

HORIZONS

Houston, Texas

January 1992

Chairman's Corner

Dr. Zafar Taqvi
Chairman

We have reached the halfway point of the 1991-92 Section year. Even though we have not accomplished 50% of our goals, we are on a "momentum" trajectory. The operational machinery is in full gear and by June, we are sure to overshoot our expectations. Membership increase, Senior Member upgrade in large numbers, membership recognition, innovative educational programs and special events will highlight our achievements.

What is coming up for the next six months will keep all of us busy. International Space Year activities (essay contest, exhibits), the Section's 30th Anniversary Gala Celebration on February 27, WAR'92 workshop on March 12, the Human Support Symposium (tentatively in March) and the Annual Technical Symposium on May 20 are some of the activities that we should look forward to. Our technical committees are also planning a very busy schedule for the remaining six months.

Let us participate!



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

Committee News

TCs Busy

Bill Best
Vice-Chairman, Technical

The Technical Committees have done a fine job so far this year. Members who have not attended a Lunch & Learn have missed opportunities to pick up some useful information disseminated by some outstanding presenters. Watch in the *Roundup* and *Horizons* and for fliers announcing more Lunch & Learns. ●

In-Space Imaging L&L

Dr. Kam Lulla
In-Space Imaging & Astronaut Observations
Chairman

The In-Space Imaging & Astronaut Observations TC had a very successful November 19 Lunch & Learn program on "The NASA Electronic Still Camera Project" by Doug Holland, JSC Project Engineer from the Man Systems Division. Mr. Holland discussed the development of digital camera systems at JSC and gave a brief synopsis of current electronic still camera flight plans on STS 42. Future issues related to electronic and optical integration were discussed. The program was well attended, with over thirty participants, and there was a lively question-and-answer session at the end. Dr. Lulla organized and chaired the program. ●

Management L&L Held

Suzan Voss
Engineering Management TC

The Engineering Management TC sponsored a Lunch & Learn on November 6, 1991, on the Deming-Taguchi Approach to Total Quality Management. The speaker was Dr. M. S. Rajaram from the Cullen College of Engineering, University of Houston. Deming's approach stresses that quality management means continual improvement and quality results in reduced costs and improved productivity. The Taguchi method utilizes orthogonal designs for sampling and builds a loss function which measures the loss due to deviation from the target value. ●

Plan Ahead for WAR '92

Dr. Zafar Taqvi
Automation & Robotics Chairman

The Automation & Robotics TC will hold its popular annual one-day Workshop on Automation & Robotics (WAR) on Thursday, March 12, 1992, at the Gilruth Center. The tentative theme is "Terrestrial Automation vs. Space Automation." The workshop will also include a tutorial. Some noted speakers are expected to participate. Details will appear in next month's *Horizons*. ●

ISAC Meetings Set

The International Space Activities Committee will meet on Wednesday, January 22, and Wednesday, February 12, at 11:30 AM. All members interested in ISAC should contact Dr. Zafar Taqvi at 333-6544. ●

3rd floor Conference Room
Lockheed Plaza 4

ISY Commemorative Tour of Chinese Space Installations

Jim McLane
ISAC - China Section

At its meeting on December 5, 1991, the Houston Section Executive Council gave the go-ahead for formation of a Technical Delegation to tour Chinese space installations. Conceived as a part of Houston Section's celebration of the International Space Year, membership on the delegation is open to all AIAA members, with priority going to those from Houston Section and accompanying members of their immediate families. The visit will be officially hosted by the Chinese Society of Astronautics, which is making all arrangements in China.

The group is scheduled to leave Houston next May 1 and return on May 15. Places to be visited include Beijing, Chengdu, the Xi-chang launch site, and Shanghai, the location of Houston's Sister Section. A busy schedule of technical activities will be supplemented by visits to principal tourist attractions and evening cultural events. A separate program of sightseeing and shopping will be provided for accompanying non-technical spouses.

Plans for the tour are rapidly being completed, and details should be available by the time this issue of *Horizons* is mailed. If you are interested in joining this group, call Jim McLane at 488-0312 to be placed on the mailing list for further advisories.

Section Growth Studied

Jim Visentine
Membership Chairman
Joey Pellarin
History/Heritage Chairman

For some time now, the History and Membership Committees have been working together to compile historical data on the growth of the Houston Section from its inception in 1962 until the present. The results of these studies provide interesting insights into the ups and downs of the Apollo, Shuttle and Space Station programs and seem to parallel our national commitment and Congressional funding quite well.

