

# HORIZONS

Houston, Texas

March 1992

## Chairman's Corner

Dr. Zafar Taqvi  
Chairman

The measure of success in a professional organization lies in the sense of accomplishment of its goals. The inner satisfaction of the volunteers in such accomplishments plays a key role in future planning and sustained activities. As we proactively as a group pursue the path of success, we not only satisfy our professional obligations but experience inner satisfaction that prepares and motivates us for future endeavor. I am sure you got my message. I am talking about AIAA volunteers' dedication in accomplishing Section goals and the satisfaction they get. I feel good with the achievement so far and I am sure you will feel the same way once you scan our activity report. The achievements speak for themselves.

How did you like our 30th Anniversary celebration? If you were not there, you missed a good program, as well as the pin, the poster, the souvenir, the presentations, the achievers, the pioneers... What else did you miss? Did you attend the Optical Computing Seminar held on January 15? Did you attend the "Space Activities in the College of Engineering at the University of Houston" seminar on January 29? All these programs and activities are organized just for you.

While you enrich yourself by your participation, you can also enrich the group. Let us participate! ☉



## Behind The Board

Steve Zobal  
Chairman-Elect

In last month's "Behind The Board" column, I promised section members an opportunity to provide inputs to the Professional Career Timeline being developed by the National Career Enhancement Committee (CEC). Plans are to develop a pamphlet that would include the timeline information for distribution to each AIAA member. A draft copy of the timeline is included in this month's *Horizons* (see page 2). Please forward your comments and/or redlines to me by March 23 for compilation and transmittal to Karen Thomas, CEC liaison. My mail code is MDC B15, or call me at 283-4246. ☉

## **In This Issue...**

|                              |    |
|------------------------------|----|
| Chairman's Corner            | 1  |
| Behind The Board             | 1  |
| Professional Career Timeline | 2  |
| Committee News               | 3  |
| Houston Section Report       | 6  |
| Events                       | 8  |
| Also Noted                   | 9  |
| Get Involved!                | 9  |
| AIAA Calendar                | 10 |
| CLCTS Calendar               | 11 |

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.

## Professional Career Timeline

This timeline focuses on what the professional should be thinking about/doing throughout his/her professional career (please see Behind The Board on page 1). The timeline begins 2 years prior to graduation and continues until retirement.

### (1) PREPARATION (2 yrs → graduation)

- Resume preparation
- Co-op opportunities, research chosen field
- Working while in school and during summer in job related field
- Develop communication, interviewing and negotiation skills
- Self evaluation/assessment
- Plan to continue in school or work
- Join a professional society
- Prepare for EIT exam

### (2) TRANSITION (Graduation → 3 yrs)

- Orientation to employment
- Managing money
- Application of textbook to "real life"
- Enhancement of organization and interpersonal skills
- Professional Society Enrollment (networking)
- Enhance professional skills (oral and verbal communication)
- Advanced degree (technical discipline or MBA)
- Publish work (participate in minisymposia, paper competition)
- EIT exam
- Self assessment--define goals (professional and personal)
- Keeping resumé current

### (3) YOUNG PROFESSIONAL (3 yrs → 10 yrs)

- Career path decision--technical or management
- Exposure to management and other disciplines
- Improve professional skills (communication, networking)
- Self assessment (check goals, review accomplishments)
- Review your options (change: career, employer, job)
- Keeping resumé current
- Return to school
- Publish and present work
- Keep up to date on industry developments
- State engineering license

- Money management/finances
- Real estate
- Community involvement (leadership roles)
- Apply for Senior Membership in AIAA
- Marriage/family and balance with career
- Enhancements to your progression (what are you going to do to help your career)

### (4) MID-CAREER (10 yrs → 22 yrs)

- Self assessment (check goals, review accomplishments, continue, modify or change)
- Maintain technical currency
- Networking, professional status
- Acquiring experience within different disciplines, knowledge through specific training
- Publish and present work
- Apply for Associate Fellow grade of AIAA
- State engineering license
- Serious financial planning
- Community involvement
- Balance work with family and recreation

### (5) LATE CAREER (10 yrs → 22 yrs)

- Job security
- Professional contacts, networking
- Maintain technical currency
- Retirement planning/preparation
- Publishing/presenting
- Balance of work with family and recreation
- Financial planning
- Community involvement
- Become a mentor, provide guidance
- Health/fitness
- Time management

