to Audrey Schwartz, JSC/IA121, or to Lou Livingston, 1911 Pepper Hill Way, Houston, TX 77058.

September

20 - Monday
Horizons inputs due COB.

23 - Thursday
Monthly Executive Board meeting.
Grumman Bldg., 5:15-6:30 PM.

30 - Thursday
Monthly dinner meeting.
Dr. Ken Cox, JSC.
JSC Gilruth Center, 5:30/6:30/7:30.

October

12 - Tuesday
Horizons inputs due COB.

14 - Thursday
Monthly Executive Board meeting.
Grumman Bldg., 5:15-6:30 PM.

21 - Thursday
Monthly dinner meeting.
Program TBD.
Space Center Houston, 5:30/6:30/7:30.

November

4 - Thursday
Monthly Executive Board meeting.
Grumman Bldg., 5:15-6:30 PM.

8 - Monday
Horizons inputs due COB.

15 - Monday
Monthly dinner meeting.
Program TBD.
JSC Gilruth Center, 5:30/6:30/7:30.

December

2 - Thursday
Monthly Executive Board meeting.
Grumman Bldg., 5:15-6:30 PM.

9 - Thursday
Monthly dinner meeting.
Program TBD.
JSC Gilruth Center, 5:30/6:30/7:30.

20 - Monday
Horizons inputs due COB.

January

20 - Thursday
Monthly Executive Board meeting.
Grumman Bldg., 5:15-6:30 PM.

24 - Monday
Horizons inputs due COB.

27 - Thursday
Monthly dinner meeting.
Program TBD.
JSC Gilruth Center, 5:30/6:30/7:30.

February

17 - Thursday
Monthly Executive Board meeting.
Grumman Bldg., 5:15-6:30 PM.

24 - Thursday
Monthly dinner meeting.
Program TBD.
JSC Gilruth Center, 5:30/6:30/7:30.

28 - Monday
Horizons inputs due COB.

March

24 - Thursday
Monthly Executive Board meeting.
Grumman Bldg., 5:15-6:30 PM.

AIAA Calendar (cont.)

March (cont.)

28 - Monday

Horizons inputs due COB.

31 - Thursday

Monthly dinner meeting.

Program TBD.

JSC Gilruth Center, 5:30/6:30/7:30.

April

21 - Thursday

Monthly Executive Board meeting.

Grumman Bldg., 5:15-6:30 PM.

25 - Monday

Horizons inputs due COB.

28 - Thursday

Monthly dinner meeting.

Program TBD.

JSC Gilruth Center, 5:30/6:30/7:30.

May

19 - Thursday

Monthly Executive Board meeting.

Grumman Bldg., 5:15-6:30 PM.

31 - Tuesday

Horizons inputs due COB.

June

23 - Thursday

Monthly Executive Board meeting.

Grumman Bldg., 5:15-6:30 PM.

30 - Thursday

Monthly dinner meeting.

Annual Honors & Awards Banquet.

JSC Gilruth Center, 5:30/6:30/7:30.

OUTSTANDING SECTION AWARD

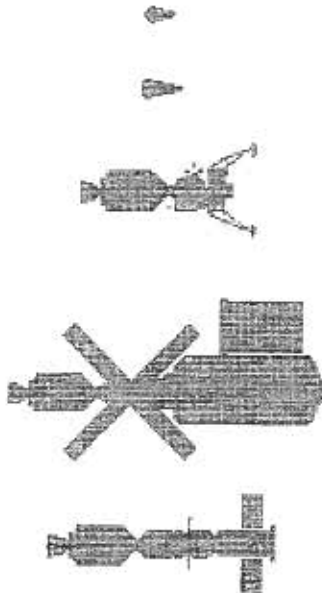


1975-1976
1976-1977
1979-1980
1980-1981
1981-1982
1983-1984
1986-1987
1988-1989

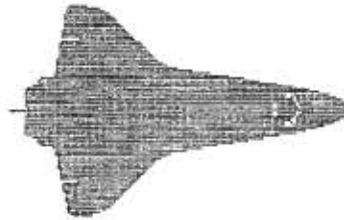
SECTION SPECIAL EVENT AWARD



1971-1972
1972-1973
1979-1980
1981-1982
1983-1984
1985-1986
1988-1989



AIAA Houston Section
P.O.Box 57524
Webster, TX 77598



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SHIRLEY BRANDT
CHAIRMAN 1993-94

American Institute of Aeronautics and Astronautics

HOUSTON SECTION P.O. BOX 57524 WEBSTER, TEXAS 77598

CO-HOSTED BY THE IEEE GALVESTON BAY SECTION
& ISA CLEAR LAKE SECTION

Thursday, September 30, 1993

A LOOK AT SPACE AVIONICS TECHNOLOGY

Dr. KENNETH J. COX
Chief of the Navigation, Control
and Aeronautics Division



PRESENTER / PROGRAM

Dr. Cox started at JSC in 1963 as Technical Manager of the Apollo Primary Digital Control Systems. He received his doctors degree in electrical engineering from Rice University in 1966. In addition to presently being Chief of the NCAD at JSC, Dr. Cox is chairman of the Strategic Avionics Technology Working Group (SATWG). The SATWG is a NASA sponsored avionics technical forum chartered by NASA headquarters in 1990 to promote dialogue and address space technology developments and issues among government, industry and academia. A current thrust of the group is to develop new strategies for doing business to advance civil space and global U.S. competitiveness. The SATWG has initiated a joint activity with industry to understand and identify the root causes associated with the issues and barriers to implementing new ways of doing business. At their next meeting, the SATWG will develop mechanisms for resolutions of these issues and barriers. After the first of the year, SATWG will present its assessment and recommendations to the NASA administrator. The implantation of these recommendations should result in a new paradigm which recognizes the existence of an integrated World economy. Dr. Cox will address some of the aspects of new ways of doing business between industry and government and a shared vision for space.

DINNER MEETING

SOCIAL: 5:30
DINNER: 6:30
PROGRAM: 7:30

MENU: CAJUN CHICKEN

MEMBERS & SPOUSES	\$9.00
NONMEMBERS	\$10.00
STUDENTS/YOUNG MEMBERS	\$8.00

AIAA HOUSTON SECTION MEETINGS
ARE HELD AT THE JOHNSON SPACE CENTER
ROBERT R. GILRUTH RECREATION CENTER

FRANKIE HAP
333-6064
LOCKHEED

ARDELL BROUSSARD
283-1040
McDONNELL DOUGLAS

KIM WUNSCH
483-1350
RSOC

SARAH LEGGIO
282-3160
BENDIX

NOTE: RESERVATION DEADLINE IS MONDAY, SEPTEMBER 27, AT 12:00 NOON.
ANY CANCELLATIONS ARE REQUIRED PRIOR TO DEADLINE. NO-SHOWS WILL BE BILLED.
ALL ARE WELCOME.
DINNER RESERVATIONS ARE NOT REQUIRED FOR ATTENDING THE PROGRAM ONLY.