For those of you who consider such trends interesting, the results of our studies will be made available in the upcoming February *Horizons*.

Science Fair Judges Wanted

The Houston Section needs 30 members to judge Science Fair projects during the February event. It is a rewarding activity. Interested members please contact Dr. Zafar Taqvi at 333-6544.

A Senior Member upgrade form is included again this month, complete with signed references. Many of you qualify (eight years of professional practice, including up to four years of work toward advanced degrees). Quit thinking about it and *do it*.

Who's Who

Membership Up

Jim Visentine
Membership Chairman

I am pleased to report that our AIAA membership has increased last month by 20 new members. Our membership now stands at 1,263 professional engineers, managers and scientists, with AIAA grade distributions assigned as follows:

- Members 910
- Senior Members 198
- Associate Fellows 144
- Fellows 11

On behalf of our Membership Committee and the Executive Council, we offer our assistance to following new members and extend to each of them a warm "welcome aboard!"

Charles Anderson	Joseph Kosmo
Manuel Avila	Allison Kruest
Donald Baumbach	Shawn Linam
David Flanagan	James Loman
Robert Flaughner	Jan Martinez
David Forrest	Stanley Moorehead
George Hall	John Phillips
Michael Hamilton	Lawrence Seidman
Robert Henson	Linda Seidman
Elizabeth Huskey	Phillip West

Awards to Section Members

Max Engert
Honors & Awards Chairman

Our Section's progress reflects outstanding work by our members. The Awards Committee is pleased to select the following individuals as Member of the Month recipients for their outstanding work in fulfilling the goals of the Houston Section.

October: Dr. Clay Shadeck "for streamlining Section educational activities."

November: Jim McLane "for coordinating China Sister Section activities and hosting the Chinese delegation."

December: Lou Livingston "for timely publication and quality Section newsletter *Horizons*."

The Member of the Month for January will be announced at the January dinner meeting. ☉

Dr. Lulla Receives Award

Dr. Kamlesh Lulla, Chairman of the Houston Section's In-Space Imaging and Astronaut Observations TC, received the 1991 Distinguished Alumni Award from Indiana State University for his contributions to the science and technology of earth remote sensing. The award was presented on October 29 at Indianapolis by the President of the University, Dr. Landini. ☉

Student Affairs Needs Chairman

Bill Krumrey, Chairman of our Student Affairs Committee, has stepped down from that position due to changes in priority. However, he will continue to spearhead Science Fair activities.

Anyone interested in this committee should contact Dr. Zafar Taqvi at 333-6544 *immediately*. We need to fill this position by January 20. ©

Events

Houston Section 30th Anniversary Dinner Set

Walter Lueke
30th Anniversary Chairman

The 30th anniversary of the AIAA Houston Section will be celebrated at the monthly dinner meeting on Thursday, February 27, 1992 in the JSC Gilruth Center.

Make plans to attend! Make your reservations early by calling Walter Lueke at 483-5939. Three hundred 30th Anniversary lapel pins have been ordered and will be given to those members who attend the dinner while the supply lasts! Space artist Pat Rawlings has created a special Houston Section 30th Anniversary poster which will be given to all who attend the dinner while the supply lasts. Dr. Zafar Taqvi, Section Chairman, will serve as Master of Ceremonies for the evening.

Dr. Taqvi is inviting all AIAA Houston Section Honorary Fellows, Fellows, and Past Chairmen to the Anniversary Dinner. Representatives from AIAA National and Regional have been invited along with special guests from the JSC community. During the program, these distinguished AIAA members and special guests will be recognized. Highlights of the accomplishments of the Houston Section over the past thirty years, as well as future plans, will be presented.

The dinner program will also feature an inspiring presentation by artist Pat Rawlings. An exhibition of Pat's space art, including the special 30th Anniversary poster, will be on display during the evening. Pat's recent work includes a cover for the December 1991-January 1992 issue of the Smithsonian's *Air & Space* magazine. That issue and a December 1991 *Aviation Week* featured Pat's art visualizing America's return to the moon and exploring Mars.

Attention, Houston Section Honorary Fellows, Fellows, and Past Chairmen: If you have not received an invitation to the Houston Section 30th Anniversary Dinner February 27, 1991, at the JSC Gilruth Center, please consider yourself invited! Call Walter Lueke at 483-5939 to confirm your reservations. ©

Correction

Last month's Calendar gave the date of the March dinner meeting as Thursday, March 11. It should have been Wednesday, March 11. Our apologies for the error.

