

HORIZONS

Houston, Texas

October 1991

Chairman's Corner

Dr. Zafar Taqvi
Chairman

Your section is progressing well! We have submitted four applications for section awards based on last year's activities: Newsletter, Membership, Public Policy and Section. We completed the Annual Section Report and Audit Report and sent them on time to Region.

Our budgeting and yearly goal setting was completed. Now each activity of the section has a price tag identified. The schedules for many of these activities have already been defined; the rest are being worked out.

An ad hoc committee for personnel search, headed by Councillor Marv White, completed its task and has been dissolved. It did a fine job in identifying committee personnel. A new ad hoc committee, headed by Councillor Emyré Robinson, has been formed to identify candidate nominees among our membership for various national awards. If you know of anyone deserving of national recognition, including yourself, please contact Emyré *immediately*.

I attended the fall AIAA Region IV meeting in Austin and picked up many innovative ideas. Following our planning, many sections in the region will conduct essay contests during the International Space Year.

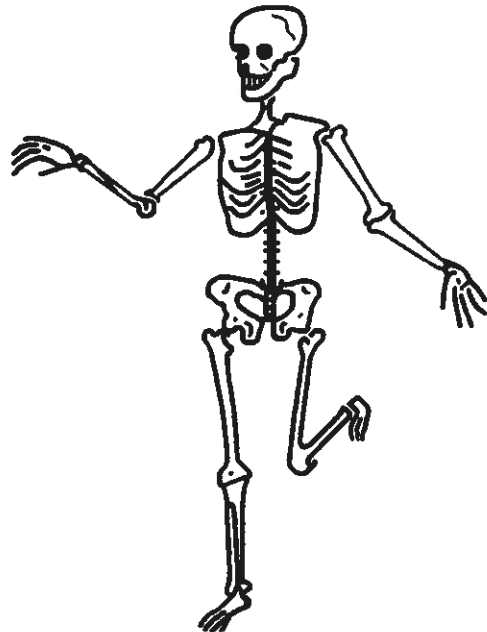
You will be pleased to know that your section is expanding its activities. Some forthcoming services will include special wallet cards and resumé writing/job search and aerospace study/research opportunity seminars. And, of course, an expanded number of technical activities.

I am sure the membership will avail itself of this opportunity to be part of the winning team.

See you next month.

In This Issue...

Chairman's Corner	1
Behind The Board	2
Who's Who	2
Committee News	3
Meeting Schedule	5
The Members Speak Out	6
Events	6
Technical Activities Calendar	7
National TC Members Sought	10
Houston Section Profile: Programs & Personnel	S-1



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 communications to the Chairman, Dr. Zafar Taqvi, LESC/C80, telephone 333-6544, fax 333-7620.



Behind The Board

Steve Zobal
Chairman-Elect

In this column I plan to share with you behind-the-scenes activities of your Houston Section Executive Board as it goes about conducting section business. Regularly scheduled board meetings are held on the Thursday preceding the ten monthly dinner meetings (published in the September *Horizons* issue). These meetings are conducted at the Lockheed Plaza 4 building at 2100 Space Park Drive from 5:00 to 6:30 PM and are open to all members. A typical agenda follows:

- Call to order & approval of minutes
- Reports and activities (past and future)
 - Chairman
 - Chairman-Elect
 - V-C, Technical committee status
 - V-C, Operations committee status
 - 30th anniversary
 - International Space Year
 - China/India
 - TQ/V
- Treasurer's report
- New business
- Other reports
- Adjourn

In addition to the internal section planning activities for the new year, several reports were prepared for submittal to the Region IV Director. These include the Annual Report by the outgoing Section Chairperson and the Section Budget & Audit. Meeting the Budget Audit due date of August 31 is required in order to receive a per capita rebate from AIAA National, distributed in October and January. Based on a 1200-plus section membership, we estimate about \$6500 in rebates for this operating year. Our Chairman appointed an audit committee and together with the outgoing and incoming treasurers, the Budget & Audit Report was prepared and submitted on time.

Next month I will bring you more on what's happening behind the scenes, including feedback from the recent Regional Advisory Committee (RAC) IV meeting in Austin. ☺



Who's Who

Chairman Honored

Dr. Zafar Taqvi, Houston Section Chairman, is one of four adjunct UH-CL faculty members awarded the title of University Adjunct. "It is an honor awarded only to those that have served the University of Houston-Clear Lake with distinction," the commendation noted.

Dr. Taqvi has also been appointed by Region 5 of the IEEE to the dual capacity of Regional Chapter Coordinator and Regional Technical Policy Coordinator. IEEE Region 5 consists of 22 regional IEEE sections over a seven-state area. The new assignment will involve providing organizational and planning support for 54 technical chapters, representing 23 technical societies within IEEE, and coordinating any technical policy issues. ☺

Notice! Achtung! Attenzione! ***etc.***

Lou Livingston
Editor

The mailing address for inputs to *Horizons* has changed. Material should be sent to Dr. Zafar Taqvi at LESC/C80 (or fax 333-7620). The change was made primarily to make my life a little easier, since Zafar's office is closer than Sarwar's, and I hate to give anyone an opportunity to see me work as hard as I can. If you prefer, you can send inputs directly to me at 16546 Ivy Grove, Houston, TX 77058.

Committee News

In-Space Imaging & Astronaut Observations TC

Dr. Kamlesh Lulla
Chairman, In-Space Imaging & Astronaut
Observations TC

An inaugural Lunch & Learn session was organized by Dr. Kamlesh Lulla, committee chairman, on September 10, 1991. Dr. Lulla discussed the objectives of the committee and encouraged the audience to take an active part in the committee's deliberations.

A presentation entitled "Engineering Analysis of Space Shuttle Launch and Landing Imagery Using Advanced Image Processing Techniques" was given by Dr. David Pitts, Chief of the Flight Science Support Office at JSC. Dave showed a 15-minute video on JSC's Photo/TV Analysis Project as an introduction to his talk. He then discussed the use of the Video Data Analysis System (VDAS) for Shuttle launch and landing imagery from several hundred photo and TV cameras, and applications of texture analysis in the image processing sciences. There was a lively discussion following the presentation and several participants expressed interest in attending future Lunch & Learn talks of the committee.

To Be Or Not To Be

Michael Laible
Chairman, Space Systems TC

Once upon a time there was a flourishing committee called the Space Systems Technical Committee (SSTC). It used to meet once a month at a local establishment for mingling, conversation, planning and general comradery. The total attendance used to reach ten to twelve participants per meeting. Monthly Lunch & Learns were held with a distribution list containing hundreds of names.

Then something strange happened. People started disappearing, until one year no one existed. The committee was thought to be extinct. Well, one member has been found and is being nurtured back to life. The SSTC has just been removed from the endangered committee list. Lunch & Learns are being planned and in December the first monthly meeting will be held. Be looking for future flyers for times and dates.

