

# HORIZONS

Houston, Texas

February 1991

## From The Chairman

### Houston Section History

John M. Trebes  
Chairman

Let's save the written history of the Houston Section.

Our section history goes back to 1962. Alan Chapman of Rice University was our first chairman; there have been 27 since then.

Over the years there have been attempts to do some historical archiving. While the initial attempts have been noble, the long term execution has faltered. No blame here; it is just a part of the syndrome found in many volunteer organizations.

Now, what to do? Wait, there is a JSC History Office, just a phone call away.

Yes, Joey Pellerin of the JSC History Office says they would be interested in our AIAA historical documents. In fact, Joey is about to send in her application to join AIAA. Oh, the serendipity of it all.

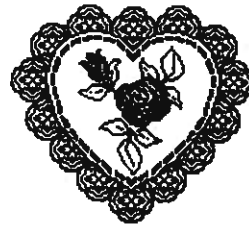
Here is how we will work the collection of our written history:

We will furnish a central collection point and then sort and collate the data. We will then present the assembled data to the History Office. The data will then be in one secure place. Future history committees may then repair to the History Office whenever pieces of our history are needed.

Please send your contributions to our Vice-Chairman, Technical, Alan Shinkman, mail code LESC/C83. ☉

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*Happy  
Valentine's  
Day*

## Recruit A New Member

AIAA has announced a new sponsorship recognition program, "Take \$Five", effective through May 31, 1992. For every new member you recruit, you will be sent a special "Take \$Five" coupon. Each coupon is worth five dollars towards most of AIAA's products and services, including membership dues, Journal subscriptions, conference registration fees, etc. Coupons are cumulative.

The coupons are not redeemable for cash by the individual recipient. However, you can apply them to the cost of section events (e.g., dinner meetings). The section then sends them to National for reimbursement. ☉

*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 Vice-Chairman of Operations, Charles Blacknall, MDSSC/T7E, telephone 283-1073.

## Committee News

### TQ/V Committee Formed

**Dr. Zafar Taqvi**  
Chairman-Elect

In keeping with the vision approach propounded by the AIAA National Executive Committee and the prevalent total quality approach practiced at JSC, the Houston Section has initiated a Total Quality/Vision (TQ/V) committee under the chairmanship of Dr. Zafar Taqvi, Chairman-Elect 1991. The objective of this committee is to provide planning for section activities by setting long range goals, devising means of implementation and providing periodic updates.

There are three standing subcommittees: Symposia Conference and Workshop (SCW), chaired by Michael Laible (Grumman, 929-7320); Education and Professional Development (EPD), chaired by George Nield (JSC/TM2, 483-1364); and Membership Development and Retention (MDR), chaired by Bill Geissler (LESC/C87, 333-6863).

In addition to the standing subcommittees, two ad hoc committees are planned for 1990-91 and 1991-92: a 30th Anniversary (Houston Section) Planning Committee and an International Space Year Planning Committee.

Michael Laible discusses the first SCW meeting below. Further details of committee activities will be forthcoming in future issues of *Horizons*.

### **Symposia Conference and Workshop Subcommittee**

**Michael Laible**  
SCW Chairman

The SCW met for the first time on December 17, 1990, to discuss our long range goals and plans for Houston Section symposia, workshops and conferences. The members of this subcommittee are Marv White, Bob Savely, Walt Lueke, Zafar Taqvi and myself.

During our first meeting, the SCW identified six areas where activities can be improved or investigated. These areas are national and annual meetings, regional conferences, joint conferences with other groups, conferences involving the Clear Lake Chamber of Commerce, ad hoc or requested conferences, and enhancement of existing conferences, such as the Annual Technical Symposium in May, the Workshop on Automation & Robotics (WAR), etc. The SCW will actively pursue these areas during 1991.

We hope to be very resourceful during the coming year; however, it takes the members to propel such an activity to great heights. If you should have any questions or suggestions, please write me at Grumman, 12000 Aerospace Blvd., Houston, TX 77034 or NASA mail code "Grumman Bldg. 1".

### Computer and Software Systems TC

**Karen Lee-Taylor**  
Chairman, Computer and Software Systems TC

The Computer and Software Systems TC will hold Lunch 'N' Learn meetings in February, March and April at Franco's Restaurant from 11:45 AM to 1:00 PM. If you have any questions, please contact Karen Lee-Taylor at 283-1961 or NASA mail code MDCT312EF. Everyone is welcome.