Quality and Standards in China

David Jih
ISAC - China Section

As we are practicing Total Quality Management (TQM) in the United States, China is also quietly implementing TQM philosophies into her economic modernization movements, and is establishing higher formal standards for both products and services. This was the message from Mr. Zhang Zeng-Mao to a seminar sponsored by our International Space Activities Committee last November 8 (see *Horizons*, December 1991, page 3). Mr. Zhang, who is Deputy Director of the Quality Assurance Bureau, Ministry of Aerospace Industry of the PRC, should know. His Bureau manages quality and standardization activities within the aerospace industry in China. It has responsibility for policy making, and for monitoring and enforcement of these policies and standards.

Mr. Zhang said that China has been actively introducing advanced techniques and modern management concepts from abroad. In 1978 they joined in international standardization efforts, first in the electrical trades, and since then they have cautiously applied new standards in many industries. TQM methodology was also introduced into China in 1978, and has been applied in the mining and many other industries with great success. A military standards system was established in 1980.

In 1989, China issued its first standardization law. Some of the standards promulgated

under this law are mandatory for certain industries and products. The aerospace industry is one which has conscientiously implemented the law. Zhang credits conformance to these standards as one reason for the success of their space launch system, which has not suffered a single catastrophic accident.

A very important nation-wide movement to improve the quality of products and after-sale services was begun earlier this year. Already, higher standards of quality have been established and applied to a variety of industries. Mr. Zhang said that the movement is providing industry with guidelines to follow which should stimulate their ability to compete in world markets, thus benefiting the people economically in the long run. They understand that high quality and solid standards are cornerstones of industrial modernization. ©

Seminar Planned

Dr. Zafar Taqvi
Chairman

A special seminar on "Space Activities in the College of Engineering at the University of Houston" is scheduled for Wednesday, January 29, 1992, from 10:30 AM to 12:30 PM. It will present an opportunity for our members to learn about research and advanced studies related to space. There is no charge for the seminar, but an advance reservation is recommended. Details of the seminar may be found in the flier accompanying this issue. ©

Optical Computing Seminar

Dr. Zafar Taqvi
Chairman

"Optics in Information Processing and Computing" is the title of a four-hour tutorial seminar organized by the Houston Section Education Committee. Dr. John Neff of the Optoelectronic Computing Systems Center, University of Colorado, Boulder, Colorado, an expert on the subject, will make the presentation.

The tutorial will be held Wednesday, January 15, from 8:30 AM to 12:30 PM at the Gilruth Center. There is no charge, but space is limited and reservations (Marcia Taylor, 483-0195) are mandatory. See the attached flier for further details. ☉

Also Noted

Back To School

John M. Trebes

May a happy new year and a profitable future await you. And the future is where I have been, figuratively, of course, from September to December. My Thursday evenings have been spent in a classroom at the University of Houston-Clear Lake. This fall I enrolled in the Studies of the Future program. By being in class on Thursday evenings I have missed our dinner meetings and council meetings. This spring my class will be on Tuesday, so I will be back. Now, if only the Pack (Green Bay, that is) will come back.

My first course was Our Future in Space; all about commercial space, scientific space, international space and so on. It was mind-expanding. Concurrently I am in a three-hour, year-long course called Classic Texts in Futures Studies. Each month the class reads the same one or two books. We then meet one Sunday a month at the home of the professor for in-depth guided discussions. So far we have read the old standby *Brave New World* by Huxley, then *Looking Backward* by Bellamy and *Last and First Men* by Stapledon. For December we are reading *The Challenge To Man's Future* by Brown and *The Limits to Growth* by Meadows. And the list goes on and on. Are you tempted? Check it out at the UH-CL, Dr. Peter Bishop at 283-3323 or ring me up at 483-7215.

I am finding this period in my life now to be as rewarding as the Apollo period from 1962-1969 was. Many in our local aerospace community have preceded me in this Master of Science degree program in Studies of the Future, and I now recognize where all their new-found enthusiasm, insight and understanding of global situations came from.