Help save a dying breed. Call today to assist in the establishment of a strong SSTC. You can call Michael Laible (the struggling survivor) at 929-7320 during business hours.

Posters Available

Bill Geissler
Chairman, Membership Development & Retention

The Membership Development & Retention Committee is happy to announce that our new posters advertising the Houston Section are now available. It is the intention of the committee that these 17" x 13" eye-catching posters be placed in every on- and off-site building of the JSC community. The posters have a jacket for our membership application brochures and can also be used to display the monthly dinner meeting flyers.

The committee is looking for members to be monitors of these new posters in their respective buildings. Each poster has its own cardboard easel for standing on a table or counter. They can also be hung on a wall, or the committee will buy a wooden easel when appropriate for stand-alone display.

If you are interested in being a monitor, let us know by calling any one of the following committee members.

Bill Geissler - 333-6863
André Sylvester - 483-1537
Larry Guderian - 283-4183
Jim Visentine - 483-8923

Education & Professional Development

Dr. Clay Shadeck
Chairman, Education/Professional Development

The Education and Professional Development Committee has met three times to organize and plan activities for 1991-92. Its members and their roles are:

- Dr. Clay Shadeck - Chairman
- Dr. Zafar Taqvi - Co-Chairman
- Mallik Putchá - Joint activities with IEEE (live videos)
- Vince Maleche - Live presentations (tutorials)
- Sagar Vidyasagar - Joint activities with Management TC
- Dr. George Nield - Library video activities

Our first scheduled activity was a live video presentation, "Quality Management Approaches to the Malcolm Baldrige Award," jointly sponsored with IEEE and held September 19, 1991. Elsewhere in this *Horizons* is an article describing this and upcoming live videos. A second live video is scheduled in late October. If you have never been to one of the live videos, you should know it's not just three hours of listening. Come a little early for doughnuts and enjoy some light refreshments during the noon hour. The price also includes a nicely bound set of presentation notes. Please note that the times shown on flyers are usually Eastern Standard Time.

The committee is planning a number of other activities such as live tutorials, library videotape presentations (see "Wednesday Afternoon at the Movies" elsewhere in this issue), and additional live videos.

The committee is also trying to develop a videotape catalog. These would be tapes of technical tutorials or tapes about professional development. Tapes in the catalog would be available to AIAA members or groups at little or no cost. The committee will be

building a library of AIAA section tapes to be included in the catalog. We are looking into other tape sources, e.g., NASA libraries, university libraries, other professional organizations, etc. If you know of a tape library which might be available to AIAA members, please contact Dr. Clay Shadeck at 280-2701 or fax 488-1092. Also, we have the opportunity to suggest topics for IEEE videos. If you have any technical topics you would like to see put on video, please let Dr. Shadeck know. ☺

From Our Sister Section in China

Jim McLane
Sister Section Coordinator - China

Mr. Song Yun Peng, Secretary General of the Shanghai Astronautical Society, has provided us with the following summary of activities of our Sister Section. Unfortunately, this arrived too late to meet the last *Horizons* deadline before our summer recess. We print it here according to my personal creed of "better late than never." The translation is by Tai Ling Lee of the International Space Activities Committee.

Shanghai Space Activities for 1990-1991

The following are the major seminar topics of 1990:

1. Overview of the light solenoid model.
2. Analysis of the solid generator model.
3. Metallic elements surface nitrogen.
4. Introduction of the new generator solder or welding equipment.
5. "Fengyun-1" satellite moved in orbit for 90 days.
6. Use of infrared-ray instruments.
7. Research on solar energy satellite battery.

1991 Space Activities Schedule:

1. Presentation of Best Paper Award.
2. International meeting exchanging space information using English.
3. Space knowledge contest.
4. Space summer camp.

(Continued on page 5)

From Our Sister Section In China (cont.)

November Lunch & Learn

Mr. Zhang Zangmao, Deputy Director, Quality Assurance Bureau of the Ministry of Aerospace Industry of China, will speak to a Houston Section Lunch & Learn on Friday, November 8, 1991. The subject of his talk will be "Recent Advances in Quality Management and Standards in the Aerospace Industry in China."

Mr. Zhang will be visiting Houston with an MOAI delegation to attend the Eighth Annual NASA/Contractors Conference and 1991 National Symposium on Quality and Productivity at the George R. Brown Convention Center on November 6-7. Before arriving in Houston, the group will meet with the AIAA Administrator of Standards, Mr. Harry Sheets, in Washington, D.C. See the separate flyer for details including time and place of this meeting.

Help Wanted

Our committee needs help in translating printed Chinese *technical* documents into English for publication in *Horizons*. If you have this special talent and would like to give a few hours of your time occasionally to AIAA, please call me at 488-0312. We have some dictionaries and an aerospace encyclopedia that may help you in this undertaking.

Automation & Robotics

Dr. Zafar Taqvi
Chairman, Automation & Robotics TC

The Automation & Robotics TC will hold a planning meeting on Wednesday, October 16, 1991, from 11:30 AM to 1:00 PM. Location is TBD.

The committee will also hold a robotics seminar at the JSC Gilruth Center, room 204, on Wednesday, November 6, 1991. Speaker and topic are TBD.

For information on either meeting, call Dr. Zafar Taqvi at 333-6544.



October Dinner Meeting

Norm Chaffee
Chairman, Programs & Events

Don't forget to make reservations for the dinner meeting October 24. The speaker will be Dr. Michael B. Duke, Program Scientist in the JSC Lunar and Mars Exploration Program Office. He will be speaking on "Lunar Outpost Concepts."

Dinner and Special Meeting Schedule

Following are Houston Section meetings for the rest of the 1991-92 year.

<u>Date</u>	<u>Program</u>	<u>Horizons Inputs Due</u>
Oct. 24, 1991	Dinner - Dr. Michael Duke	Sept. 20, 1991
Nov. 13, 1991	Dinner - TBD	Oct. 11, 1991
Dec. 12, 1991	Dinner - Director's Reception	Nov. 8, 1991
Jan. 23, 1992	Dinner - TBD	Dec. 20, 1991
Feb. 13, 1992	Dinner - Houston Section 30th Anniversary	Jan. 10, 1992
Feb. 27, 1992	International Space Year	—
Mar. 11, 1992	Dinner - TBD	Feb. 6, 1992
Mar. 14, 1992	Workshop on Automation & Robotics (WAR)	—
Apr. 9, 1992	Dinner - International Space Year	Mar. 6, 1992
May 20, 1992	Annual Technical Symposium	Apr. 16, 1992
Jun. 4, 1992	Dinner - Honors and Awards	May 1, 1992

The Members Speak Out

Lou Livingston
Editor

[Opinions expressed in this column are those of the correspondents and the columnist. They do not necessarily represent the position of the AIAA or of the Houston Section.]