Tuesday, February 19 - "HyperCard: An Object-Oriented Environment" presented by Stephen Desrosiers of McDonnell Douglas.

Tuesday, March 19 - "Artificial Intelligence with HyperCard" presented by Stephen Desrosiers of McDonnell Douglas.

Tuesday, April 23 - "IDEF: In Support of Requirements Analysis" presented by Mark S. Smith of D. Appleton Company.

## Automation and Robotics Technical Committee

Dr. Zafar Taqvi  
Chairman, Automation & Robotics TC

The Fourth Annual Workshop on Automation and Robotics (WAR '91), organized by the Automation and Robotics Technical Committee of the Houston Section, is planned for Thursday, March 14, 1991. This year the presentations will focus in the area of Space Robotics.

A new format for the event will be initiated. Special tutorials will be conducted in serial manner in the morning to provide maximum exposure to the attendees. In the afternoon, the same topics will be discussed to bring out critical design issues and their possible solutions. A group of prominent experts has been lined up to conduct the workshop.

There is no charge for the workshop. However, registration is necessary to attend the program. Additionally, luncheon reservations, at \$6 per person is due before close of business Thursday, March 7. A flier with additional details is enclosed with this newsletter.

## On The Horizon

### 16th Annual Technical Symposium Planned

Alan Shinkman  
Vice-Chairman, Technical

The planning committee for the 16th Annual Technical Symposium has begun meeting. The committee is composed of William Geissler, Michael Laible, Walt Lueke, Alan Shinkman (chairman), André Sylvester and John Trebes.

The date for the symposium is May 16, 1991, and the location is UH-CL. The theme will be "The Challenges of the 90s." A call for abstracts is included in this newsletter. Abstracts are due March 22.

The next issue of *Horizons* will contain a further update.

### Election Time Is Here

Dr. Zafar Taqvi  
Chairman-Elect

Nominations are sought from interested individuals for the 1991-92 Houston Section elections. The deadline is February 20, 1991. Please contact Dr. Zafar Taqvi at 333-6544, mail code LESC/C80 or fax 333-7620. Next year will be especially active as we will be celebrating the Houston Section's 30th anniversary and the International Space Year.

The prospective candidates should be AIAA Houston Section members in good standing, be experienced and have time to implement the goals of the section.

The positions to be filled in the election include Chairman-Elect; Vice-Chairman, Operations; Vice-Chairman, Technical; Secretary; Treasurer; and five councillors.

### Wallet Card Update

If you attended the January dinner meeting, you received a wallet-size card with the names, addresses and phone numbers of Section officers, councillors and committee chairmen. Karen Lee-Taylor, Chairperson of the Computer and Software Systems TC (see page 2), took that job after the cards were printed and was not included. Please add her name (mail code MDCT312EF, phone 283-1961) to the list.

## From Our Sister Section In China

### Papers Available

Jim McLane  
Sister Section Coordinator, China

Last month I alluded to two papers authored by Professor He Zhenghua, who was profiled in that issue of *Horizons*. Both of these papers were presented at the Seventeenth International Symposium on Space Technology and Science in Tokyo last May. The full papers (in English) can be obtained by contacting the International Space Activities Committee foreign publications chairperson, Gloria B. Reilly, at 480-8357. Abstracts of the two papers are included below.

#### Research on the Phenomena of RF Interference in Transmitter Group and Disturbance to Co-Site Receiver — Abstract

He Zhenghua

On a complex spacecraft with many transmitting and receiving frequencies, sometimes the complicated phenomena of RF interference in the transmitter group and disturbance to the onboard receivers would occur. These problems, which cause troubles and cannot be solved easily, will hinder the development of the spacecraft. From the point of view of spacecraft system designing, this paper studies the mechanism of these phenomena and gives a simple, effective and very fast design method for the prevention of those problems.

#### The First Chinese Meteorological Satellite FY-1 — Abstract

Men Zhizhong and He Zhenghua

This paper describes the first Chinese meteorological satellite FY-1 launched on 7 September 1988. The sun synchronous orbit of this satellite is nearly circular with an altitude of 99 km\*, inclination of 99° and period of 102 minutes. FY-1 circles the earth 14 times a day. Its mass is 750 kg. The spacecraft was researched

and developed in China independently and is composed of domestic materials and components. The main body is 1.2 x 1.2 x 1.4 m in size with deployable solar cell panels connected to its left and right sides symmetrically. The length of the spacecraft is 8.6 m and the height 1.76 m. High-quality HRPT, APT and playback pictures as well as space environment monitoring data are received on the ground. The transmitting signals are strong enough to be received by low cost receiving stations.