See you in the future. ☉

Dr. Irvin Vatz - In Memoriam

Dr. Zafar Taqvi
Chairman

Dr. Irvin Vatz, a long-time friend of AIAA, passed away December 15, 1991, at Huntsville. He had been helping the AIAA sections in conducting the "train the trainers"

(continued on page 8)

program using *Nine Steps to Success* for about two decades, and providing job counselling for the unemployed. I had heard about his training expertise and contacted him on December 13 for a special program for the Houston Section on Saturday, February 1, 1992. He was very enthusiastic about the trip and I was looking forward to his visit, not knowing that his end was so near. AIAA will miss him and his expertise. ☉

Truly on International Cooperation In Space

[Editor's note: Last October 29, NASA Administrator Richard H. Truly delivered the Keynote address to the NASA Alumni League "Space Exploration '91" conference at the South Shore Harbour Conference Center. Houston Section International Space Activities Committee member Jim McLane was among those who took advantage of Admiral Truly's invitation to ask questions following his prepared talk.]

McLane. The current easing of international tensions has raised a lot of voices again about international cooperation in space. I wonder whether this has caused you people in NASA Headquarters to consider expanding international cooperation beyond the existing agreements that you have.

Truly. We've worked awfully hard on international cooperation and we are awfully proud of what we have done. In the past, in the past year and a half, I have visited the space program in Japan, the space program in Europe, and the space program in the Soviet Union. I meet probably on the average of two or three times a month with a major rep-

resentative of some country that we have some dealings with. Over the years we have had over a thousand cooperative agreements with over one hundred countries that range from everything from the exchange of data—life sciences data for example, or scientific data—to the Apollo-Soyuz docking, to the building of an international space station. I don't know what to say other than it's an integral part of NASA and of all of our planning.

Frankly, personally, until the last few years that I have been in NASA Headquarters I've not thought so much about international space cooperation, even though I was involved in the Apollo-Soyuz program. But in the last few years I've come to the personal conclusion that in global international affairs, space is going to become more important rather than less important, and international space cooperation is going to become more of a sign of the times rather than an anomalous event.

So I think that we in NASA had better get prepared for it. It's not enough to sit in Huntsville or Houston or Ames or Goddard and think that we are running just a U.S. space program that doesn't touch other countries. It's a major element of foreign policy, and therefore it has politics in it. It has been recognized as that by every President since the space program was begun. So I think that it's something that the [NASA] Alumni League frankly should think about some. It's just a fact of life.

(continued on page 11)

AIAA Calendar

January

15 - Wednesday

Education Committee event (rescheduled from November 13).

"More About Mars," Dr. Nadine Barlow.

JSC Gilruth Center, 10:15 AM.

No charge; reservations required by noon January 13.

Reservations: Frankie, 333-6064.

AIAA/IEEE joint event.

Tutorial seminar "Optics in Information Processing and Computing," Dr. John A. Neff, University of Colorado.

JSC Gilruth Center, 8:30 AM-12:30 PM.

No charge; reservations required by January 10.

Reservations: Marcia Taylor, 483-0195.

Info: Dr. Zafar Taqvi, 333-6544.

16 - Thursday

Human Support TC Lunch & Learn. "Human Factors at JSC," Tandi Bagian.

JSC Bldg. 3 cafeteria, 11:30-12:30.

Info: Dr. Michael Stanford, 283-6536.

22 - Wednesday

Education/Professional Development Committee film.

"America's Wings."

JSC Bldg. 1, Rm. 820, 4:15 PM.

Info: Dr. George Nield, 483-1364.

23 - Thursday

Dinner meeting.

"Magellan Results," Dr. Virgil Sharpton, LPI.

JSC Gilruth Center, 5:00/5:30/6:15.

Info: Dr. Sarwar Naqvi, 282-2767.

February

19 - Wednesday

Education & Professional Development Committee film.

"SMS Tour."

JSC Bldg. 1, Rm. 820, 4:15 PM.

Info: George Nield, 483-1364.

27 - Thursday

Dinner meeting.

Houston Section 30th Anniversary.

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

Info: Walter Lueke, 483-5939.

March

6 - Friday

Human Support TC conference.

"Human Rating for Exploration."

Info: Dr. Hatice Cullingford, 283-8229.

11 - Wednesday

Dinner meeting.

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

Info: Norm Chaffee, 483-9995.

22 - Wednesday

Education & Professional Development Committee film.

"Research Project X-15."

JSC Bldg. 1, Rm. 820, 4:15 PM.

Info: George Nield, 483-1364.