### (6) RETIREMENT

- The transition
- Attitude and role adjustments
- Opportunities
- Fitness
- Meaningful use of time--volunteering
- Financial planning
- Role of spouse
- Travel
- Networking
- Developing hobbies

## **Committee News**

### **Ground Testing & Simulation TC**

**Dr. Sivaram Arepalli**  
Chairman, Ground Testing & Simulation  
Committee

The Ground Testing & Simulation TC has recruited twelve active members from the Houston Section. Frank Burgett of the national committee has also agreed to be an active member and will help us in our activities. One suggestion that was made by one of these members is to encourage student participation and sponsor seminars. This is seriously being looked into by the committee and I will report progress in my next communication.

The main objective of this TC is "to foster interest in the different aspects of testing of spacecraft components in ground based facilities." The format for the last couple of years has been to sponsor bi-monthly Lunch & Learn meetings and participate in the local annual Technical Symposium. The first Lunch & Learn meeting for 1992 took place on January 30 in the JSC Bldg. 3 cafeteria.

The presentation, "The JSC Hypervelocity Impact Testing Facility - A Brief Description," was very well received by the attendees. Jeanne Crews and Eric Christiansen of the Space Science Branch took turns in explaining the various aspects of impact testing and analysis, including some simulation studies. The presenters brought in samples to show the effects of meteoroid and debris impacts, and the audience enjoyed the show and tell. We all came out of the meeting with a better and more useful knowledge of shielding concepts for Space Station Freedom and a better appreciation of the constant technical improvements to meet the challenge.

One of the aims of the Lunch & Learns is to bring to a focus the varied ground testing and simulation that go on around the Houston area. These will en-

able us to better appreciate the difficulties in conducting tests and analyzing the data using simulation techniques. These will also increase awareness of the state of the art technologies that are being used in these facilities.

The second Lunch & Learn will take place March 26 and the speaker will be Frank Burgett. Hope to see you all there! ☺

### **International Activities**

**Dr. Zafar Taqvi**  
Acting Chairman, ISAC

Sister Sections are being approached to participate in our Annual Technical Symposium. According to Mallik Putcha, Sister Section Coordinator for India, the India Section has shown interest in participating. China Section participation is in work.

The International Space Year Commemorative Tour of Chinese space facilities is planned for May 1-15, 1992. Several applications have been received but space is still available. See the article on page 4 for details.

Efforts are under way to establish Sister Section relationships with Germany, England, Japan, Canada and Russia.

Dr. Larry Friesen has agreed to become acting Co-Chairman of ISAC. He is spearheading an International Publications Index project. Please call Larry at 333-6799 if you want to add any publications to the list.

Gloria B. Reilly is heading the Foreign Language Subcommittee.

ISAC will be supporting the International Space Year activities of the Section.

If you are interested in ISAC activities, please contact either Dr. Zafar Taqvi at 333-6544 or Dr. Larry Friesen at 333-6799. ☺

## Student Activities

**Michael Begley**  
Chairman, Student Activities Committee

In support of Engineer's Week (February 16-22), several JSC and contractor engineers are volunteering their time to make presentations at local schools, targeting seventh through tenth grade science classes. This year's theme is Discover"E", emphasizing the connection between Engineering and Exploration. Our thanks go out to all our volunteers.

Next month, our Section is supplying 20 judges for the Houston Science Fair. We currently have only ten volunteers, so please consider participating in this fun event. After all, you may be working for these sharp kids one day!

To volunteer, or for more information, call Bill Krumrey at 929-7013.

## Deadline Approaches to Join Delegation to Visit China

**Jim McLane**  
ISAC - Sister Section Coordinator, China

Friday, March 13, is the last day that applications will be received to join the Houston Section ISY Commemorative Tour of Chinese Space Facilities. This is the second such visit by an official Houston group since we entered into our "Sister Section" relationship with the Shanghai Astronautical Society in 1987. The first, undertaken in 1988, was considered to be an unqualified success. Building on that experience, the Chinese Astronautical Society is again making all arrangements in China. The group will depart Houston for Beijing on Friday, May 1, and return from Shanghai on May 15, 1992. Membership in the delegation is open to all AIAA members, non-members who apply for membership at the time of registration, and accompanying family members. Places to be visited include Beijing, Chen-

du, Xichang (a launch site in southern Sichuan province), Shanghai and Suzhou.

