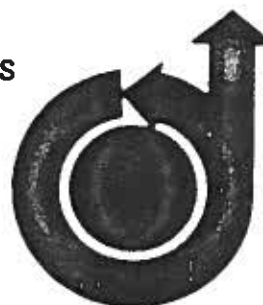


AIAA HOUSTON SECTION 1982 – 1983 DINNER MEETINGS  
HELD AT HOLIDAY INN – NASA ROAD ONE

Social: 6:00  
Dinner: 7:00  
Program: 8:00



AMERICAN  
INSTITUTE OF  
AERONAUTICS AND  
ASTRONAUTICS

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

**THURSDAY – NOV. 18, 1982**



## PROGRESS TOWARDS EXCELLENCE

### DEVELOPMENT AT THE PATENT AND TRADEMARK OFFICE

**GERALD J. MOSSINGHOFF**

**COMMISSIONER OF PATENTS AND TRADEMARKS  
UNITED STATES DEPARTMENT OF COMMERCE**

**FOR DINNER RESERVATIONS, CALL:**

<b>DIANNE</b> 333-4150 (Martin Marietta)	<b>JOANNE</b> 333-2030 EXT. 242 (Rockwell)	<b>PATTY</b> 488-5660 EXT.211 (MDTSCO)	<b>SANDRA</b> 483-3995 (NASA)	<b>SYLVIA</b> 845-7541 (College Station)	<b>ENTREE – BAKED CHICKEN SHORT RIBS</b>	
					<b>MEMBERS &amp; SPOUSES</b>	<b>\$9.50</b>
					<b>NON-MEMBERS</b>	<b>\$10.50</b>
					<b>STUDENT DISCOUNT</b>	<b>\$2.00</b>

**RESERVATIONS DEADLINE IS TUESDAY – NOV. 16 at 12:00 NOON**

**DINNER CANCELLATIONS ARE REQUIRED**

**ALL ARE WELCOME**

**THERE IS NO CHARGE FOR ATTENDING THE PROGRAM ONLY**

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS  
HOUSTON SECTION  
NEWSLETTER

October 1982

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The Houston Section Newsletter is published periodically by the Houston Section AIAA: This issue printed by Lockheed. Address all communications to Carolyn Conley, Associate Editor on Site, NASA/JSC, Mail Code CH4, or to Robert Glowczwski, Associate Editor, Martin Marietta, Mail Code MMC, 1740 NASA Road 1, Suite 100, Houston, Texas 77058.

W.A. Stewart, Editor

#### CHAIRMAN'S REPORT --- BILLING

--- Just a note concerning the annual billing cycle for membership dues (referenced as "Oh, it's that time again!")

For a long time an AIAA billing cycle has been yearly from 1 October, to 30 September. If a person joined, he would pay a full years dues and next years bills would be prorated -- hopefully, correctly.

After a long, hard fight, the billing cycle is now to be changed. Henceforth, after 1 October, a new member joining will again pay a full years dues. However, he will not be billed automatically on 1 October. He will have a choice of billing dates: anniversary of the joining date, or his birthdate.

For current members, the new system will also change to the same procedure as soon as the National Office can handle the budget flow.

Please try to be patient if you get a bill that is incorrect; changes are being made.

--- Sharon Castle

#### EDITORIAL -- A DEBT TO OUR PROFESSION\*

Most of us can remember the feeling of accomplishment and relief that we experienced upon receiving an engineering degree. We had completed a long and difficult task, and we had measured up to the high standards requisite to graduation in engineering. It was the completion of a long, tough piece of work.

In most universities, a bachelor's degree in engineering required more credit hours than any other curriculum, and considerably more study time than most. Sure, many of the courses were interesting, and some might have been classed as delightful. Nevertheless, the drudgery and discipline of long study hours had to be ground out year after year.

But, hard work alone was not sufficient. Most would agree that only a small portion of our high school classmates were blessed with the talents to get through engineering. The rest either lacked the interest or mental capacity to do the work. Quite simply, most of us have become engineers because we had the interest and motivation to sustain a prolonged, tough effort and the mental capacity to understand what we were being taught.