[\* This altitude, quoted as given in the abstract, appears to be a typographical error. A period of 102 minutes corresponds to a circular orbit altitude of about 850 km; a sun-synchronous inclination of 99° implies an altitude of roughly 900 km. — Ed.]

### Weather Satellite Discussed

Jim McLane  
Sister Section Coordinator, China

Chinese weather satellites are the principal responsibility of the Shanghai Institute of Satellite Engineering, which employs many members of our Sister Section. We recently received the following report from the Secretary General of the Shanghai Astronautical Society concerning activities in connection with the second satellite in that series.

#### FengYun-1 Meteorological Satellite Seminar

Translated from the Chinese by Tai Ling Lee

Mr. Song Yun Peng, Secretary General of the Shanghai Astronautical Society, reported that China used a Long March 4 rocket to launch a second FengYun-1 (FY-1) meteorological satellite on September 3, 1990. This satellite is very precise, therefore it is easier to put it into orbit and initiate its operation. So far the satellite has been operating in orbit over 94 days. Every day the satellite not only reports the weather for China but also supplies the weather conditions for other countries. This project provides China with experience in the control and maintenance of a meteorological satellite.

(continued on page 5)

The FY-1 employs infrared and visible light beams to monitor the cloud images on the earth. Then it sends the pictures to the weather station on earth. All the international weather bureaus will have information from this satellite.

At this seminar, Professor Men Zhi Zhong, the principal designer of the FY-1, Mr. Kung Hui Shin, the chief designer of rotation, and Mr. Lee Kuo Shing, chief FY-1 designer, all presented their expertise. The meeting was held at the Shanghai Science Auditorium and approximately 700 people attended, including TV and news media.

To: AIAA Houston Chapter  
John Trebes  
From: Michael B. Duke  
Subject: Space Science Award

January 25, 1991

On January 8th, in a very impressive ceremony at the AIAA meeting in Reno, I was presented the AIAA Space Science Award for 1991. The presentation was made by John Swihart, President of the AIAA.

I did not know, until the day of the presentation, the list of previous recipients (except that Paul Gast, when he was Chief of the Earth and Planetary Sciences Division at JSC, in 1973). But that list is truly outstanding, and contains many of the key contributors to space science over the 22 years that the award has been given, so I am particularly honored to be added to that list.

Most of us think of the AIAA as an organization with an engineering and technology focus, not science. The importance of the Space Science Award is that it reflects the link between science and engineering and technology - science is a major stimulus to and enables new engineering and technology advances, and engineering is essential to the pursuit of scientific research. Making that linkage stronger, interpreting between science and engineering, is where my contributions have been strongest over the past two decades. It was also a major part of Paul Gast's contribution twenty years ago.

The work of many people has been honored in this award. In particular, Wendell Mendell and my colleagues in the Solar System Exploration Division were key contributors over the past decade and Aaron Cohen opened many doors and provided constant support for lunar and Mars exploration activities.

But I mostly want to thank you, and the members of the local section, for your support. I am proud to be a member of the AIAA and have rededicated myself to the goals of human exploration of the Moon and Mars, which we all share.

/s/

Michael B. Duke

## The Members Speak Out

Lou Livingston  
Editor

At the January dinner meeting, Loren Wood asked me if The Members Speak Out was still part of *Horizons*. His interest is understandable, because TMSO was originally his idea, more years ago than either of us can remember. I could only tell him yes, it's still there, and no, he hadn't seen it because the members don't seem to be speaking out.

As all but the newest members are aware, this column is here to let you speak your mind on issues relevant to AIAA and/or aerospace in general. This includes opinions, questions, complaints, or whatever. Opinions are printed as is, with a minimum of nasty retorts from yours truly. Questions and complaints are passed along to the appropriate individual for response or action.

We have had some lively discussions here in the past, but interest has fallen off recently. It's a pity, because if you *do* have something on your mind, this is a handy way to tell 1200 relatively influential people about it. Drop me a line at 16546 Ivy Grove, Houston, TX 77058, or send it through our Vice-Chairman, Operations, Charles Blacknall, MDSSC/T7E.



