AIAA Houston Section
Horizons
American Institute of Aeronautics and Astronautics
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Dinner Meeting with Dr. Kamlesh Lulla
Earth Observations from Orbit

By William Best

Dr. Kamlesh Lulla of JSC's Earth Science Dept. gave a very informative presentation on the history of Earth observations, present activities on the Shuttle and the plans for the International Space Station (ISS).

Not many people realize that scientific Earth observations and remote sensing began along with manned spaceflight program. Some of the 1200 Gemini astronaut photos are unsurpassed today for the data they contain. One reason being that the atmosphere was much clearer then.

The Earth observation program expanded greatly during Apollo with well-defined experiments, but by the beginning of the Shuttle era (1981) support had been greatly reduced. The general realization that the shuttle provides a superb

…*See Dinner Meeting on Page 8*

AIAA Houston Section ♦ ONLINE ♦ www.jsc.nasa.gov/aiaa

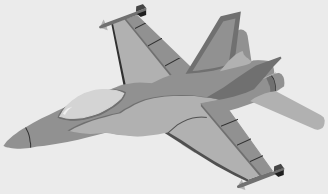
News *Membership* *Upcoming Events* *Committees* *Leadership* *Horizons*

Judges Needed!

Science and Engineering Fair

Astroarena
Friday, March 24, 2000

AIAA will be giving out their own awards at the Science Engineering Fair of Houston. If you would like to be a judge contact Joy Conrad at (281) 480-4101 or *jconrad@averstar.com.*



February 9 Deadline for Next Horizons

Thanks to everyone who contributed to this edition of Horizons! The deadline for next month's issue is just around the corner. Please submit all articles to John Keener by Wednesday, February 9, 2000!

Contributions can be submitted by email to John Keener at john.keener@lmco.com.

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Chairman's Corner

By Merri Sanchez, Chairman

The year 2000 is off to a great start for the Houston Section. At the 38th AIAA Aerospace Sciences Meeting and Exhibit in Reno early this month the Houston Section was given several awards. These included:

- **Outstanding Section**: For overall activities and contributions of the section throughout the year - Russ Filler
- **Career Enhancement**: For section activities that are beneficial to career development - Russ Filler and John Alred
- **Communication**: For outstanding communication outreach through our newsletter - Bill Best and Cynthia Collins
- **Membership**: For increasing the section's membership by planning and implementing effective new member recruitment and retention campaigns - Darby Cooper
- **Public Policy**: For stimulating public awareness of the needs and benefits of aerospace research and development - Wayne Rast
- **Young Professional Activity**: For planning and executing successful events that encourage young member participation in AIAA - Russ Filler

In addition, **Dr. Donald Kessler**, a retired NASA JSC senior scientist for orbital debris was awarded the **Losey Atmospheric Sciences Award**. In 1940, the Robert M. Losey Award was established in memory of Captain Robert M**.** Losey**,** a meteorological officer who was killed while serving as an observer for the U.S. Army, the first officer in the service of the United States to die in World War II. In 1975 the name was changed to the Losey Atmospheric Sciences Award. It is presented in recognition of outstanding contributions to the atmospheric sciences as applied to the advancement of aeronautics and astronautics. In Dr. Kessler's case, the award was presented "in recognition for pioneering work in the discovery and definition of the orbital debris component of the atmospheric environment."

And several members of the Houston section were awarded Associate Fellow status at the Associate Fellow banquet. AIAA Associate Fellows are individuals of distinction who have made notable and valuable contributions to the arts, sciences, or technology of aeronautics or astronautics. The members are:

- Chittur P. Balasubramanian Lockheed Martin
- Dimitris C. Lagoudas Texas A&M University
- Kenneth S. Reightler Lockheed Martin
- Merri J. Sanchez NASA/JSC

We have also started the year 2000 with an excellent dinner program. On January 18th, Dr. Kamlesh Lulla spoke to us on "35 Years of Earth Observations from NASA Low Earth Orbit Missions". We were also honored to have Dr. Donald Kessler and his wife Lynn and Dr. Angelo Miele and his wife Gymme as our guests for that program. Dr. Miele is the A.J. Foyt Professor Emeritus of Engineering, Aerospace Sciences, and Mathematical Sciences at Rice University, and has been elected as an AIAA Honorary Fellow.