I feel compelled to respond to several letters written recently. I do not want to belabor this point longer than necessary, but as a member I must speak out. I have listened to the moaning and groaning for four months about the one-candidate-per-office nomination that happened on the 1991 election ballot. All I have to say is very simple. I said it during my closing speech at the 15th Annual Technical Symposium, and I'm sure several prior committees have expressed what I am about to say. It takes involvement to run a successful not-for-profit organization. Involvement would, has in the past, and will in the future produce a full ballot for elections. I feel the process is good and would suggest if there is an error, it's in the members' involvement.

Truthfully speaking, to all the people complaining: where were you at nomination time?

Thank you.

Michael R. Laible

Events

Wednesday Afternoon at the Movies

Dr. Clay Shadeck
Chairman, Education & Professional Development

Under the auspices of the Education and Professional Development Committee, the Houston Section is starting a new activity this year. On the third Wednesday of every month, there will be a presentation of one or more videotapes that are of interest to the aerospace community. The presentations

will be held at JSC, building 1, room 820, starting at 4:15 PM. Most of the films last 20 to 30 minutes. Come on by on your way home from work and enjoy some classic cinema!

Our first showing will be October 16 and will feature "Go for Sep: The Space Shuttle Approach and Landing Tests." It includes air-to-air and ground-based photography, and tells the story of the ALT program from the initial delivery of the Enterprise to the successful completion of the flight test series.

The schedule for the year is shown below:

- October 16 - "Go for Sep: The Space Shuttle Approach and Landing Tests"
- November 20 - President Kennedy's "We choose to go to the moon in this decade" speech
- December 18 - "Space Flight: The Application of Orbital Mechanics"
- January 22 - "America's Wings"
- February 19 - "SMS Tour"
- March 18 - "Preparation and Packaging of Food for Space Flight"
- April 22 - "Research Project X-15"
- May 20 - "Shuttle Flow at KSC"

If you have any questions, please call George Nield at 483-1364.

IEEE Videoconference Held

AIAA cosponsored an IEEE videoconference on September 19, 1991, at the JSC Gilruth Center. The subject was "Quality Management Approaches to the Malcolm Baldrige Award." The conference emphasized the approaches the leading companies used to significantly improve efficiency and increase profits. The presenters from 1990 Malcolm Baldrige Award winners (IBM/Rochester, Federal Express, Cadillac Motor Car Division, and Wallace Co.) outlined their company's approach and ways to use the Baldrige criteria to evaluate quality improvement.

The next IEEE/AIAA cosponsored videoconference, "Software Testing and Reliability," will be October 30, 1991, at the Gilruth Center from 10:30 AM to 2:00 PM (Houston time). For additional information, please contact Mallik Putcha at 282-7244 or Andy Lindberg at 483-1474.

September Dinner Meeting A Success

Lou Livingston
Editor

The first dinner meeting of the 1991-92 year was held September 26 at the JSC Gilruth Center. This was a joint meeting with the IEEE. Attendance was 175 for the dinner, plus 18 that came later for the talk, which is the best turnout this reporter can recall for several years. For the few of you who weren't there, it was a very successful, enjoyable get-together. Many of us, particularly the retirees, saw quite a few people we hadn't seen for a long time.

The speaker was Richard Kohrs, Deputy Associate Administrator for Space Station Freedom (SSF). He began to a round of applause at the announcement that Congress had approved the full funding request for SSF. The discussion centered on the challenges that the program has faced within the last few years. Principal among these was excessive cost. Two criticisms were especially damaging to the general perception of the program: the excessive amount of EVA required for assembly, and the weight/power crunch that became evident at the Preliminary Design Review. The NASA/industry team responded well to the challenges, producing a smaller station. Even with the reductions, however, a comparison drawing (to scale) showed the current SSF still substantially larger than either Skylab or the Soviet Mir station.

The widespread idea that the station would be useless for scientific purposes was harder to overcome. Dr. Allen Bromley's favorable statements were singled out as a major factor in the recovery.

He noted that by the end of this fiscal year, half of the \$16.1 billion total development cost will have been spent; in other words, a complete restart of the program, which is sometimes proposed, would be wasteful.

He cautioned, however, that solid progress must be made this year if Congressional support is to be maintained. One way is to produce some hardware by shortly after CDR. The program is perceived by some, rightly or wrongly, as inefficient; this must also be addressed.

Finally, he thanked the audience and the community for its support in letting Congress know what they thought, and urged that this support be continued. ●

Technical Activities Calendar

Bill Best
CLCTS Coordinator

October

1 - Tuesday

American Society for Quality Control (ASQC).
Program TBD.

American Host Motel, 2020 NASA Rd. 1, 5:00/6:00/
7:00.

Information: Hank Williams, 338-2676.

2 - Wednesday

JSC Astronomy Seminar.

"Report on the Mars Surface & Atmosphere Through
Time Workshop," Dr. Nadine Barlow.

JSC Bldg. 31, Rm. 129, noon to 1:00 PM.

Information: Al Jackson, 333-7679.

(Continued on page 8)

Technical Activities Calendar (cont.)**October (cont.)****3 - Thursday**

Clear Lake Area SigAda Executive Council Meeting.
Tindy's, 18307 Egret Bay Blvd., 11:45 AM.
Information: Paul Kennedy, 282-6262.

7 - Monday

NASA Area Macintosh Users (Group) "NAMU."
Tentative: Fifth Generation Systems, Inc.
RSOC Cafeteria, 600 Gemini, 7:00 PM.
Information: 488-2262.

8 - Tuesday

LPI Brown Bag Series.
"In The Wheeltracks of Sedgwick & Murchison:
Picturing the Lower Paleozoic in Wales," Graham
Ryder, LPI.
LPI, 3303 NASA Rd. 1, Hess Room, noon - 1:00 PM.
Information: Dr. Deborah Dominique, 486-2167.

9 - Wednesday

CLCTS monthly meeting.
Lockheed Plaza 3, 1150 Gemini, 11:45 AM.
Information: Andy Lindberg, 483-1474.

JSC Astronomy Seminar.

"Report on the Near Earth Asteroids Meeting," Dr.
Greg Ojakangas.
JSC Bldg. 31, Rm. 129, noon to 1:00 PM.
Information: Al Jackson, 333-7679.

11 - Friday

LPI Colloquium Series.
"Compositional Analysis From Reflectance
Spectroscopy," Marcia Nelson, Lunar & Planetary
Laboratory (LPL).
LPI, 3303 NASA Rd. 1, Berkner Room, 3:30 PM.
Information: Dr. Deborah Dominique, 486-2167.

15 - Tuesday

LPI Colloquium Series.
"Ultraluminous Infrared Galaxies: Evidence for Super
Massive Black Holes?," J. Bland-Hawthorne, Rice
University.
LPI, 3303 NASA Rd. 1, Berkner Room, 3:30 PM.
Information: Dr. Deborah Dominique, 486-2167.