12 - Thursday

Automation & Robotics TC.

Workshop on Automation & Robotics (WAR '92).

Info: Dr. Zafar Taqvi, 333-6544.

18 - Wednesday

Education & Professional Development Committee film.

"Preparation and Packaging of Food for Space Flight."

JSC Bldg. 1, Rm. 820, 4:15 PM.

Info: George Nield, 483-1364.

April

9 - Thursday

Dinner meeting.

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

Info: Norm Chaffee, 483-9995.

22 - Wednesday

Education & Professional Development Committee film.

"Research Project X-15."

JSC Bldg. 1, Rm. 820, 4:15 PM.

Info: George Nield, 483-1364.

May

20 - Wednesday

17th Annual Technical Symposium.

Info: Bill Best, 283-0261.

Education & Professional Development Committee film.

"Shuttle Flow at KSC."

JSC Bldg. 1, Rm. 820, 4:15 PM.

Info: George Nield, 483-1364.

June

11 - Thursday

Honors & Awards Banquet.

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

Info: Norm Chaffee, 483-9995. ☉

CLCTS Calendar

The CLCTS Calendar includes technical events other than those listed in the AIAA Calendar above.

January

2 - Thursday

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

6 - Monday

NASA Area Macintosh Users (Group) "NAMU."
"Utah Beach" (computer game), Keith Zabaloui.
RSOC cafeteria, 600 Gemini, 7:00 PM.
Information: 488-2262.

7 - Tuesday

American Society for Quality Control (ASQC).
"Quality Control in a Large Church," quality coordinator
of 2nd Baptist Church.
American Host Motel, 2020 NASA Rd. 1,
5:00/6:00/7:00.
Information: Hank Williams, 338-2676.

8 - Wednesday

CLCTS monthly meeting.
Lockheed Plaza 3, 1150 Gemini, 11:45 AM.
Information: Andy Lindberg, 483-1474.
JSC Astronomy Seminar.
"Recent Development in the Lunar Prospector Project,"
Alan Binder, NASA.
JSC Bldg. 31, Rm. 129, noon to 1:00 PM.
Information: Al Jackson, 333-7679.

9 - Thursday

IEEE luncheon meeting.
"Dynamic Space Vehicle Communications Simulator,"
Robert Best, LESC.
JSC Gilruth Center, 11:30/12:00.
Reservations (by 11:00 AM January 6): Marcia Taylor,
483-0195.

15 - Wednesday

Houston Space Business Roundtable monthly luncheon.
"The Regional Technology Transfer Contract," Texas
A&M and UH speakers.
Doubletree Hotel, 1 Allen Center, 400 Dallas,
11:30/12:00 noon.
Information: Beth Land, 480-0014.

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

16 - Thursday

Clear Lake Area SigAda membership meeting.
"Summary of the Washington Tri-Ada Conference."
Mario's Pizza, 618 NASA Rd. 1, Webster, 11:45 AM.
Information: Paul Kennedy, 282-6262.

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.

17 - Friday

LPI Colloquium Series.
"Galileo Encounter with 951 Gaspra: First Pictures of
an Asteroid," Joseph Veverka, Cornell University.
LPI, 3303 NASA Rd. 1, Berkner Room, 3:30 PM.
Information: Dr. Deborah Dominique, 486-2167.

22 - Wednesday

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

23 - Thursday

Society for Computer Simulation (SCS) monthly meeting.
Program TBD.
Lockheed Plaza 3, 1150 Gemini, 11:45-12:45.
Information: Dr. Sarwar Naqvi, 282-2767.

24 - Friday

LPI Colloquium Series.

"Comparisons of Terrestrial Palagonites: Implications for Mars," William Farrand.

LPI, 3303 NASA Rd. 1, Berkner Room, 3:30 PM.
Information: Dr. Deborah Dominique, 486-2167.

28 - Tuesday

LPI Brown Bag Series.

"A Tale of Three Reservoirs," Peter Jakes, LPI.
LPI, 3303 NASA Rd. 1, Hess Room, noon.

Bay Area PC Organization (BAPCO) monthly meeting.
Program TBD.

League City Bank & Trust, 303 E. Main, 7:30 PM.
Information: Steve Medcalf, 554-2300.

29 - Wednesday

JSC Astronomy Seminar.

"Report on the 11 July and 4 January Solar Eclipses,"
Paul Maele, NASA.

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

31 - Friday

LPI Colloquium Series.