## Technical Activities Calendar

Bill Best  
CLCTS Coordinator

### February

#### 4 - Monday

NASA Area Macintosh Users (Group) "NAMU." "MacSPOC Program" (flew on STS-41), Dan Adamo; MacDraw Pro demo by Claris. RSOC Cafeteria, 600 Gemini, 7:00 PM. Information: Sharyn Best, 488-6522.

#### 6 - Wednesday

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

#### 8 - Friday

Clear Lake SigAda meeting. "Uniform Extensions for Real Time Ada Applications," Dominique Chandesris and Gilles Pitette. Clear Lake Development Facility - McDonnell Douglas, 13000 Space Center Blvd., Rm. 2043, 1:30 PM. Information: Tom Sullivan, 244-4253.

#### 12 - Tuesday

Clear Lake Council of Technical Societies Annual Luncheon. Red Lobster, 888 Bay Area Blvd., 11:45 AM. Information: Andy Lindberg, 483-1474.

#### 13 - Wednesday

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

#### 15 - Friday

LPI Seminar Series. "Polar Wander of an Ice Shell on Europa," Gregory Ojakangas, Lockheed. LPI, 3303 NASA Rd. 1, Berkner Rm., 3:30 PM. Information: Dr. Deborah Dominique, 486-2167.

(cont. on page 7)

**February (cont.)****19 - Tuesday**

AIAA Computer & Software Systems TC. "HyperCard: An Object-Oriented Environment," Stephen Desrosiers, McDonnell Douglas. Franco's, 1101 NASA Rd. 1, 11:45 AM. Information: Karen Lee-Taylor, 283-1961.

**20 - Wednesday**

AIAA Ground Test & Simulation TC. "Material Degradation in Space Environment - Recent Results," Dr. Steven L. Koontz, Materials Branch, JSC. JSC Bldg. 3 Cafeteria, 11:30 AM. Information: Dr. Sivaram Arepalli, 483-5910.

Houston Space Business Roundtable monthly luncheon. Panel discussion: "Space Technological Spinoffs." Nassau Bay Hilton Hotel, 3000 NASA Rd. 1, 11:30 AM/12:00 noon. Information: John Culp, 480-2817.

**20 - Wednesday**

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

**21 - Thursday**

IEEE monthly meeting. "The Space Initiative and Lunar Exploration," Dr. Michael Duke, JSC. JSC Gilruth Center, 11:30 AM/12:00 noon. Information: Dr. Zafar Taqvi, 333-6544.

Clear Lake SigAda business meeting. Location TBD, 11:45 AM. Information: Tom Sullivan, 244-4253.

**26 - Tuesday**

Bay Area PC Organization (BAPCO) monthly meeting. Program TBD. League City Bank & Trust, 303 E. Main, 7:30 PM. Information: Earl Rubenstein, 483-4807.

**27 - Wednesday**

JSC Astronomy Seminar. "Arthur C. Clarke Discusses the Tungusta Event" videotape. JSC Bldg. 31, Rm. 129, noon to 1:00 PM. Information: Al Jackson, 333-7679.

**28 - Thursday**

Society for Computer Simulation (SCS) monthly meeting. "GN&C Simulation," McDonnell Douglas speaker. Lockheed Plaza 3 Bldg., 1150 Gemini, 11:45 AM - 12:45 PM. Information: Wade Webster, 244-4306.

AIAA monthly dinner meeting. "Impact of Space Upon American Education," Richard MacLeod, President, US Space Foundation. JSC Gilruth Center, 5:30/6:30/7:30 PM. Information: Shirley Brandt, 929-7183.

**March****4 - Monday**

NASA Area Macintosh Users (Group) "NAMU." "Excel 3.0," Tom Turner, Microsoft. RSOC Cafeteria, 600 Gemini, 7:00 PM. Information: Sharyn Best, 488-6522.

**8 - Friday**

LPI Seminar Series. "From (Sir R. L.) Murchison to the Moon: Dispute in the Planetary Sciences," Graham Ryder, LPI. LPI, 3303 NASA Rd. 1, Berkner Rm., 3:30 PM. Information: Dr. Deborah Dominique, 486-2167.

**20 - Wednesday**

IEEE/ISA/CLCTS Video Conference. "Uses of Artificial Intelligence in Manufacturing." JSC Gilruth Center, 10:00 AM to 2:00 PM. \$60 members, \$70 non-members. Information: Andy Lindberg, 483-1474.