16 - Wednesday

JSC Astronomy Seminar.
"Report on the Mars Surface & Atmosphere Through
Time Workshop," Dr. Nadine Barlow.
JSC Bldg. 31, Rm. 129, noon to 1:00 PM.
Information: Al Jackson, 333-7679.

Houston Space Business Roundtable monthly
luncheon.

Program TBD.
Doubletree Hotel, 1 Allen Center, 11:30/12:00 noon.
Information: Beth Land, 480-0014.

17 - Thursday

Clear Lake Area SigAda membership meeting.
"Interfacing ADA to Network Software," Michael
Daniels, Loral.
Mario's Pizza, 618 NASA Rd. 1, Webster, 11:45 AM.
Information: Paul Kennedy, 282-6262.

IEEE luncheon meeting.

"Robotic Targeting Techniques," Leo Monford, JSC
New Initiatives Office.
JSC Gilruth Center, 11:30/12:00 noon.
Reservations: Marcia Taylor, 483-0195.

TSPE monthly meeting.

Program TBD.
Ramada King's Inn, 1301 NASA Rd. 1, 7:00 PM.
Information: 338-2966 or 485-2404.

AMIGA User's Group meeting.

Micro Search, 2402 Bay Area Blvd., 7:00 PM.
Information: Carroll Moore, 483-0259.

22 - Tuesday

Bay Area PC Organization (BAPCO) monthly
meeting.
"Network Systems," Steve Somer, Space Network
Systems, Inc.
League City Bank & Trust, 303 E. Main, 7:30 PM.
Information: Steve Medcalf, 554-2300.

23 - Wednesday

JSC Astronomy Seminar.
Open discussion.
JSC, Bldg. 31, Rm. 129, noon to 1:00 PM.
Information: Al Jackson, 333-7679.

October (cont.)**24 - Thursday**

AIAA dinner meeting.

"Lunar Outpost Concepts," Dr. Michael Duke, JSC.

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

Information: Dr. Sarwar Naqvi, 282-2767.

Society for Computer Simulation (SCS) monthly meeting.

Speaker: Frank Hughes.

Lockheed Plaza 3, 1150 Gemini, 11:45 - 12:45.

Information: Wade Webster, 282-6589.

25 - Friday

LPI Colloquium Series.

"Superheated Melts and Planetary Cores," Peter Jakes, LPI.

LPI, 3303 NASA Rd. 1, Berkner Room, 3:30 PM.

Information: Dr. Deborah Dominique, 486-2167.

28 - Monday

IEEE/CLCTS video conference.

"Software Testing and Reliability."

JSC Gilruth Center, 10:00 AM to 2:00 PM.

IEEE members \$50, CLCTS \$70, others \$80.

Information: Andy Lindberg, 483-1474.

30 - Wednesday

JSC Astronomy Seminar.

"The Liquid Mirror Telescope," Mark Mulrooney *et al.*

JSC, Bldg. 31, Rm. 129, noon to 1:00 PM.

Information: Al Jackson, 333-7679.

November**4 - Monday**

NASA Area Macintosh Users (Group) "NAMU."

Apple Computer.

RSOC Cafeteria, 600 Gemini, 7:00 PM.

Information: 488-2262.

6 - Wednesday

JSC Astronomy Seminar.

Open discussion.

JSC, Bldg. 31, Rm. 129, noon to 1:00 PM.

Information: Al Jackson, 333-7679.

8 - Friday

AIAA International Activities Committee event.

"Recent Advances in Quality Management and Standards in the Aerospace Industry in China," Zhang Zangmao, Deputy Director, Quality Assurance Bureau, Ministry of Aerospace Industry, PRC.

Lockheed Plaza 4, 11:00 - 12:00 noon.

Information: Jim McLane, 488-0312.

Please send additions, corrections and comments to:

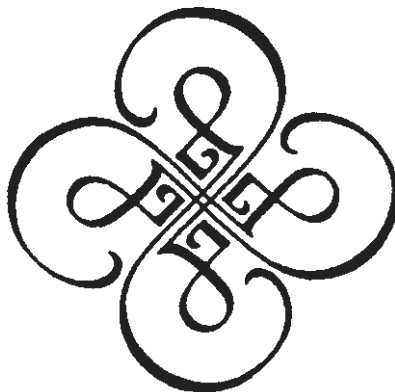
Bill Best/R12A

Rockwell Shuttle Operations Company

600 Gemini Ave.

Houston, TX 77058


Telephone 283-0261



Urgent Call for National TC Membership

The Houston Section wants to encourage section members to join national technical committees. There are 62 national TCs, each with 30 or more members selected nationally. Membership is for one year with an option for two additional years.

National TC members are required to attend two meetings per year and have endorsement from their employers for travel and support for committee business.

If you are interested in being considered for a national TC position, please fill out the preliminary form and return it to Dr. Zafar Taqvi (LESC/C80 or fax 333-7620) by October 15, 1991. 

1991-92 AIAA National Technical Committees

Aeroacoustics	Digital Avionics	Nuclear Thermal Propulsion
Aerodynamic Decelerator Systems	Economics	Plasmadynamics & Lasers
Aerodynamic Measurement Technology	Electric Propulsion	Propellants & Combustion
Aerospace Maintenance	Flight Simulation	Sensor Systems
Aerospace Power Systems	Flight Testing	Society & Aerospace Technology
Air Breathing Propulsion	Fluid Dynamics	Software Systems
Air Transportation Systems	General Aviation Systems	Solid Rockets
Aircraft Design	Ground Testing	Space Automation & Robotics
Aircraft Operations	Guidance, Navigation & Control	Space Operations & Support
Applied Aerodynamics	History	Space Processing
Artificial Intelligence	Interactive Computer Graphics	Space Sciences & Astronomy
Astrodynamics	Legal Aspects of Aeronautics & Astronautics	Space Systems
Atmospheric Environment	Life Sciences & Systems	Space Transportation
Atmospheric Flight Mechanics	Lighter-Than-Air	Structural Dynamics
Balloons	Liquid Propulsion	Structures
Command, Control, Communications & Intelligence	Management	Support Systems
Communications Systems	Marine Systems & Technology	Survivability
CAD/CAM	Materials	Systems Effectiveness & Safety
Computer Systems	Missile Systems	Technical Information
Design Engineering	Multidisciplinary Design	Terrestrial Energy Systems
	Optimization	Thermophysics
		V/STOL Aircraft Systems

Name: _____

Telephone: _____

Company/
Organization: _____

Position: _____ Age: _____

Technical Committee Interest: _____

Return to Dr. Zafar Taqvi, LESC/C80, by October 15, 1991



Houston Section Profile: Programs and Personnel

This supplement to the October *Horizons* describes the Houston Section: what it's trying to do, how it's organized, and who's involved. It is arranged so that it can be separated from the rest of the issue if you find it convenient to keep it apart from the monthly *Horizons*.