"The Extraordinary Radar Properties of the Icy Galilean
Satellites," Steven Ostro, JPL.

LPI, 3303 NASA Rd. 1, Berkner Room, 3:30 PM.
Information: Dr. Deborah Dominique, 486-2167.

February**3 - Monday**

NASA Area Macintosh Users (Group) "NAMU".
National Instruments demo.
RSOC cafeteria, 600 Gemini, 7:00 PM.
Information: 488-2262.

Please send additions, corrections and comments to:

Bill Best/R12A
Rockwell Shuttle Operations Company
600 Gemini Ave.
Houston, TX 77058
Telephone 283-0261

Truly (from page 8)

Competition is important. My buddy John Young, whom I haven't seen in a while, always said that one of the greatest things that ever happened in aviation was the air races of the '20s, and I think that the space races at the beginning of the space program were important—[they] began to drive us in certain directions. But we are no longer in air races, and frankly I think we are past the point of being in space races. I think we need to maintain our leadership. We have it today. And it's just a sign of our times, and you need to recognize it. You need to factor it into your thinking instead of thinking it's some sort of anomaly. It's at the core of all of our thinking. ☺

Notice

The February dinner meeting and 30th Anniversary Celebration, previously planned for February 13, has been re-scheduled to February 27. The Honors and Awards Banquet has also been moved from June 4 to June 11. Please make a note of these changes on your calendar.

OUTSTANDING SECTION AWARD

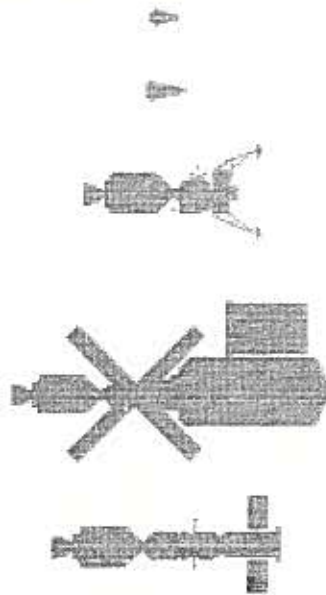


1975-1976
1976-1977
1979-1980
1980-1981
1981-1982
1983-1984
1986-1987
1988-1989

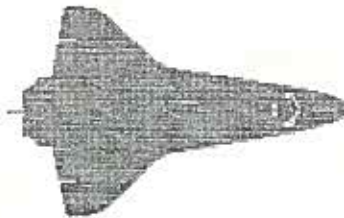
SECTION SPECIAL EVENT AWARD



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



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Webster, TX 77598



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

ZAFAR TAQVI - CHAIRMAN 1991-92

Thursday, January 23, 1992

VENUS REVEALED: MAGELLAN RESULTS

Dr. VIRGIL L. SHARPTON

LUNAR AND PLANETARY INSTITUTE



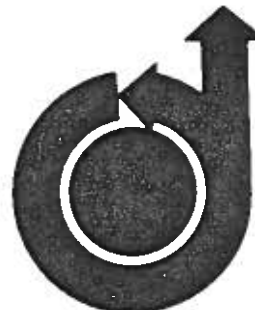
PRESENTER

Dr. Sharpton is presently a Lunar and Planetary Institute Staff Scientist. He holds a doctorate and masters degree in geological sciences from Brown University. His professional interests include: 1) the structural and geophysical analysis of large impact basins and tectonic features on Earth, the Moon, Venus, and Mars; 2) all aspects of terrestrial impact craters and the cratering record; and 3) analysis of remotely-acquired data sets. He has over 80 publications on various topics to his credit. Currently he has a number of proposals funded for impact-related research including the tectonic evolution and current state of Venus, and the origin of ridged belts and large circular structures (coronae) on this planet. In this regard he is a Magellan Guest Investigator.