This tour offers a truly unique opportunity for our members to see at first hand how our professional counterparts on the other side of the world go about their business in a completely different cultural, political, and economic environment from our own. Our travels will take us to widely separated geographical areas of China, giving us samples of differing climates, topography, architecture, and culture. While the emphasis will be on learning about the Chinese space program and the people who work in it, we will also visit all major tourist attractions. Accompanying family members will have a special program of additional sightseeing and shopping during the times that the delegates are engaged in technical activities.

Because of our close ties with the Chinese Astronautical Society we are able to offer this experience at the exceptional price of \$3,085 per person double occupancy. Single occupancy hotel rooms are available for a supplemental cost of \$400. The project is designed to qualify as an educational expense for aerospace professionals who itemize miscellaneous deductions on their federal tax returns. A journal will be maintained and published to document delegation activities.

Information and application forms are available from Jim McLane, telephone 713/488-0312.

## Space Transportation Highlights

**Charles Teixeira**  
Space Transportation TC

The Space Transportation Technical Committee (STTC) held their winter meeting on January 16-17 in San Diego, California, hosted by General Dynamics. The STTC currently has 37 members and remains one of the more active AIAA technical committees. The STTC has recently initiated a scholar-

ship program for engineering students with interests in space transportation. Other activities include formation of an environmental (impact) subcommittee, increased scope of the Testimony Subcommittee to provide information and position papers to congressional offices, creation of a 120 set 35 mm slide show on space transportation, development of a space transportation video library, and recent completion of a white paper on space commercialization.

This past year, the Publications Subcommittee published the International Reference Guide to Space Launch Systems by S.J. Isakowitz with support from the Martin Marietta Corp. For those of you that haven't seen it, it is an excellent guide and can be obtained from the AIAA.

A feature of all meetings is a "great debate" addressing current issues. The debate at the winter meeting addressed pros and cons of using Soviet launch vehicles, and systems (e.g., engines). The consensus was that the government should not restrict or impede use of said hardware, and that industry should decide if their use was in the best interest of the commercial objectives. In other words, let the normal bidding/proposal process decide. It was a good debate.

The next meeting is scheduled in April to coincide with the Space Congress in Cocoa Beach. ☺

## Fuzzy Logic Seminar A Success

Dr. Zafar Taqvi  
Chairman, Automation & Robotics TC

The special presentation on "Fuzzy Logic Applications to Expert Systems and Control" under the auspices of the Automation & Robotics Technical Committee was a real success. Dr. Yashvant Jani, Vice-President of the Technology Systems Division of Togai Infralogic, Inc., provided an interesting presentation emphasizing the forthcoming importance of fuzzy logic and its commercial applications. More than 30 participants kept the talk interesting and rewarding. ☺

### A Reminder

Don't forget that the dinner meeting is earlier than usual this month (March 11). Be sure to make your reservations by March 8.

Engineers (scientists and managers may skip to the next item): The next time you feel like saying "I can't think of *everything*," consider that, when you get down to fundamentals, "thinking of everything" is really all an engineer gets paid for. ☺

## Membership Upgrade Deadlines

The annual nomination deadlines for upgrade to Associate Fellow, Fellow and Honorary Fellow are almost upon us. Due dates are:

- April 15 - Associate Fellow nominations.
- May 15 - Associate Fellow references.
- June 15 - Fellow and Honorary Fellow nominations.
- July 15 - Fellow and Honorary Fellow references.

Nominees for upgrade to Associate Fellow must be Senior Members. Senior Member upgrade forms are available and processed throughout the year.

Nomination forms should be available by the time you read this. Contact Jim Visentine at 483-8923. ☺

## ***AIAA Houston Section Report***

### **Six-Month Update - January 1992**

**Dr. Zafar Taqvi  
Chairman**

#### **MEMBERSHIP**

- 1263 members ( M - 916, SM - 198 - AF 144, F - 11)
- 23 Senior Member upgrades last month
- Membership campaign through company executives - next month

#### **EDUCATION AND PROFESSIONAL DEVELOPMENT**

- Three videoconferences
- One seminar
- One tutorial
- Two professional videos every month

#### **HONORS AND AWARDS**

- Member of the Month awarded for October, November, December and January
- Eight members recommended for special awards from National
- One person recommended for national award