Interest, motivation, and mental capacity are talents that could be either instilled by others or acquired through heredity. Consequently, those of us who are content with our careers must realize that other people, chance or Divine design had much to do with our good fortune. I conclude from this that there is an implied responsibility to pay back to our profession some share of the good fortune that we have enjoyed.

Your membership in the AIAA is in many ways an expression of this support to your profession. Others are: professionalism in the conduct of assignments, helping inexperienced colleagues and young engineers to develop their capabilities, and en-

EDITORIAL (Continued)

couraging talented youngsters to consider a career in engineering. We can all point with pride to the accomplishments of our profession in improving the quality of life on Earth. Certainly, this good work must continue into the future.

--- Max Faget

\* Although this article is directed toward engineers, it is also applicable to other AIAA members with different educational backgrounds.

SECOND CALL FOR PAPERS FOR AIAA HOUSTON SECTION MINI SYMPOSIUM

The annual mini symposium is to be held April 28, 1983 at the Gilruth Center at JSC. Mr. Aaron Cohen, JSC Engineering and Development Director will serve as General Chairman.

The theme for the mini symposium this year is "Space Operations Systems". The abstract deadline is 1 March 1983. Please submit abstracts to Robert E. Lewis, Technical Vice-Chairman, Houston Section AIAA, at Mail Code EH13 at JSC.

MEMBERS URGED TO IDENTIFY THEMSELVES WITH A TECHNICAL COMMITTEE

The purpose of AIAA is participation in technical committees for technical information exchange. Every member of the section is urged to join one or more technical committees. Please sign up with the committee(s) of your choice by calling or writing the technical chairman and giving them your name, mail code, and telephone number so you will be informed when the meetings will be held and the topics to be covered.

Our technical committees are:

Software Systems, Wayne Musial/MDTSCO, 488-5660 X262  
Computer Systems, Frank Whiting/MDTSCO, 488-5660 X222  
Energy Systems, Dick West/MDTSCO, 488-5660 x244  
Communications Systems, Dr. Phil Hopkins/Lockheed, 483-4119  
Ground Test and Simulation, John Grimaud/NASA, 483-3481  
Mechanics and Control of Flight, Roscoe Lee/TRW, 333-3133  
Materials, Structures and Dynamics, Tom Modlin/NASA, 483-3076  
Space Systems, Logan Haycraft/Boeing, 486-1280

## MEMBERSHIP OPPORTUNITIES - MAKING THE MOST OF THEM

As members of AIAA, you and I are "aerospace professionals". Our dues payments help ensure the long term success of our industry, and bring us Institute Benefits and Technical Information (via magazines) to enhance our personal "professional development". These are reasons enough to be a member, but maybe we are cheating ourselves of some special opportunities.

- o There is a local and national committee related to every work assignment in the aerospace industry. By our participation and contributions of ideas, we stimulate each other to greater achievements.
- o We can develop and present technical papers in our special area of interest at our own Section Mini-Symposium or "Lunch and Learn Sessions". And Possibly develop papers for national publication.
- o We can attend/participate in Section Meetings, Local Conferences and National Conferences or just call up other members for a private meeting - to compare notes and ideas, and gain perspective.
- o We can borrow cassette tapes free of charge from our local Section and privately listen and learn - on a wide variety of technical and personal development topics.
- o And best of all, we can develop new friendships, to share our thoughts within the profession we enjoy.

These are the bonuses of AIAA membership. I sincerely hope each member of the Houston Section receives his/her rightful share. There are endless opportunities for all.

---Loren Wood

## UNISPACE 82 (concluded) - KEY ISSUES

Prior to the Unispace 82 Meeting in August, committee meetings were held to draft a copy of the final report. The report was 430 paragraphs long and covered three areas: A review of developments in space; space applications; international cooperation and the UN role.

Of the 430 paragraphs, only 15 were still open at the start of the conference. However, the 94 nations attending had to approve all 430 paragraphs, not just the 15 disputed ones. Rather than vote on each paragraph, the national representatives had to come to 100 per cent consensus for a paragraph to be approved. It took two weeks for the three committees to review the paragraphs.