**21 - Thursday**

JAIPCC '91 (Joint Applications in Instrumentation Process and Computer Control) Symposium. UH-CL, Registration 7:30 - 8:30 AM, program 8:30 AM to 4:00 PM. \$15 advance registration, \$20 at the door, no charge for full-time students. Information: Sandy Griffin, 283-5892.

Please send additions, corrections and comments to Bill Best/R12A-130, Rockwell Shuttle Operations Co., 600 Gemini Ave., Houston, TX 77058, telephone 283-0261.

# AIAA HOUSTON HORIZONS

## OUTSTANDING SECTION AWARD



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



## SECTION SPECIAL EVENT AWARD



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

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



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300591872 B HO  
Dr Larry J Friesen  
League City TX 77573-4485



# AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

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

# AIAA

## 16th ANNUAL TECHNICAL SYMPOSIUM

CO-HOSTED BY

THE UNIVERSITY OF HOUSTON - CLEAR LAKE HIGH TECHNOLOGIES  
LABORATORY

MAY 16, 1991

AT THE

UNIVERSITY OF HOUSTON - CLEAR LAKE

### CALL FOR ABSTRACTS

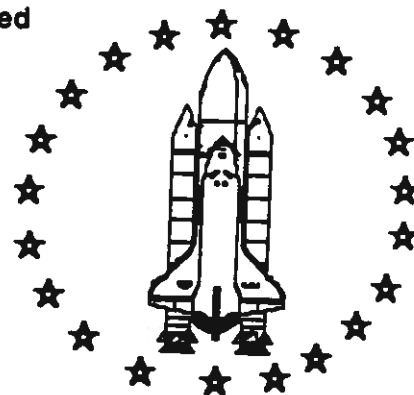
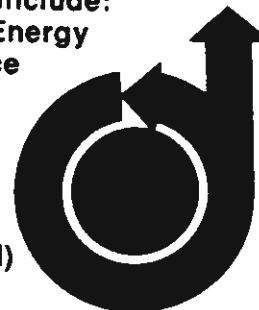
**DUE: MARCH 22, 1991**

**THEME: CHALLENGES OF THE 90s**

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#### GUIDELINES FOR ABSTRACTS AND PRESENTATIONS

1. Subject of your choice on space activities. Suggested topics include: Communications Systems, Computer and Software Systems, Energy Systems, Simulation, Materials, Structures, Dynamics, Space Systems, Guidance, Navigation and Control, Life Sciences, Management, International Space Activities and Flight Mechanics
2. The abstract should be 250 words or less. (Abstracts must be typed double spaced. Floppy discs are strongly encouraged)
3. Presentations should be 10 to 15 minutes. VU-graph or 35 mm slides are preferred
4. Formal publication is not required. However, it is requested that you have handouts available at your presentation
5. Include with your abstract:
  - Completed NASA Form FF427
  - Title of presentation
  - Your name (and co-authors names)
  - Company affiliation, mail code and telephone number
6. Submit abstracts or inquiries to:  
Alan Shinkman AIAA Vice-Chairperson, Technical  
LESC/C83  
2400 NASA Road 1, Houston, TX 77058  
(713) 333-7508





AUTOMATION AND ROBOTICS TECHNICAL COMMITTEE  
OF  
AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS  
HOUSTON SECTION

AND  
AUTOMATION AND ROBOTICS DIVISION, NASA/JSC  
PRESENT

# WAR '91

A ONE DAY WORKSHOP ON SPACE ROBOTICS  
GILRUTH RECREATION CENTER, NASA/JSC  
MARCH 14TH, 1991, 8:00 AM-5:00 PM

## PROGRAM SCHEDULE

7:30 AM - 8:30 AM

8:30 AM - 8:45 AM

WELCOME  
INTRODUCTION

### REGISTRATION

John Trebes, AIAA CHAIRMAN  
Dr. Jon Erickson, GENERAL CHAIRMAN  
NASA/JSC

8:45 AM- 12:00 PM

### TUTORIALS (SERIAL PRESENTATIONS)

T-1 *MECHANICAL SYSTEM DESIGN*

TUTOR: DR. DEL TESAR  
The University of Texas

T-2 *ROBOTIC VISION SYSTEM*

TUTOR: DR. J. K. AGGARWAL  
The University of Texas

T-3 *NEURAL NETWORK APPLICATION*

TUTOR: DR. HALMUK OGMEN  
The University of Houston

12:00 PM- 1:00 PM

*LIGHT LUNCH AND INFORMAL CHAT*  
(Reservation required)