#### **PROGRAMS AND SPECIAL EVENTS**

- Special monthly dinner meetings (August, September, October, November, December, January)  
(average attendance ~145)
- Special events - Space programs at Texas A&M and University of Houston;  
UH-CL planned for March 25, 1992
- Trip to Texas A&M planned

#### **PUBLIC POLICY FORUM**

- One event on Augustine Threshold report
- One more event planned

#### **PUBLICATIONS**

- Section newsletter Horizons (six, including one supplement; four more planned)
- Fliers for monthly dinner meetings, Lunch & Learns, seminars and workshops

#### **STUDENT AFFAIRS**

- Three school presentations
- Science Fair judging planned

## TECHNICAL MEETINGS

|                                   | Held/Planned      |
|-----------------------------------|-------------------|
| • Ground Test & Simulation        | 1 / 2             |
| • Human Support                   | 2 / 1 + symposium |
| • In-Space Imaging                | 3 / 2 + symposium |
| • Life Science & Space Processing | 1 / 2             |
| • Management                      | 2 / 1             |
| • Thermal Physics                 | 1 / 1             |
| • Automation & Robotics           | / 1 WAR '92       |
| • Other TCs                       | / 2 each          |

## INTERNATIONAL SPACE ACTIVITIES

- One Chinese delegation received; technical presentations
- Sister Section coordination
- Technical journal procurement and translation

## SCHOLARSHIP

- Spirit of Apollo scholarship (\$1,000)

## TQ/V ACTIVITIES

- Streamlining membership displays
- New ideas in Education & Professional Development
- Reception for national technical committee members, with Director of Technical Services present
- Preparing a list of Houston facilities

## INTERNATIONAL SPACE YEAR ACTIVITIES

- Essay contest among local high schools
- International Space Awareness Fair during Space Week
- Looking into a "Down-to-Earth" space exhibit

## HOUSTON SECTION 30TH ANNIVERSARY

- Gala evening on February 27
- Pin, anniversary brochure, anniversary poster
- Regional Director, Past National President, Past Section Chairmen, Fellows, JSC Directors,...

## BUDGETING/SECTION OPERATION

- Original budget for two six-month periods in July 1991
- Second six-month budget in January 1992
- Minutes and action items tracked

## Events

### **WAR '92 Slated**

**Dr. Zafar Taqvi**  
Chairman, Automation & Robotics TC

Plans are finalized for the Annual Workshop on Automation and Robotics (WAR '92) organized by the Automation & Robotics TC. "Meeting the Automation and Robotics Technology Needs of the Space Exploration Initiative" is the theme of the one-day workshop set for Thursday, March 12, 1992, at the JSC Gilruth Center.

Following registration at 7:30, three tutorials will cover topics on robotics, automated scheduling and applications of model based reasoning. A luncheon presentation will provide an overview of the Space Exploration Initiative program. Following the luncheon, three sequential segments of the workshop will deal with automation and robotics aspects of mission operations, spacecraft systems and planet surface systems. The workshop is free but reservations are mandatory. There is a nominal charge for the luncheon. Details of the program are given in the attached flier.

### **IEEE/AIAA Videoconferences Set**

**Mallik Putch**  
Education Committee

AIAA is cosponsoring the IEEE videoconference on "Making High Performance Optoelectronic Data-communications Work" on March 26, 1992, at the JSC Gilruth Center. Other planned conferences are as follows:

April 30 - "Workstations of the Future"

May 28 - "Environmental Issues and Impact to Engineers"

Please mark your calendar and register early. The videoconferences are held at the Gilruth Center from 10:30 AM to 2:00 PM Houston time. For additional information, please contact Mallik

Putch, AIAA Education Committee, at 282-7244 or Andy Lindberg, IEEE Education Committee, at 483-1474.

### **Wednesday Afternoon at the Movies**

**George Nield**  
Education/Professional Development Committee

Under the auspices of the Education and Professional Development Committee, the Houston Section is conducting a new activity this year. Each month, there is a presentation of one or more videotapes that are of interest to the aerospace community. The presentations are held on site at JSC in building 1, room 820, starting at 4:15 PM. Most of the films last 20-30 minutes. Come on by on your way home from work and enjoy some classic cinema!

Our next showing will be March 18, and will feature a film on the preparation and packaging of food for Space Shuttle missions. We've come a long way since our astronauts had to exist on Tang and whatever mush they could squeeze from a toothpaste tube!