I would like to correct the motivation for the election that was published in our last newsletter as it was in error. Dr. Miele was selected as an Honorary Fellow "for analytical, computational, and educational contributions to the fields of atmospheric and space flight mechanics, centered on optimization, guidance, and control of aircraft and spacecraft trajectories." This is the highest honor that AIAA has. Honorary Fellows are persons of eminence in aeronautics or astronautics recognized by a long and highly contributive career in the arts, sciences, or technology. There were only 3 Honorary Fellows elected this year. Dr. Angelo will be recognized at Global Air and Space 2000 this May in Washington DC.

We are half way through our council year this month, but we still have three council positions open. Please contact me if you would be interested. The open

…See Chairman on Page 10

Congressional Visits Day

By Merri Sanchez

The 4th annual AIAA Congressional Visits Day will be held in Washington D.C., on March 15-16. This is AIAA's annual grassroots, educational outreach activity to Congress and the Executive Branch. Each year nearly 120 AIAA members from across the US travel to Capitol Hill to educate Congress and the presidential administration on the aerospace industry's importance to our country. Russ Filler, Bill Atwell, and John Bendle will be representing the Houston Section at this event. Russ will be pulling together our message on what we feel are critical issues affecting the Houston area as well as the nation. If you would like to provide an input to that message, please contact Russ at 281-483-6904.

Equipment Available for Demos

By Joy Conrad

This year Engineer's Week is February 20-26. Hundreds of schools in the area have requested visits and AIAA volunteers have stepped up to the challenge. If you will be visiting schools for Engineer's Week, the AIAA Houston Section has demonstration equipment that can be borrowed. To reserve your demo, contact Joy Conrad at (281) 480-4101 x220 or jconrad@averstar.com. The AIAA equipment includes:

1. Vacuum pump and bell jar for demonstrating pressure and the outer space environment
2. Supplies to make Alka Seltzer rockets
3. Magnets (permanent and electromagnets)
4. Optics (lens and color filters)
5. Gyroscopes
6. Tornado bottles
7. Inclined plane for demonstrating angular momentum and mass distribution

AIAA Life Sciences, Space Processes and Human Factors Technical Committee Presents

Lunch 'n' Learn

Protection Against Decompression Sickness on Mars

Johnny Conkin, Ph.D.

Tuesday
February 15, 2000
11:30 am -12:30 pm
Building 37
Conference Room 2

Please join us, bring your lunch and a friend, and listen to Dr. Conkin discuss the "Protection against Decompression Sickness on Mars." Dr. Conkin is an Environmental Physiologist. He completed a Ph.D. in physiology in 1993 from the State University of New York at Buffalo on probabilistic modeling of hypobaric decompression sickness. He has worked in the Environmental Physiology Laboratory since 1979 (except for the time at Buffalo), starting with Technology Incorporated and is now with NSBRI through Baylor College of Medicine.

Please RSVP to Karin C. Loftin at (281) 244-1122. Hope to see you there!!

AIAA Member Survey: *The Results*

By William Best

The survey questionnaire which was published in the "Horizons" resulted in a response by 53 members. I think the results would be more accurate if we had a few more responses but still may be representative. The responses came from a wide and even spread of ages and a wide variety of employees with NASA (11), Boeing (8), Lockheed-Martin (6) and USA (5) being the most frequent.

One result from the survey is that an interesting speaker is the #1 reason people go the meetings. Another is that people would like some variety in the location of our dinner meetings although most are satisfied with the Gilruth and though a number would like to see the price reduced it is not a major issue. Some would also like to have the meetings right after work and a lesser number opted for lunch time meeting, but Thursday remains the most popular day with Tuesday or Wednesday favored by some. The most cited reason for not attending a meeting is an inconvenient time with some stating their schedules do not permit them to come.

From my perspective, the section has done a decent job in getting good speakers on a variety of subjects and also in changing the locale for meetings although we have not tried to vary the time to any extent. I am sure the section will continue their efforts to keep the members interested in section activities. I think it would be a good idea to do the survey again in about 2 years with some editing to the survey (hindsight is good) to try to improve the response.

What do you hope to get out of the AIAA?

1. Technical information
2. Leadership experience/Opportunity to serve on committees
3. Contacts/Networking

What type of distribution is best for the 'Horizons"?