1:00 PM- 4:15 PM

### WORKSHOPS (SERIAL PRESENTATIONS)

W-1 *SPACE ROBOTICS MECHANICAL SYSTEM DESIGN*

Workshop Leader: DR. CLARENCE BELL, NASA/JSC  
Participants: Dr. Del Tesar, UT  
LaBarian Stokes, NASA/JSC

W-2 *SPACE ROBOTICS VISION SYSTEM*

Workshop Leader: DR. C. CHIEN, LOCKHEED  
Participants: Dr. J.K. Aggarwal, UT  
Tom Pendleton, NASA/JSC

W-3 *NEURAL NETWORKS IN SPACE ROBOTICS*

Workshop Leader: LARRY LI, NASA/JSC  
Participants: Dr. Halmuk Ogmen, UH  
Anne Murray, NASA/JSC  
Miriam Zacksenhouse, LOCKHEED

4:15 PM- 5:00 PM  
Workshop leaders

**WORKSHOP SUMMARIES**

W-1 Dr. Clarence Bell  
W-2 Dr. C. Chien  
W-3 Larry Li

5:00 PM

**AIAA SECTION RECEPTION**

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**WAR ' 91 ORGANIZING COMMITTEE**

Workshop Chairman: Dr. Jon Erickson, NASA/JSC  
Workshop Co-Chairman: Marv White, Lockheed-ESC  
Program Chairman: Dr. Zafar Taqvi, Lockheed-ESC  
Program Co-Chairman: Charles R. Price, NASA/JSC  
Tutorial Chairman: Dr. Clarence Bell, NASA/JSC  
Registration Chairman: Mary Stewart, Lockheed-ESC

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**THERE IS NO CHARGE TO ATTEND THE WORKSHOP. HOWEVER,  
WORKSHOP REGISTRATIONS AND LUNCH RESERVATIONS ARE REQUIRED BEFORE COB  
THURSDAY MARCH 1991. SPACE IS LIMITED. LUNCH cost is \$ 6.00 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 in space robotics. It is expected that the workshop sessions will bring out prioritized critical design issues and their possible solutions relevant to our activities in space robotics areas.

Please mail the registration form to Mary Stewart, NASA/EF3,  
(or Fax to 713-483-7580) on or before March 7, 1991

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**REGISTRATION FORM:**  
Please register me for WAR'91

Name: Organization:

Mail Code Telephone:  
Fax:

Please reserve .....lunch for me . My check of \$ 6.00 in the name of AIAA is enclosed.

Signature.....Date.....

# CALL for PRESENTATIONS

FOR  
JAIPCC '91

Joint Applications in Instrumentation  
Process and Computer Control Symposium

March 21, 1991

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**THEME: COST REDUCTION IN OPERATIONS**

JAIPCC will consist of four parallel technical tracks:

- **Robotics**
  - standards
  - performance improvements
  - automation
  - man-machine tradeoffs
  - path planning and collision avoidance
- **Monitoring & Control**
  - real time
  - system modeling/complexity
  - levels of automation
- **Fuzzy Logic/Neural Networks**
  - comparisons with the present techniques
  - operational systems
  - diagnostics
  - control
  - decision making
- **Training (CBT, CAI and ICAT)**
  - flight operations
  - maintenance
  - ground facilities

Authors are asked to submit an **ABSTRACT** by Jan. 24, 1991. Only abstracts will be published.  
Presentations limited to 30 minutes, including question and answer period.

**Conference Location:** University of Houston - Clear Lake  
Bayou Building  
Houston, Texas

**Sponsors:** IEEE, ISA and UHCL

**Submit Abstracts to:** Dr. Y. Jani  
LinCom Corporation  
re: JAIPCC  
1020 Bay Area Blvd., #200  
Houston, Texas 77058

For more information, contact Dr. Y Jani (713-488-5700) or Sandy Griffin (713-283-5892)

# JAIPCC '91

## SYMPOSIUM

Joint Applications in Instrumentation  
Process & Computer Control

Thursday March 21, 1991 University of Houston-Clear Lake

### **THEME: COST REDUCTION IN OPERATIONS**

(with TRACKS OF ROBOTICS, MONITORING AND CONTROL, NEURAL NETWORKS AND FUZZY LOGIC AND TRAINING)