The section has defined a number of goals for the 1991-92 year, as noted above by the Chairman. These are summarized in bullet form on the following page; many are covered in more detail in the committee discussions.

An overall organization chart of the section is also included.

The descriptions of Houston Section committees include the general objectives of the committee; specific goals the committee hopes to achieve during the 1991-92 section year; and, for the chair and co-chair, names, mailing addresses, telephones, fax numbers (if any), and very brief biographical sketches where available.

From the Chairman

**Dr. Zafar Taqvi
Chairman**

The idea of "Section Profile: Programs and Personnel" is unique to the Houston Section. In the evolution of this issue of *Horizons*, we have considered not only the visibility of section programs and personnel, but have streamlined their effort in early planning of their activities.

Early planning of annual section activities in summer will, we believe, help provide better services to the membership and at the same time reduce the level of committee personnel effort during the rest of the year.

We have to meet the section goals for the year set by the Executive Board. We believe that all members of the section will participate in section activities and support committee personnel in implementing these goals.

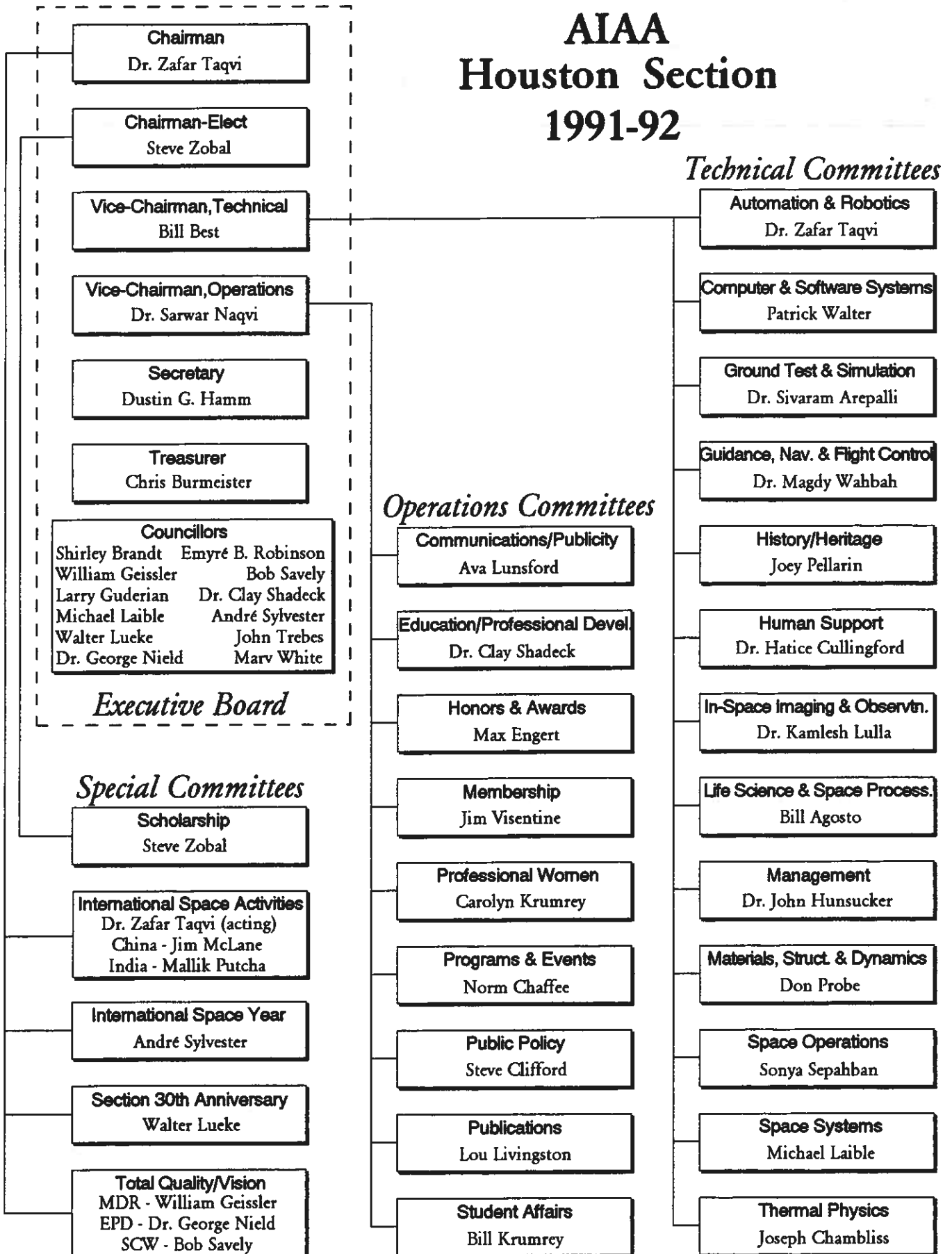
Chairman

Dr. Zafar Taqvi, LESC/C80, 333-5433, fax 333-7620. Dr. Taqvi is an advanced system engineering specialist. He has been at Lockheed for 22 years and has worked on the Apollo, Skylab, Shuttle and Space Station Freedom programs. He has served as Houston Section Councillor and as Program Chairman. He is founder and chairman of the Houston Section Automation & Robotics TC and coordinator of the Workshop on Automation and Robotics (WAR). He is an Associate Fellow of AIAA, a Fellow of the Instrument Society of America (ISA), and a Senior Member of IEEE. He has served as chairman of the local ISA and IEEE sections.

AIAA Houston Section Goals 1991-92

- Membership
 - 7% membership increase
 - 30 Senior Member upgrades
 - 8 Associate Fellows
 - One Fellow
- Education
 - Five video seminars
 - Continuing education material procurement/scheduling
- Publicity
 - Monthly section meetings
 - Committee activities
 - Special events
- Awards
 - Member of the Month
 - Annual Award Program
 - CLCTS nomination process
 - Special Service Certificates
- Monthly Dinner
 - Ten monthly meetings
- Public Policy
 - Organize forums
 - Coordination with AAS and others
 - Three white papers on "Aerospace Culture"
- Publications
 - Ten issues of *Horizons*, including Section Profile special issue
 - Monthly meeting and special event fliers
 - Wallet cards
- Student Activities
 - Enhanced student programs
 - Science Fair
- Scholarship
 - Conduct scholarship program
- Total Quality/Vision
 - Contact HQ
 - Line up national AIAA conferences and workshops
 - Recommend, facilitate corresponding technical/operational committees
- International Space Year
 - Hold seminar focusing on international space programs
- International Space Activities
 - Hold seminar focusing on U.S. space programs
 - Conduct essay contest
 - Conduct and participate in national events
 - Coordination with sister societies in China and India
- 30th Anniversary
 - Special Honor Program
 - Special souvenirs/pins

AIAA Houston Section 1991-92



Special Committees

International Space Activities

Chair (acting): Dr. Zafar Taqvi, LESC/C80, 333-5433, fax 333-7620.