1. E-mail to check website
2. E-mail distribution
3. Paper

How many of the following have you attended?

Members who answered this question on dinners (42) attended on average just under 3 dinners, Lunch and Learns (22 responses) about 2 events and conferences (19 responses) averaged 1 each.

What attracts you to the dinner meeting?

1. Interesting speaker
2. Socialize with others/Professional networking

What would you change so that you would attend more meetings?

1. Lower price
2. Schedule right after work/Evenings
3. Schedule a luncheon meeting

What are the major reasons you do not attend?

1. Inconvenient time
2. Speaker topic of no interest

What type of program would you like to see? [This is a little difficult to rank]

1. Human Spaceflight
2. Planetary/Astronomy
3. Unmanned Space
4. Systems Engineering
5. Military Space
6. Human Factors
7. General Aviation, Flight Dynamics, Structures
8. Other (State of NASA, remote sensing, university research, space politics)

What is the best way to get information to you?

1. E-mail
2. Monthly newsletter
3. AIAA website
4. Flyer
5. JSC Roundup

AIAA Region IV Student Paper Conference

Volunteers Needed

The 48th AIAA Region IV Student Paper Conference is coming to Houston on April 6-7, 2000. The conference is one of seven regional conferences. Region IV includes students from Texas A&M University, the University of Texas (Austin & Arlington), Louisiana State University, University of Oklahoma, Oklahoma State University, University of New Mexico, and New Mexico State University.

The conference will enable students to gain valuable technical presentation experience while competing for cash awards. Students from the various schools will present their technical research at both the undergraduate and graduate levels. In addition, the students will hear from exciting industry speakers and have an opportunity to tour NASA's Johnson Space Center.

As a sponsor of this event, the Houston Section provides logistical support to the host student branch and conducts fund-raising efforts to help defray the costs for the students. In addition, the section is responsible for providing both technical and audio judges to provide feedback to the students on their work. Volunteers are needed to make this conference a success. If you are interested in volunteering please contact:

Darby G. Cooper
281/538-6100 ext. 20
dgcooper@neostar-astro.com

Display Space Available

By Merri Sanchez

In addition to this event being an important developmental event for the students in preparing and presenting a paper, this is also an important event for the aerospace industry. AIAA will be selling table space to the local aerospace companies during the competition for recruiting efforts. As industry leaders you will be able to directly target a prime audience: college seniors and graduate students. The fees from the table space will be used to cover the costs of putting on the competition. Please contact Neil Johnson at 281-228-5462 or Mike Oelke at 281-228-5410 for more information.

Have You Considered Applying for a Membership Upgrade?

By Rakesh Bhargava

As a dues-paying member, you are eligible for various upgrades in your membership at no additional cost. All current members are encouraged to apply for the relevant membership upgrade. If you satisfy the requirements given below, or need any additional information, please contact the following at the earliest possible:

Rakesh Bhargava at 713-977- 7770 (bhargava@uei-houston.com)
Merri Sanchez at 281-244-8461 (merri.j.sanchez1@jsc.nasa.gov)

Membership Grade	***Due Date***	***Requirements for Upgrade***
Senior Member	Applications are processed monthly	Over 8 years of professional practice in the arts, science or technology of aeronautics
Associate Fellow	Nomination – April 15 References – May 15	Currently Senior Member and Over 12 years of professional practice in the arts, science or technology of aeronautics
Fellow	Nomination – June 15 References – July 15	Currently Associate Fellow and made notable and valuable contributions in the fields of aeronautics or astronautics
Honorary Fellow	Nomination – June 15 References – July 15	Currently Fellow and you are person of eminence in the fields of aeronautics or astronautics, and recognized by a long and highly contributive career in the arts, sciences or technology

AIAA SPACE 2000 Conference and Exposition

September 19-21, 2000

Sponsored by: The Boeing Company in cooperation with the Space Technology Alliance