The area of most heated debate was over four paragraphs dealing with the militarization of space. The General Assembly assigned this issue to the UN Committee on Disarmament (CD). However, the Group of 77, the third world non-aligned nations in the UN, worked in many closed meetings and through their representatives in the committee meetings, to keep the militarization issue open. Since 100 per cent consensus must be reached, any one country could veto wording in a paragraph.

The Group of 77 wanted bounds on the military use of space and a directive to the Committee on the Peaceful Uses of Outer Space (COPUOS) to address this issue. Compromise was achieved with wording requesting all nations to prevent an arms race in outer space; to adhere to present treaties and for the CD to give high priority to the prevention of an arms race in space.

Another issue of the conference was the use of geostationary orbits. The equatorial countries have defined the geostationary orbits over their territory as national territory and expect rental fees from satellite users.

The countries and multinational corporations using this space have not agreed with that idea. This leaves open hours of debate on where space begins and what are national boundaries. A long-term resolution of this problem has not been reached, although compromise language was agreed upon.

Developing countries also are concerned that the developed countries will use all the frequency capability at geosynchronous orbit, so that by the time they can afford their own satellites to exploit this resource, there will be no space left for them. Developed countries point out that technological "breakthroughs" will continue, providing such countries with desired capabilities in the future. The concern expressed by developing countries has sensitized developed countries to be aware of future needs of developing countries. For example, Intelsat now boosts its dead satellites up out of geosynchronous orbit to open space for future satellites.

For the present, consensus language was reached on these and other issues and they can be taken to the General Assembly this fall. No one left the conference convinced space is now safe from the arms race. Interestingly, multinational corporations, such as Intelsat, Imarsat, Arabsat, ESA, as well as other multinational corporations have so much to benefit from peace, that in a couple of decades it is going to be to everyone's interest to cooperate and make 100 per cent consensus the needs of operating this earth.

#### NEW CHAIRMAN FOR MATERIALS, STRUCTURES AND DYNAMICS TECHNICAL COMMITTEE

Tom Modlin, ES, NASA Structures Division, has agreed to take on the duties of Chairman for this committee.

## STUDENT AFFAIRS

The four AIAA Student Chapters that fall under the responsibility of the Houston Section - AIAA (Texas A&M University, Rice University, Prarie View University and Lamar University) have begun their program year. The Student Affairs Committee has made contact with the faculty advisors and is assisting in setting up the individual programs. The faculty advisors and student chapter presidents, respectively, are: Lamar University - Dr. Joseph Pizzo and Jack Mades; Dr. Herschell Sheely and Victor Taylor; Rice University - Dr. Fred Wierum and James Baeder and; Texas A&M University - Asst. Prof. Gerald Hall and Keesy Miller. Several chapters have started their programs already.

The status of the Getaway Special (GAS) program at each school was reviewed with the following results: Lamar University, being less than a year old, has no current program but has high hopes of initiating one this year. To this end the Houston Section - AIAA intends to support them in obtaining the \$500.00 down payment as soon as possible--more on this later.

Prarie View has been supported by McDonnell Douglas Technical Services Company for some time. Experiment studies have been going on for several years and a request for AIAA-Houston Section technical advice has been received. Rice University has revived its interest in their program and has worked up an experiment proposal that is currently being reviewed. Texas A&M dropped their GAS reservation in 1979 due to lack of support from the other engineering departments at A&M.

In an effort to coordinate more closely with the students, and to retain student members after they graduate, the Student Affairs Committee has initiated a "Pared Member" program. This program will involve a professional member being associated with a student member on a "one-to-one" basis.

The involvement will include: communicating by letter, phone, or in person; invitations to AIAA dinners, or other appropriate technical meetings; career counseling; visits to the school for technical guidance; etc. All of the student chapters have endorsed this plan. AIAA section members who would like to participate in this program should call Ernie Hillje at 483-3405. The inputs will be minimal, however the results should be outstanding!