The schedule for the rest of the year is shown below:  
April 22 - "Research Project X-15"  
May 20 - "Shuttle Flow at KSC"

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

### **UH-CL Program Seminar**

**Dr. Zafar Taqvi**  
Chairman

A special seminar on "Programs in the School of Natural and Applied Sciences at UH-Clear Lake is scheduled for Wednesday, March 25, from 10:30 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 advance reservations are recommended. Details of the seminar may be found in the flier accompanying this issue.



---

## Also Noted

---

### **Membership Upgrade Deadlines**

The annual nomination deadlines for upgrade to Associate Fellow, Fellow and Honorary Fellow are almost upon us. Due dates are:

- April 15 - Associate Fellow nominations.
- May 15 - Associate Fellow references.
- June 15 - Fellow and Honorary Fellow nominations.
- July 15 - Fellow and Honorary Fellow references.

Nominees for upgrade to Associate Fellow must be Senior Members. Senior Member upgrade forms are available and processed throughout the year.

Nomination forms should be available by the time you read this. Contact Jim Visentine at 483-8923. ☉

### **Student Journal Articles**

**Lou Livingston**  
Editor

A publication you may not be aware of (I wasn't) is the *AIAA Student Journal*. It is published quarterly and is received by all of the 8,000 student members of AIAA in the United States and abroad. The jour-

nal solicits both technical papers and general non-technical articles on any AIAA-related topic, which covers a lot of ground (and space).

This is a prime opportunity to communicate directly with the next generation's aerospace leaders to an extent that would be hard, if not impossible, to achieve any other way.

The submission deadline for the Summer 1992 issue of the *AIAA Student Journal* is April 10, and July 10 for the Fall issue. However, submissions are accepted at any time, and will be reviewed for the publication at the first available deadline.

For more information, call the Editorial Assistant at 202/646-6458 or write to

American Institute of Aeronautics and Astronautics  
Editorial Assistant  
AIAA Student Journal  
The Aerospace Center  
370 L'Enfant Promenade, SW  
Washington, D.C. 20024-2518 ☉

---

## Get Involved!

---

### **National Technical Committees**

**Dr. Zafar Taqvi**  
Chairman

It seems that several of our members who volunteered to join AIAA national TCs sent their applications very late. It is very possible that they may not be selected this year. We are starting the campaign anew for 1992. Anyone who was denied membership, or who was not able to apply earlier, should contact AIAA Headquarters (Brigette Supir, 202/646-7461) before the end of March 1992 and

request the necessary application form. It is recommended that the application be sent directly to AIAA Headquarters with a copy for the Houston Section to Dr. Zafar Taqvi, LESC/C80. ☉

### **Section Elections**

If you are interested in serving the Section as an officer or councillor, please contact Steve Zobal, Chairman of the Nominating Committee *immediately* at 283-4246. ☉

## AIAA Calendar

This calendar lists Houston Section events for the year. For other technical societies, see the CLCTS Calendar on page 10.

### March

#### 5 - Thursday

Executive Board meeting.  
Lockheed Plaza 4, 5:00-6:30.

#### 6 - Friday

Human Support TC conference.  
"Human Rating for Exploration."  
Info: Dr. Hatice Cullingford, 283-8229.

#### 11 - Wednesday

Dinner meeting.  
"Soviet Space Program - What Now?," Jim Oberg,  
RSOC.  
JSC Gilruth Center, 5:00/5:30/6:15.  
Info: Norm Chaffee, 483-9995.

#### 12 - Thursday

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.

#### 20 - Friday

17th Annual Technical Symposium  
**ABSTRACTS DUE!**  
Info: Bill Best, 283-0261.

#### 25 - Wednesday

AIAA/IEEE joint seminar.  
"Programs in the School of Natural and Applied  
Sciences at UH-Clear Lake."  
JSC Gilruth Center, 10:30 AM-12:30 PM.  
Reservations (no charge): Frankie Hap, 333-6064.  
Info: Dr. Zafar Taqvi, 333-6544.

### April

#### 2 - Thursday

Executive Board meeting.  
Lockheed Plaza 4, 5:00-6:30.

#### 9 - Thursday

Dinner meeting.  
Speaker: Story Musgrave.  
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

#### 14 - Thursday

Executive Board meeting.  
Lockheed Plaza 4, 5:00-6:30.