China Section

Objectives: Serve as a focus for cooperative activities between the Houston Section and its Sister Section in China, the Shanghai Astronautical Society (SAS). Sponsor, arrange and coordinate a wide spectrum of activities designed to meet the broad objectives of the Sister Section proclamation, *viz.* fostering goodwill and understanding between the two sections. Typical activities may include, but are not limited to:

1. Exchange of appropriate publications
2. Exchange of videotaped symposia
3. Arranging for special programs and administrative support for visiting members of the SAS and its parent organization, the Chinese Society of Astronautics
4. Planning and organizing visits by section delegations to China
5. Other appropriate activities as may be approved by the Houston Section Executive Board.

Coordinator: James C. McLane, Jr., 1702 Fairwind, Houston, TX 77062, 488-0312. Mr. McLane retired from JSC as Chief, Space Environment Test Division and is now a consultant. He has served as Chairman of the Houston Section and AIAA Region IV Director, and has been Sister Section Coordinator for China since 1987.

India Section

Objectives: Exchange general information on how India's educational and aerospace industry foster technical education and research and development in aeronautics and astronautics. Exchange local newsletters, journals of interest, and activities information with the Bangalore Branch of the Aeronautical Society of India.

Coordinator: Mallik S. Putcha, IBM/6066, 282-7244. Mr. Putcha is in the Systems Engineering Group at the MDSSC Avionics Development Facility. He is an AIAA Associate Fellow and has served as Houston Section Secretary, Councillor, and Operations Chairman of the AIAA Invited Lecture Series.

International Space Year

Objectives: To create programs to:

1. Increase awareness of U.S. and international space achievements on the part of the general public and, in particular, increased space awareness at the junior high/high school level
2. Provide information on international space programs to Houston Section members
3. Provide local coordination/support of activities associated with AIAA National ISY events.

Goals:

1. A monthly column for *Horizons* to keep membership informed of ISY activities.
2. A calendar of ISY events will be compiled and, at a minimum, published in *Horizons*. If funding can be obtained, large quantities can be distributed in the Clear Lake/Houston area.
3. An essay contest will be established with high school and junior high classifications. Topics will emphasize how the students might see space affecting their lives. Top winners will be brought to JSC in April 1992 for a special presentation of their papers and receipt of awards. The event will be videotaped for distribution on NASA Select and PBS networks.
4. A seminar on international space programs will be held at JSC in February 1992. Representation or material will be present from major/minor space participants.

Chair: André Sylvester, JSC/ER5, 483-1537, fax 483-5810. Mr. Sylvester has served as Houston Section Chairman.

Scholarship

Objective: Conduct scholarship program.

Chair: Steve Zobal, MDSSC/B115, 283-4246.

Section 30th Anniversary

Objective: Celebrate the Houston Section's 30th anniversary.

Goals: Hold celebration at February 13, 1992, Houston Section dinner meeting. Honor and remember past and present section members and events. Distribute commemorative memorabilia - pins, pictures, brochures, etc.

Chair: Walter Lueke, JSC/ES361, 483-5939. Mr. Lueke has served as Chairman of the Houston Section.

Total Quality/Vision (TQ/V)

Objective: Provide total quality/vision planning for section activities, setting long range goals, devising means for their implementation and providing periodic updates. There are three subcommittees under TQ/V:

Symposia, Conference & Workshop (SCW)

Objective: Develop a 3 to 5 year section plan for section/regional/national symposia, conferences and workshops hosted by the Houston Section.

Chair: Bob Savely, JSC/PT41, 483-8105, fax 483-5200.

Education/Professional Development (EPD)

Objective: Develop a 3 to 5 year section plan for educational and professional development of the section membership via continuing education, tutorials, video conferences and other means.

Chair: Dr. George Nield, JSC/TM2, 483-1364, fax 483-8998.

Membership Development & Retention (MDR)

Objective: Develop a 3 to 5 year plan for section growth and the projected means of achieving it.

Chair: William Geissler, LESC/C87, 333-6863, fax 333-6908.

Operations Committees

Vice-Chairman, Operations

Dr. Sarwar Naqvi, RSOC/R15A, 282-2767, fax 282-4505.

Communications/Publicity

Goals: Send releases on monthly meetings to all contractor newsletters, local papers and NASA *Space News Roundup*. Assist in publicizing AIAA special events in the above papers.

Chair: Ava Lunsford, Bendix/B80A, 282-2888, fax 480-0362. Ms. Lunsford is Communications Manager for Bendix Field Engineering Corp. in Houston.

Education/Professional

Development

Objective: To provide educational and professional development opportunities to members of the Houston Section. Secondly, to provide similar educational opportunities to the local community.

Chair: Dr. Clay Shadeck, GE, 488-9005, fax 488-1092. Dr. Shadeck is the Director of GE Government Services' Houston Operations. He is an Associate Fellow of AIAA.

Honors & Awards

Objective: To nominate Houston Section members for major AIAA awards. Prepare section annual service awards and Technical Symposium awards.

Chair: Max Engert, JSC/EA, 483-3973.

Membership

Objective: To promote new member growth and membership retention through innovative programs and frequent contacts with AIAA Executive Council and corporate membership representatives.

Goals: Seven percent membership increase. Thirty Senior Member, eight Associate Fellow and one AIAA Fellow upgrades.

Chair: Jim Visentine, JSC/ES5, 483-8923, fax 483-2162.

Professional Women

Objective: To obtain greater participation from the women in the technical community in AIAA.

Goals: Increase AIAA membership among women in the technical community. Select at least one woman from the technical community as a speaker at an AIAA dinner meeting. Solicit/encourage women to present papers at the next technical symposium. Identify one woman from each of the local aerospace corporations as a focal point for soliciting/encouraging women to participate in AIAA. Provide a networking opportunity through AIAA for women in the technical community. Phase out the committee over a three to four year period, once membership and participation in AIAA by women in the technical community has reached a reasonable level.

Chair: Carolyn Krumrey, JSC/VF5, 483-5028, fax 483-2080.

Programs & Events

Objective: To arrange and organize monthly dinner meetings and other Houston Section events.

Chair: Norm Chaffee, JSC/ER, 483-9995, fax 483-3204. Mr. Chaffee has served as Houston Section Chairman.

Public Policy

Objective: To inform members of the Houston Section of national issues that affect the aerospace industry and the U.S. space program. To inform the general public of positions the AIAA may take on these issues following detailed study.

Goals: Host three or four panel discussions on space issues.

Chair: Steve Clifford, LPI, 486-2146, fax 486-2162. Mr. Clifford is a planetary scientist with a research interest in the climatic and dynamic behavior of water on the Earth and Mars.