7:30 AM -8:30 AM REGISTRATION

8:30 AM -9:00 AM WELCOME

9:00 AM-12:00 NOON PARALLEL TECHNICAL SESSIONS

12:00 NOON-1:30 PM LUNCHEON [COST \$7.00]

SPEAKER: DR. JOHN YEN

"FUZZY INSTITUTE OF TEXAS"

1:30 PM-3:00 PM PARALLEL TECHNICAL SESSIONS

3:00 PM-4:00 PM RECEPTION SPEAKER: DAN LEE and BRAD ALLEN  
INFERENCE CORPORATION

4:00 PM WINE & CHEESE RECEPTION  
SPONSORED BY INFERENCE CORPORATION

For more information on Symposium call:

Sandy Griffin, General Chair @ 283-5892

or Dr. Y. Jani, Program Chair @ 488-5700

Luncheon REGISTRATION: CALL LIWEN SHIH AT 283-3866 BY NOON,  
MARCH 14, 1991

Cut below this line and mail to the Registration Chairman

.....

### **REGISTRATION FORM**

#### **JAIPCC '91 SYMPOSIUM**

NAME.....Date.....

Company Affiliation.....Tel. No.....

Address.....

Advance registration Fee: \$15.00 Due by COB March 14, 1991

Registration fee at the door: \$20.00 Amount enclosed: \$.....

Please make checks payable to: JAIPCC

All participants must register (no fee for full time students)

Mail to: Bill Weber, Lockheed Engineering & Sciences Co.(333-6785)

2400 NASA RD 1, Mail Code B-18, Houston, Tx-77058

# AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

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

JOHN M. TREBES - CHAIRMAN 1990-91

**Thursday, February 28, 1991**

## THE IMPACT OF SPACE ON AMERICAN EDUCATION

**RICHARD P. MacLEOD**

**PRESIDENT  
UNITED STATES  
SPACE FOUNDATION**



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

### PRESENTER/PROGRAM

Richard P. MacLeod was a founding member and appointed the second Executive Director of the United States Space Foundation on May 1, 1985, and President in August 1988. Mr. MacLeod will talk on space education and provide details on the U.S. Space Foundation's 7th Annual Space Symposium April 9-12, 1991. The U.S. Space Foundation was established in March 1983 to:

1. Articulate space policy alternatives to the government and the public while providing the means for interaction among space professionals, promoting technological development led by space technology advancements, and publicizing space technology benefits to society;
- II. Prepare students to live and prosper in a high-tech society while stimulating student achievement by promoting teaching with space aviation materials; and
- III. Develop the U.S. Space Foundation as an International Space Information Center, perform Space Policy Research and develop interactive Space Museums/ Discovery Centers.

### Guest Host

**H. Ray Barrett, CEO  
Barrios Technology, Inc.**



### DINNER MEETING

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

**MENU: CHOPPED SIRLOIN**

<b>MEMBERS &amp; SPOUSES</b>	<b>\$7.00</b>
<b>NONMEMBERS</b>	<b>\$8.00</b>
<b>STUDENTS/YOUNG MEMBERS</b>	<b>\$6.00</b>

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

**NOTE: THE DINNER RESERVATIONS DEADLINE IS MONDAY, FEBRUARY 25, AT 12:00 NOON.  
ANY CANCELLATIONS ARE REQUIRED PRIOR TO DEADLINE. NO-SHOWS WILL BE BILLED.  
ALL ARE WELCOME.**

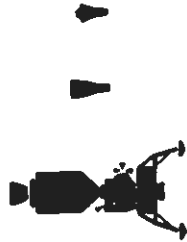
**DINNER RESERVATIONS ARE NOT REQUIRED FOR ATTENDING THE PROGRAM ONLY.**

# AIAA HOUSTON HORIZONS

## OUTSTANDING SECTION AWARD



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

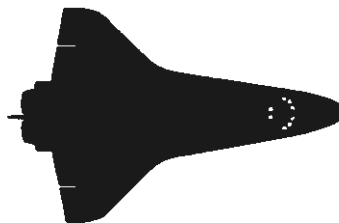


## SECTION SPECIAL EVENT AWARD



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 HO  
Dr. Larry J. Friesen  
League City TX 77573-4485