Guest Host

Glynn Lunney

**Vice President & General Manager
Rockwell Int'l - Houston Operations**



DINNER MEETING

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

MENU: CHICKEN IMPERIAL

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

**NOTE: THE DINNER RESERVATION DEADLINE IS MONDAY, JANUARY 20 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.

Wednesday January 15, 1992

**A
VERY SPECIAL
TUTORIAL SEMINAR**

**OPTICS
IN
INFORMATION
PROCESSING
AND
COMPUTING**

DR. JOHN A. NEFF
OPTOELECTRONIC COMPUTING
SYSTEMS CENTER
UNIVERSITY OF COLORADO
BOULDER, COLORADO

PRESENTER

Dr. John Neff is a senior research associate with the Optoelectronic Computing Systems Center at the University of Colorado, overseeing all of the Center research in optical interconnection. Before joining the University of Colorado in March 1991, he was the Research Manager for Optical Computing at E.I. DuPont de Nemours & Co., Inc. Prior to joining DuPont in 1988, he spent 15 years as a Program Manager for Optical Computing with the Department of Defense, first with the Air Force Office of Scientific Research (AFOSR) and then with the Defense Advanced Research Projects Agency (DARPA). He holds a B.A. degree in Physics and Maths from Ohio Wesleyan University, and M.S. and Ph.D. degrees in Electrical Engineering from the Ohio State University. Dr. Neff is a Fellow of both OSA and SPIE.

NASA/JSC

Gilruth Center

8:30 AM- 12:30 PM

SEMINAR OUTLINE

- I. Fundamentals of Optics in Computing (diffraction, refraction, polarization, coherency, imaging, Fourier Transformation, Electron/photon conversion)
- II. Basic Optical Devices and Components
 - a. Spatial Light Modulators (1-D and 2-D))
 - b. Holographic Optical Elements
 - c. Photorefractives
 - d. Solid-state Detector Arrays
 - e. Laser Diode Arrays
 - f. Optoelectronic Arrays
 - g. Optical Logic Arrays
- III. Applications
 - a. Signal Processing
 - b. Image Processing
 - c. Numerical/Algebraic Processing
 - d. Optical Interconnects (including neural networks)
 - e. Information Storage

HAND-OUT WILL BE PROVIDED

RESERVATIONS: MARCIA TAYLOR 483-0195

Reservation deadline is Friday January 10, 1992. All are welcome

TUTORIAL IS FREE

SPACE IS LIMITED....RESERVATION IS MANDATORY FOR ALL ATTENDEES

For further information, contact Education Committee members or Dr. Zafar Taqvi at 333-6544

AIAA HOUSTON SECTION
PROGRAMS AND SPECIAL EVENTS COMMITTEE
AND
IEEE GALVESTON BAY SECTION EDUCATION COMMITTEE
JOINTLY PRESENT

A SPECIAL SEMINAR ON
"SPACE ACTIVITIES IN THE
COLLEGE OF ENGINEERING AT
THE UNIVERSITY OF HOUSTON"

An opportunity to learn about research and advanced studies in aerospace

WEDNESDAY, JANUARY 29, 1992, 10:30 AM- 12:30 PM
GILRUTH CENTER

PRESENTATIONS

- 10:30 AM Engineering at the University of Houston:
 An Overview
 C. Dalton
- 11:40 AM Computational Fluid Dynamics Applied to
 Spece-related Activities
 R.W. Metcalfe, Mechanical Engineering Deartment
- 11:00 AM Taguchi Methods in Total Quality Management
 E. E. Deal, Industrial Engineering Department
- 11:20 AM Knowledge-based Power Management Systems
 Ben Jansen, Ovidiu Crisan, Electrical Eng. Department
- 11:40 AM Simulation Techniques for Space Station Activities
 C. E. Donaghey, Industrial Eng. Department
- 12:00 PM Space Applications of High Temperature
 Superconducting Antennas
 J. T. Williams, Electrical Eng. Department
- 12:20 PM Discussion and Closure

NO CHARGE

For reservation, call Frankie Hap at 333-6064

For further details, contact
Dr. Zafar Taqvi, 333-6544

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS
370 L'Enfant Promenade, S.W.
Washington, DC 20024
(202) 646-7400

Ack.	Appr.
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FOR OFFICE USE ONLY

APPLICATION FOR SENIOR MEMBER GRADE

Dear AIAA Member:

AIAA Membership Grades are both a means of personal recognition and a reflection of the member's standing in the professional community. You are encouraged to review the criteria for Senior Member grade as stated below. There is no fee for application for advance in grade.

Members are encouraged to nominate other Members, as well to apply themselves for an advance in grade. It's essential that you complete both sides of the form. Processing of advance in grade applications includes a review of the applicant's qualifications by the Membership Committee; this procedure generally requires eight weeks. As soon as the review is completed you will be notified of the Committee's decision.