Publications

Objective: Produce and distribute the Houston Section newsletter, *Horizons*, to the Section membership and other recipients. Produce and distribute flyers announcing meetings and events. Produce wallet

cards with addresses and phone numbers of officers and committee chairs.

Goals: Increased reporting of past events. Improved announcements of upcoming events. Wallet card availability at initial (September) dinner meeting.

Chair: Lou Livingston, 16546 Ivy Grove, Houston, TX 77058, 480-2086. Mr. Livingston, an AIAA Associate Fellow, is retired from JSC where he was involved in conceptual design and systems engineering.

Student Affairs

Objectives: Provide information and counseling on space programs to local schools. Support the Houston Science Fair with special awards. Support "college nights" at section meetings. Support local AIAA chapters and colleges. Arrange programs for young members.

Chair: Bill Krumrey, RSOC/R10C, 282-6685.

Technical Committees

Vice-Chairman, Technical

Bill Best, RSOC/R12A-130, 283-0261, fax 283-0241.

Goals (all TC's): Establish a dialogue between national and local TC's for each discipline. Try to get local TC members on the national TC's. Keep all the TC's active with Lunch & Learns, seminars, newsletter articles or other activities. Encourage section members to join a TC and get involved. Help the section put on another outstanding Technical Symposium next spring.

Automation and Robotics

Objective: To advance the technology and provide forums for consideration of techniques and applications of robotics and automation in aerospace systems which in future will demand systems with greater autonomy, efficiency, reliability and longevity.

Chair: Dr. Zafar Taqvi, LESC/C80, 333-6544, fax 333-7620.

Co-Chair: Donald Peterson.

Computer Systems

Objective: Focus on theory and practical application of computer science and software engineering principles for aerospace problems. Members are involved with the design, implementation and maintenance of computer hardware and software systems.

Chair: Patrick Walter, BAR/3600, 280-1997, fax 283-7900. Mr. Walter is involved in teaching and development in the areas of corporate systems, manufacturing/inventory control systems, expert systems, and automation of Shuttle payload documentation.

Co-Chair: Shirley Brandt, Grumman, 929-7183.

Ground Test and Simulation

Objective: To foster interest in the different aspects of testing of spacecraft components in ground-based facilities. To help the technical community to be current regarding the continuous development of diagnostic and simulation techniques at JSC and elsewhere. This will be done by means of seminar talks and technical meetings.

Chair: Dr. Sivaram Arepalli, LESC/C61, 483-5910.

Co-Chair: Dr. Luen Tam, LESC/C87, 333-7312.

Guidance, Navigation and Control

Objective: Increase member involvement in AIAA GN&C activities and technical meetings. Provide a forum for the analytical and operational techniques, devices and systems for navigation, guidance and flight control of vehicles with emphasis on JSC-related space projects. Coordinate and plan technical meetings for familiarization of members with latest technical issues in the area of GN&C. Make available to members related AIAA educational material for continued education and professional development.

Chair: Dr. Magdy Wahbah, MDSSC/B23, 283-4311, fax 283-4020. Dr. Wahbah manages to dynamics and control development group at the MDSSC Houston Division. He has performed and supervised work on spacecraft dynamics and control, space rendezvous, trajectory optimization and dispersion, and onboard GN&C development since 1987.

History/Heritage

Objective: To administer an AIAA Oral History Program aimed at capturing, for the historical record, the experiences and "corporate memory" of those instrumental to NASA's manned spaceflight program. Since many of these individuals are reaching retirement age or have already left the program, it is becoming more difficult for the current crop of young engineers and managers to benefit from a "mentor relationship" with their more experienced colleagues. The Oral History Program is intended to span partially this "generation gap."

Chair: Joey Pellarin, JSC/BY4/HEI, 483-6706, fax 483-2726. Ms. Pellarin is the archivist in the JSC History Office with responsibility for creating a large collection of documents relating to all of NASA's manned space flight programs.

Human Support

Objective: To promote an interest in interdisciplinary approaches to the development, testing, operation and analysis of human support equipment, systems, procedures and interfaces including intra- and extravehicular activities, lunar and Mars habitats, human factors, radiation and gravity countermeasures, nutrition and ecological components along with special instrumentation, automation and computer modeling/simulation applications.

Chair: Dr. Hatice Cullingford, JSC/XE111, 283-8229, fax 283-5818. Dr. Cullingford, an AIAA Senior Member, has chaired the committee since its inception in 1987. Her work experience includes all aspects of human support as described in the committee objectives.

Co-Chair: Dr. Michael Stanford, MDC, 283-6536.

In-Space Imaging and Observations

Objective: To advance the imaging sciences and technology for applications to space flight and space based activities. The primary focus will be on the integration of imaging systems with astronaut observations in order to monitor and analyze spacecraft launch and landing activities, monitoring spacecraft

components, documentation of in-cabin life support science experiments, and observations of the Earth and earth processes using the emerging imaging technologies.

Chair: Dr. Kamlesh Lulla, JSC/SN15, 483-5159, fax 483-2911.

Co-Chair: Dr. Richard Juday, JSC/EE621, 483-1486.

Life Science & Space Processing

Objective: Area of interest includes all aspects of the utilization of space flight for basic research on materials, applied research to obtain data to use for development of products and attendant processes that may be processed in space or to obtain data to use for process improvements on the technical and economic aspects of orbital research and manufacturing; and the equipment, technology and operations required to support these activities. Also of interest is the cooperation needed in the aerospace community to make space processing a permanent, economically self-sustaining activity.

Chair: Bill Agosto, P. O. Box 590004, Houston, TX 77259-0004, 486-9343.

Management

Objective: Understanding issues and solution of problems of interest to managers of organizations involved in aeronautics and aerospace.

Chair: Dr. John Hunsucker, Dept. of Industrial Engineering, University of Houston, Houston, TX 77204-4812, 749-2545, fax 749-2316. Dr. Hunsucker is the former head of the Engineering Management Graduate Program at the University of Houston. For the past seven years he has been working on a research grant for the Shuttle Program Office. He has published numerous papers on engineering management.

Co-Chair: Dr. D. C. Schultz.

Materials, Structures and Dynamics

Objective: Consider the interaction of aerodynamic, elastic, inertia and damping forces acting on aerospace vehicles, ground vehicles and other types

of structures. Involves design, analysis and testing of such vehicles and structures. A second objective is the systematic application of materials to aerospace, astronautic and missile systems and support systems.

Chair: Don Probe, LESC/B14, 333-6278.

Space Operations

Objective: Concerns itself with operations and technology developments for manned and unmanned missions both in earth orbit and planetary operations, and with space operation and support. Such support includes training, servicing, logistics, etc.

Chair: Sonya Sepahban, JSC/IA13, 283-5310.

Space Systems

Objective: To promote greater understanding of the development, application and operation of space systems, including space transportation, spacecraft, launch, orbital, superorbital and entry systems for manned and unmanned space missions.