#### 20 - Wednesday

17th Annual Technical Symposium.  
UH-CL.  
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

#### 4 - Thursday

Executive Board meeting.  
Lockheed Plaza 4, 5:00-6:30.

#### 11 - Thursday

Honors & Awards Banquet.  
JSC Gilruth Center, 5:30/6:30/7:30.  
Info: Norm Chaffee, 483-9995.

---

## CLCTS Calendar

---

Bill Best  
Vice-Chairman, Technical

AIAA-sponsored events are listed in the AIAA Calendar on page 10.

---

### March

#### 3 - Monday

NASA Area Macintosh Users (Group) "NAMU."  
Program TBA.  
RSOC Cafeteria, 600 Gemini, 7:00 PM.  
Info: 488-2262.

#### 4 - Wednesday

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

#### 5 - Thursday

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

#### 11 - Wednesday

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

#### 18 - Wednesday

Houston Space Business Roundtable monthly luncheon.  
Speaker: George Abbey.  
Location TBD, 11:30/12:00 noon.  
Info: Beth Land, 480-0014.

#### JSC Astronomy Seminar.

"Space Age Myths of the Moon," Jim Oberg, RSOC.  
JSC Bldg. 31, Rm. 129, noon to 1:00 PM.  
Info: Al Jackson, 333-7679.

#### 19 - Thursday

Clear Lake Area SigAda membership meeting.  
"Ada Binding and POSIX," Jane Guyse, Mitre.  
Mario's Pizza, 618 NASA Rd. 1, Webster, 11:45 AM.  
Info: Paul Kennedy, 282-6262.

#### 20 - Friday

**ABSTRACTS DUE** for AIAA 17th Annual Technical Symposium on May 20.  
Info: Bill Best, 283-0261.

#### 25 - Wednesday

JSC Astronomy Seminar.  
"A Search for Extraterrestrial Intelligence Conference - A Report," Dr. Larry Friesen, LESC.  
JSC Bldg. 31, Rm. 129, noon to 1:00 PM.  
Info: Al Jackson, 333-7679.

#### 26 - Thursday

IEEE/CLCTS videoconference.  
"Making High Performance Opto-Electronics Datacommunications Work."  
JSC Gilruth Center, 10:00 AM-2:00 PM.  
IEEE members, \$50; CLCTS, \$70; non-affiliated, \$80; students, \$15.  
Info: Andy Lindberg, 483-1474.

#### ISA Annual Trade Show.

Nessier Center, 21st St. & 5th Ave., Texas City,  
4:00-8:00 PM.  
Info: Bill Weber, 333-6785.

Professional & Continuing Education (PACE) course.  
"Total Quality Management Implementation" in four modules.  
UH-CL Bayou Building, Rm. 2-504, 6:00 PM.  
Info: 283-3030.

Please send information about your organization's meetings to:

Bill Best  
RSOC, R12A-130  
600 Gemini  
Houston, TX 77058  
283-0261

## OUTSTANDING SECTION AWARD



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

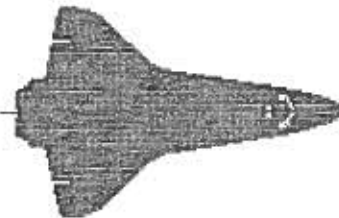


## SECTION SPECIAL EVENT AWARD



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

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



**Non-Profit Organization  
U.S. POSTAGE PAID  
Webster, Texas  
Permit Number 1**

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

# AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

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

ZAFAR TAQVI - CHAIRMAN 1991-92

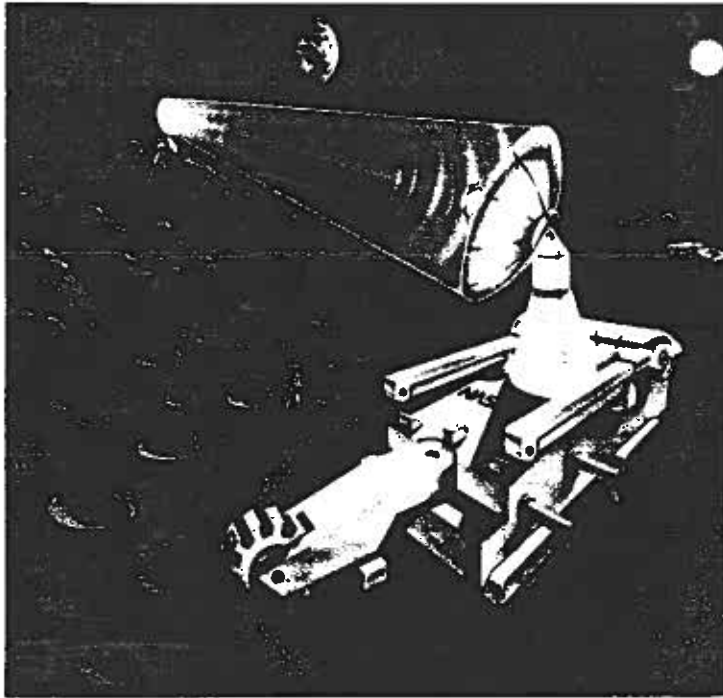
## PRESENTER

Wednesday, March 11, 1992

## ROBOTS FOR THE NEXT CENTURY

**Dr. JON ERICKSON**

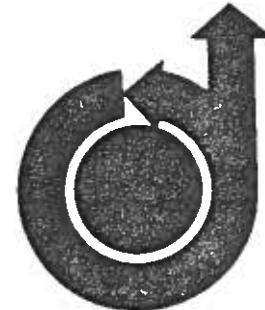
CHIEF SCIENTIST  
AUTOMATION AND ROBOTICS  
DIVISION, NASA-JSC



Dr. Jon D. Erickson is Chief Scientist of the Automation and Robotics Division at the NASA Johnson Space Center. He obtained his Ph.D. in Nuclear Engineering from the University of Michigan in 1966. He is an internationally recognized expert in artificial intelligence and intelligent robots. He formed the first Artificial Intelligence Office at JSC in 1984. He serves as the JSC representative to the Advanced Technology Advisory Committee, which reports to Congress on the progress of using intelligent systems and advanced robotics in the Space Station Freedom Program. He supports the Space Exploration Initiative Level II Program Office Systems Engineering with a focus on intelligent systems and intelligent robotics.

### Guest Host

A. J. (Tony) Macina  
General Manager  
IBM Federal Sector Division  
Houston



### DINNER MEETING

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

MENU:

### COUNTRY STEAK

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

NOTE: THE DINNER RESERVATION DEADLINE IS FRIDAY, MARCH 6, AT 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.

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

A SPECIAL SEMINAR ON  
"PROGRAMS IN THE SCHOOL OF  
NATURAL AND APPLIED  
SCIENCES AT UH-CLEAR LAKE"

*An opportunity to learn about research and advanced studies in aerospace natural and applied sciences*

WEDNESDAY, MARCH 25, 1992, 10:30 AM- 12:30 PM  
GILRUTH CENTER

**PRESENTATIONS**

- 10:30 AM     **Aerospace and Natural and Applied Sciences:**  
                  **A Growing Partnership**  
                  Dr. Jim Lester, Dean  
                  School of Natural and Applied Science, UH-Clear Lake  
                  **Computer Engineering at UH-Clear Lake:What does it mean?**  
                  Dr. Rod Bown, Chair  
                  Computer and Information Sciences Department  
                  **Time critical Scheduling on Space Station**  
                  Dr. Sadegh Davari, Associate professor  
                  Computer and Information Sciences Department  
                  **Our Future:Software Engineering for Success**  
                  Dr. Glen Houston, Associate professor  
                  Computer and Information Sciences Department  
                  **Analysis of Dynamical Systems Using Mathematica and PhaseScope**  
                  Dr. Mike Mezzino, Chair  
                  Mathematics Department
- 12:20 PM     Discussions and Adjournment

**There is NO CHARGE for the seminar**

*Coffee and donuts will be served*

For reservations, call Frankie Hap at 333-6064

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

AUTOMATION AND ROBOTICS TECHNICAL COMMITTEE  
OF  
AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS  
HOUSTON SECTION  
AND  
AUTOMATION AND ROBOTICS DIVISION, NASA/JSC  
PRESENT