AIAA Membership Committee

Membership number _____

Section _____

Please Print or Type

Name _____ Position _____

Address (Business) (Home) _____ Phone _____
please circle

City _____ State _____ Zip Code _____

Your Duties and Responsibilities _____

(Use additional sheets as necessary)

SENIOR MEMBERS

"Senior Members shall be persons who have demonstrated a successful professional practice in the arts, sciences, or technology of aeronautics or astronautics for the equivalent of at least eight (8) years."

NOTE: Post baccalaureate engineering or science degrees from an educational institution of acceptable standing shall be considered equivalent to professional practice for an equivalent number of years, up to a maximum of 4 years. Bylaw 3.2.1

College or University _____ Degree Received _____ Date _____

Advanced or Additional Degrees Received _____ College or University _____ Date _____

_____ College or University _____ Date _____

Other Technical Schools or Colleges or Special Educational Programs _____

Date _____ Applicant's or Nominator's Signature _____

APPLICATION FOR AIAA SENIOR MEMBER GRADE

PROFESSIONAL RECORD

DATES From To	EMPLOYER OR AFFILIATION	TITLE	DUTIES AND RESPONSIBILITIES

PROFESSIONAL REFERENCES

Senior Member Grade applicants shall furnish two (2) references, both of whom shall be Senior Member grade or higher. Bylaw 3.1.4

INSTRUCTIONS—Professional References—Please give the full name, title and address of each of your references. Be sure to identify in the appropriate areas (SM) Senior Member; (AF) Associate Fellow; (F) Fellow; (HF) Honorary Fellow, for each reference's grade of membership.

THE NOMINATOR MUST OBTAIN SIGNATURES FROM TWO REFERENCES WHO MUST BE OF SENIOR MEMBER GRADE OR HIGHER.

1. Name DR. S. Z. TAQVI Title Adv. Systems Engg. Specialist SM AF F HF
 Address LESC, C-80, 2400 NASA RD 1 Phone (713) 333-6544
 City HOUSTON State TX Zip Code 77058

The applicant is qualified as a Senior Member. Signature [Signature] Date 10/15/91

2. Name JAMES T. VISENTINE Title STS EXPERIMENTS MANAGER SM AF F HF
 Address NASA JSC, ESS Phone (713) 483-8923
 City HOUSTON State TX Zip Code 77058

The applicant is qualified as a Senior Member. Signature [Signature] Date 10/15/91

Date Rec'd.

For Committee use only

	Appr.	Not Appr.*	Date Ret.
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REVIEWER: _____

Comments: _____

Signature: _____

(* Returned for additional information — see comments)

Please return to:
 Senior Member Grade Committee
 AIAA, 370 L'Enfant Promenade, S.W.
 Washington, DC 20024

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

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

13 March 1992

NOMINEE LIST

This year's nominating committee has prepared a ticket of nominees for officer and council member vacancies for the administrative year, 1 June 1992-31 May 1993. The vacancies and nominees are as follows:

OFFICERS

- Chairman-Elect: Shirley Brandt (Grumman)
Bret Wingert (IBM)
- Secretary: Tak Shrini (Unisys)
- Treasurer: Dustin Hamm (JSC)
Paul Judas (MDSSC)
- Vice-Chairman, Operations: Audrey Schwartz (JSC)
- Vice-Chairman, Technical: Dick Bennett (MDSSC)

COUNCILLORS

- Dave Dannemiller (RSOC)
- Dr. George Nield (JSC)
- Larry Guderian (MDSSC)
- Mallik Putcha (IBM)
- Michael Laible (Grumman)

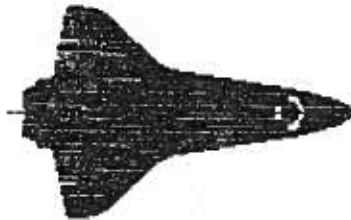
In accordance with the Houston Section Bylaws, additional nominations may be made by petition to the Secretary, stating the nominee's name (and desired position) and be signed by at least a membership quorum. A membership quorum consists of at least five percent of the Section voting members (61 members, based on current membership).

Petitions with the required number of signatures must be in the hands of the Secretary (Dustin Hamm, MC:JSC/DM33, 483-8027, FAX:483-6204) no later than 10 April 1992.

Ballots containing validated nominees, bios and the position to be filled will be mailed by the Secretary to all Section members no later than 15 April 1992.

300591872 B HO
Dr Larry J Friesen
League City TX 77573-9220

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



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