Another area of responsibility of the Student Affairs Committee concerns the annual Science Fairs. The Brazos Valley Science Fair awards are managed independently by Houston Section-AIAA members in the Texas A&M area. The Greater Houston Science Fair awards are managed by the Houston Section-AIAA Student Affairs Committee. This year we plan to give more awards to these ambitious and deserving students.

In addition to the three education level categories, awards will be broken down further to encompass the technical disciplines such as Earth/Space Sciences, Engineering, Mathematics/Computers, etc. Also special category awards will be planned for outstanding exhibits in categories such as "Most Creative," "Best Theoretical Basis," etc. These latter awards will be given only in the event of above-average exhibits that did not fall in one of the three educational level categories. Planning has started on the award listings and groundrules will be formulated for the Houston Section judging.

The above efforts as well as the normal day-to-day business of the Student Affairs Committee will be handled by three sub-committees. These are the Student Chapter Liaison, Getaway Special, and Science Fair Sub-committees. Many section members have already volunteered to help in these endeavors, however there can never be too many. Any section member who would like to be on one of these sub-committees should call Ernie Hillje at 483-3405 or drop a note to me at NASA-JSC mail code ET3.

---Ernie Hillje

#### MCFTC MEETS, FUTURE MEETINGS PLANNED

The Mechanics and Control of Flight Committee held its first meeting on 21 September: attendance, 24 persons. During the organizational session, a charter was reviewed and accepted. A goal of monthly "lunch and learn" sessions was established.

The second portion of the meeting was addressed by Sam Wilson, TRW, who presented a description of a desk-top simulator for shuttle payload operations. The device provides a high-fidelity, low cost simulation of multi-body, on orbit dynamics. The auditors expressed high interest and the consensus will be extremely valuable in support of cost-effective shuttle operations.

A second "lunch and learn" session with Dr. T. Muller, Department of Aerospace and Mechanical Engineering from the University of Notre Dame on the topic of "The History of Smoke Visualization" took place on 20 October. A history of the utilization of smoke visualization from 1892 to the present was described.

The November session will address the performance of the Remote Manipulator system on STS-3 and STS-4. Flyers will be circulated announcing specific time and place. Please contact Roscoe Lee, 333-3133,X243, with any questions on proposed topics and speakers.

#### GTSTC TO HEAR ABOUT WIND TUNNEL

The Ground Test and Simulation Technical Committee (GTSTC) will sponsor a "Lunch and Learn" technical exchange program. Next month's meeting is to be held on November 9, 1982, in room 235 of Building 32 from 12:00 noon to 1:00 p.m.

The program will feature a presentation by Ernest R. Hillje and Paul O. Romere of the NASA/JSC System Engineering Division's Flight Analysis Branch. The topic will be the Space Shuttle Orbiter Vehicle Wind Tunnel Program and Orbital Flight Test Results.

Everyone is invited to attend. For additional information contact John Grimaud, NASA/JSC, Phone 483-3481.



### CMS-TC MEETS

The third and final CY82 meeting of the Communication Systems Technical Committee (TC-CMS) was held on 20 October in Bedford, Massachusetts at the MITRE Corporation facility.

As Chairman of the Subcommittee on local section liaison, I proposed at that meeting the generation of a local TC Newsletter that would disseminate to the national and all local section TCs in this discipline area, what the locals around the country are doing and planning.

This sheet, to be published tri-annually and accompany each TC-CMS meeting minutes distribution, would establish a dialog between national and local TCs largely non-existent today. If approved for trial publication in 1983, Houston section TCs under the Information Systems TG will be encouraged to contribute articles and accounts of their activities. The writer and Phil Hopkins, now members of TC-CMS, will bear responsibility for soliciting such contributions from this section.

---C.V. Wolfers  
Chairman-Elect  
Houston Section AIAA

### TCCS PLANS MEETING

The Technical Committee on Communication Systems will be hosting a lunch and learn meeting in the conference area of building 3 on December 3, 1982 from 11:30 a.m. to 12:30 p.m. The speaker will be Paul Harton from Lockheed-EMSCO's Tracking and Communications Systems Department. The topic will be "MSBLS (Microwave Scanning Beam Landing System) For The Shuttle Orbiter".