Chair: Michael Laible, Grumman, 929-7320, fax 929-7333. Mr. Laible is involved in Space Station Freedom Engineering and Integration. He has worked at RSOC on Shuttle payload deployment and retrieval, and on the Tethered Satellite System. He joined AIAA as a student member, and most recently served as Houston Section Vice-Chairman, Technical in 1989-90.

Thermal Physics

Objective: Provide a forum for the dissemination of new information on thermal systems and design developments.

Chair: Joseph Chambliss, LESC/C70, 333-6713, fax 333-7620. Mr. Chambliss, an AIAA Associate Fellow, is a project manager working on Space Station Freedom thermal control and life support. He has been involved in Orbiter thermal and life support and advanced work since 1974 with Lockheed, Rockwell and McDonnell Douglas.

Horizons

Lou Livingston
Editor

This supplement seems an appropriate place to set forth our editorial policy, since it may not be clear to everyone that one exists.

First of all, policy is established by the Executive Council, not the editorial staff. The elected officers of the Section have the final responsibility, and the final authority.

The principal issue is what we print and what we don't print. In brief, submissions for publication fall into three categories: mandatory inclusion, optional inclusion, and mandatory exclusion.

The first category includes policy statements by Section officers (normally the Chairman), notices of upcoming events, reports of past events, calls for volunteers and/or participation, and committee activity and status reports. A few AIAA National items, such as election reminders, fall in this group. Time-critical items get priority if space is limited, but space is rarely a constraint. Style and grammar, but not content, may be edited.

The first category also includes letters from Section members to The Members Speak Out (TMSO) as long as they are related to AIAA or aerospace and do not fall within the exclusions of category three below.

The second category includes AIAA National activities, technical articles, aerospace news, news of individual Section members, and professional advancement and development other than AIAA. In all cases, the constraints of category three apply. Lengthy commentary or opinion on aerospace and/or AIAA issues that doesn't fit TMSO also may go here. If the item has a reasonable relationship to the interests of some or all Section members, we'll try to include it if space is available.

The third category includes political statements or opinions and promotion of personal products or publications. These will not be published even though they may pertain to AIAA.

Submissions generally come from the committee chairperson or other individual cognizant of the activity; however, sources aren't restricted to such individuals. Section members have preference, but submissions in the second category from non-members may be accepted at the editor's discretion.

Articles from members are strongly encouraged; finding something to print has been the hardest part of this job. It's an easy way to participate in Section activities because an extended commitment of time isn't necessary, and it enhances the value of *Horizons* to you and to the rest of the membership.

OUTSTANDING SECTION AWARD

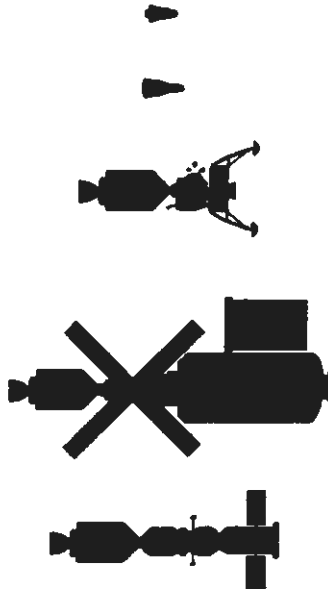


1975-1976
1976-1977
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1983-1984
1986-1987
1988-1989

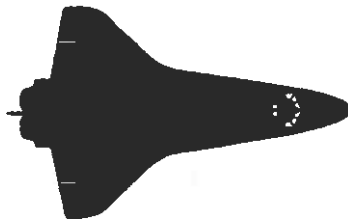
SECTION SPECIAL EVENT AWARD



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



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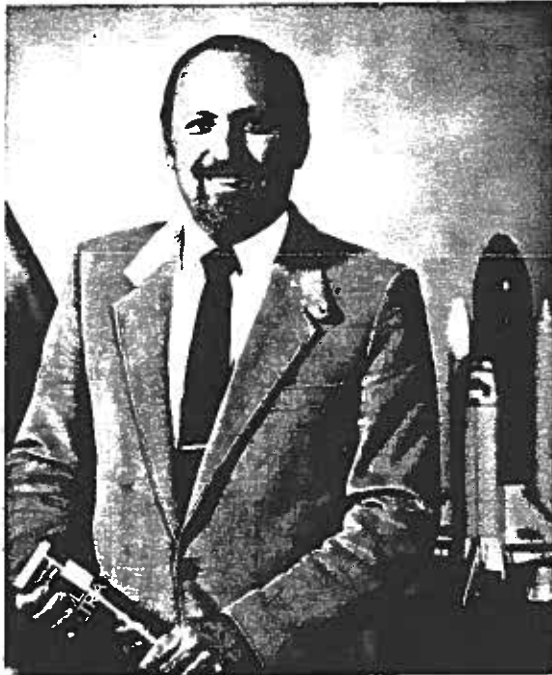
ZAFAR TAQVI - CHAIRMAN 1991-92

Thursday, October 24, 1991

LUNAR OUTPOST

Dr. MICHAEL B. DUKE

**DEPUTY FOR SCIENCE
LUNAR AND MARS EXPLORATION
PROGRAM OFFICE
JOHNSON SPACE CENTER**

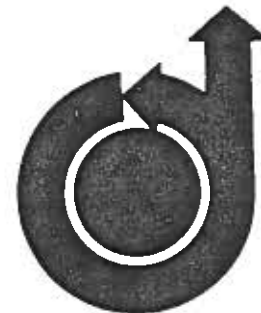


PRESENTER

Dr. Duke has been active in lunar science research and the future exploration of the Moon for over 25 years. Since 1977, he has been involved with the development of concepts and rationale for the utilization of resources of the Moon to enable the development of new activities in space. Since 1981, he and his colleagues at JSC have led efforts to define and develop concepts for the establishments of lunar bases as a major objective of post-SSF NASA initiatives. He was the organizer of the 1st Symposium of Lunar Bases and the Space Activities of the 21st Century, in 1984, which has been continued with a second Symposium in 1988. In 1988, he served as Director for Science Studies in the NASA Headquarters Office of Exploration. He serves on the Solar System Exploration Subcommittee and on the Aerospace Medicine Advisory Committee of the NASA Advisory Council.

Guest Host

Dr. James M. Vanderploeg
General Manager
KRUG Life Sciences Inc.-Houston Div.



DINNER MEETING

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

MENU: CHICKEN CACCIATORE

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	SANDY	ARDELL	CARROLL	SARAH
333-6064	845-0735	283-4214	283-6000	282-3160
LOCKHEED	COLLEGE STATION	McDONNELL DOUGLAS	EAGLE	BENDIX

**NOTE: THE DINNER RESERVATION DEADLINE IS MONDAY, OCTOBER 21, 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.