# WAR '92

A ONE DAY WORKSHOP ON AUTOMATION AND ROBOTICS  
GILRUTH RECREATION CENTER, NASA/JSC  
MARCH 12TH, 1992, 8:00 AM-5:00 PM

THEME: MEETING THE AUTOMATION AND TECHNOLOGY NEEDS  
FOR THE SPACE EXPLORATION INITIATIVE

## PROGRAM SCHEDULE

|                          |                                                   |                                                                                                                        |
|--------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 7:30 AM - 8:30 AM        |                                                   | <b>REGISTRATION</b>                                                                                                    |
| 8:30 AM - 8:45 AM        | WELCOME                                           | Dr. Zafar Taqvi, AIAA CHAIRMAN<br>LOCKHEED-ESC                                                                         |
|                          | INTRODUCTION                                      | Norman Chaffee, GENERAL CHAIRMAN<br>NASA/JSC                                                                           |
| <u>8:45 AM- 12:00 PM</u> |                                                   | <b><u>TUTORIALS (SERIAL PRESENTATIONS)</u></b>                                                                         |
| T-1                      | <i>Title</i><br>TUTOR:                            | <i>QUALITATIVE REASONING WITH INCOMPLETE KNOWLEDGE</i><br>Prof. Benjamin Kuipers<br>Department of Computer Science, UT |
| T-2                      | <i>Title</i><br>TUTOR:                            | <i>AUTOMATED PLANNING</i><br>Monte Zweben<br>Asst. Chief, AI Research Branch, Ames Research Center                     |
| T-3                      | <i>Title</i><br>TUTOR:                            | <i>ROBOTS FOR SURFACE OPERATIONS</i><br>Dr. Red Whittaker<br>Carnegie Mellon University                                |
| 12:00 PM- 1:15 PM        | LUNCHEON<br>MEETING                               | <i>A SPECIAL PRESENTATION ON ' AN OVERVIEW OF SPACE<br/>EXPLORATION INITIATIVE'<br/>(Reservations required)</i>        |
| <u>1:15 PM- 4:15 PM</u>  |                                                   | <b><u>WORKSHOPS (SERIAL PRESENTATIONS)</u></b>                                                                         |
| W-1                      | <i>Title</i><br>Workshop Leader:<br>Participants: | <i>MISSION OPERATIONS</i><br>Laurie Webster NASA/JSC<br>List to be provided later                                      |
| W-2                      | <i>Title</i><br>Workshop Leader:<br>Participants: | <i>SPACECRAFT SYSTEMS</i><br>Leo Monford NASA/JSC<br>List to be provided later                                         |
| W-3                      | <i>Title</i><br>Workshop Leader:<br>Participants: | <i>PLANET SURFACE SYSTEMS</i><br>Dave Homan NASA/JSC<br>List to be provided later                                      |

4:15 PM- 5:00 PM  
Workshop leaders

**WORKSHOP SUMMARIES**

W-1 Laurie Webster  
W-2 Leo Monford  
W-3 Dave Homan

5:00 PM

**AIAA SECTION RECEPTION**

**WAR '92 ORGANIZING COMMITTEE**

|                        |                               |
|------------------------|-------------------------------|
| Workshop Chairman:     | Norman Chaffee, NASA/JSC      |
| Workshop Co-Chairman:  | Donald Peterson, Ex-Astronaut |
| Program Chairman:      | Charles R. Price, NASA/JSC    |
| Program Co-Chairman:   | Dr. Zafar Taqvi, Lockheed-ESC |
| Tutorial Chairman:     | Dr. Reg Berka, NASA/JSC       |
| Registration Chairman: | Mary Stewart, Lockheed-ESC    |

**THERE IS NO CHARGE TO ATTEND THE WORKSHOP.**

**HOWEVER, WORKSHOP REGISTRATIONS AND LUNCH RESERVATIONS ARE REQUIRED BEFORE COB THURSDAY MARCH 5, 1992. SPACE IS LIMITED. LUNCH cost is \$ 7.00 per person.**

Both the tutorials and the workshop sessions will be held serially to provide maximum exposure to the state of art discussions on the topics. It is expected that the workshop sessions will bring out prioritized critical design issues and their possible solutions relevant to our activities in the areas of automation and space robotics.

Please mail the registration form to Mary Stewart, NASA/ER3, 483-1724 (or Fax to 713-483-7580) on or before March 5, 1992

**REGISTRATION FORM:**

Please register me for WAR'92

Name:

Organization:

Mail Code

Telephone:

Fax:

Please reserve lunch for me . My check of \$ enclosed.[ \$7.00/person]

in favor of AIAA is

Signature.....

Date.....