### OH, MORTIFICATION!

What an embarrassment! Last month I reported that I'd only received one correct answer to the May Cranium Cruncher. Lou Livingston from NASA has pointed out that he had the right answer, too! And indeed he did --- just expressed in a form I hadn't expected. So there were two smart folks, and I apologize for not recognizing it.

### OCTOBER CRANIUM CRUNCHER

I didn't pose much of a challenge to you last month! I got a bunch of correct answers (my house was number 35 in a street with 49 houses on it). The winner, selected at random from all the current answers is

BOB MARAIA - NASA (ES3)

Bob gets the free dinner and our congratulations.

I received other correct answers from:

Cliff Bean - NASA (FM84)  
Carl Scott - NASA (ES3)  
Mike Rasmussen - MDTSCO  
C.K.J. NG  
Michael Martin - Lockheed  
Henry Schneider - MDTSCO  
Jim Oberg - MDTSCO  
Carl Watkins - NASA (EF2)  
Bill Schoolmeyer - MDTSCO  
Ralph Hite - MDTSCO  
Gene Brown - CSC  
J. A. Yannie - Aerospace Corp.  
Tom Mikus - Shell  
S. M. DiPietro - MDTSCO  
Steve Brown - MDTSCO  
Charles Campbell - Lockheed  
Marlowe Cassetti - NASA (FA)  
L. P. Dorsey - Texas A&M  
Barbara Kolkhorst - IBM  
Paul Anna - Texas A&M  
Carl Cornell - Texas A&M (Got it half right)

Congratulations and thanks for participating. The rest of you, put your brain in gear and try this one for October:

"Find the smallest number with 28 divisors"

The winner gets a free dinner at an up-coming AIAA meeting and will be selected by a random process from all correct entries. Send your answers to:

Norman Chaffee  
NASA-JSC  
Mail Code EP  
Houston, Texas 77058

GOOD LUCK!

## 1982-83 AIAA HOUSTON SECTION

Officers

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Loren E. Wood	TRW/H5	333-3133 X253

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Ernest R. Hillje - CLCTC Rep.	NASA/ET-3 77546	483-3404
Dr. Edward C. Ezell - Historian	NASA/BE4	483-2838
Robert V. Glowczwski - Region IV, Deputy for Membership	Martin Marietta/MMC	333-4150

Committee Chairman

Phillip M. Deans - Membership Committee	NASA/EK3	483-6486
William A. Stewart - Newsletter	Box 57913 Webster 77598	476-1630
Richard J. Crane - Publicity	1111 Oak Circle Seabrook 77586	333-2465
Bob Cohen - Public Affairs/Speaker Group	NASA/WT3	483-6161
Thomas B. Murtagh - PA/Tour Group	NASA/FD4	483-3217
Richard Gertsch - Public Affairs Magcobar Minerals	Box 6504 Houston 77005	627-8124



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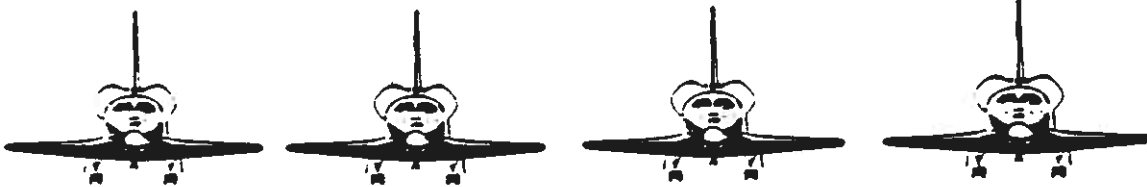
# newsletter

November 18 Progress Towards Excellence  
Development at the Patent  
and Trademark Office

Gerald J. Mossinghoff  
Commissioner of Patents  
and Trademarks  
United States Department  
Commerce

December 15 JSC Challenges  
for JSC and AIAA

Gerald D. Griffin  
Director, Johnson Space  
Center



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