This forum will address recent space systems & technology achievements and provide an opportunity to define our future in space. Past space achievements were significant. Safe reliable access to space, the International Space Station, space-based communications and navigation, routine use of space assets by our military and space science advancements are among our accomplishments. The next decade will bring new government missions, new opportunities for space business and new challenges. Progress will be paced by business decisions as well as technology readiness. Action is needed to ensure the skills and facilities are available. This conference will investigate new missions and markets to establish system requirements and define system features. Architectures and system concept sessions on transportation and orbital systems, civil and military systems, space sciences and emerging commercial products and services are included to address future options and frame key decisions. Separate sessions focus on the technology needs and priorities. In addition, legal and regulatory matters will be investigated to improve our understanding of the environment and barriers affecting the future direction of the world's space programs. The SPACE 2000 conference offers a venue for researchers, system developers, and management from government, industry and academia to share ideas and interact. Invited speakers and panelists will provide a unique perspective on key issues, setting the stage for continuing discussion throughout the program. This conference complements other more specialized meetings by offering a broad perspective on space, making this meeting the "must attend" conference for 2000.

For more information, please contact Deputy Program Chair, Steve Trejo, Tel (714) 372-2702, Fax (714) 372-2720, steve.trejo@boeing.com or Technical Chair, Dr. Fred Kosofsky, Tel (714) 372-2696, Fax (714) 372-2716, fred.kosofsky@boeing.com.

Military Space Missions
The space environment is vital to the interest of the United States. To that end, the space mission is evolving for USSPACECOMMAND and its space component commands from the USAF, USN, and USA. The current mission is focused on the defense and a free and open outer-space environment. The military space mission includes the defense of space assets. With the growing production and deployment of commercial and the potential growth in military space systems, the space above the earth's atmosphere has emerged as a potential new Area of Responsibility (AOR), which, someday, may need to be defended.

Space Science & Robotic Missions
The pursuit of detailed knowledge about our planet and the universe provides the impetus for key space science missions in the future. Scientists seek to learn of environmental impacts to Earth, to make new discoveries within the Solar System, to understand the physics of the cosmos, the characteristics of Sol's planets, and their affect on life on Earth. Space missions will detect natural threats to space assets and related ground systems.

Human Space Flight & Exploration
The Space Shuttle, in the continuing successful launch of payloads and the support of International Space Station deployment and assembly, has demonstrated the multifaceted role of man in space and has provided a training ground for the development of the skills necessary for future human space missions. The new International Space Station represents our latest achievement in human space flight. But, these efforts are the mere beginnings of human exploration of space, an exploration that is literally unlimited.

Business Potential of Space
In recent years we have seen a dramatic increase in of the use of space for commercial enterprise. All contribute high growth revenues to the global economy.

…See Space 2000 on Page 10

Lunch and Learn with Dr. Jane Krauhs

NASA's Life Sciences Data Archive: A Resource for Life Scientists

By Karin C. Loftin, Ph.D.

AIAA Life Sciences, Space Processes and Human Factors Technical Committee sponsored our first "Lunch and Learn" of the new century. Dr. Jane Krauhs presented "NASA's Life Sciences Data Archive: A Resource for Life Scientists," on Thursday, January 13, 2000. Dr. Krauhs discussed the history and development of the Life Sciences Data Archive (LSDA) that really had its beginning about 1990. When I joined KRUG Life Sciences (now Wyle Life Sciences) in 1989, no such resource was available. It required many hours in the library performing library searches to find space-flight information that is now easily reached on the World Wide Web at http://lsda.jsc.nasa.gov. The LSDA project began in earnest in 1994, and Dr. Judy Robinson, Code SL, currently manages it. LSDA receives data input from the 3 major NASA centers, JSC ARC, and KSC, and is the only database of its kind in the world.

LSDA includes 900 NASA experiments conducted during space missions and requires a standardized data entry. Original data of various species of animals are available for further analysis. Unfortunately human data are not in the database, because of confidentiality restrictions, but in the future averaged human data may beonline. Dr. Krauhs guided us through an overview of the options available on the menu using the computer directly connected to the web, and then described the details from a handout document. For those of you interested in obtaining additional handouts, please contact Jane Krauhs jkrauhs@klsiems.jsc.nasa.gov.

There are several options for searching LSDA, by mission, by experiment, by authors, or by biospecimens. Hardware information is also included, along with flight documents and photographs. Photos from the photo gallery may be downloaded for use in presentations and reports. For educational purposes with the younger scientist in mind, subjects such as living & working in space, my first Shuttle launch, and astronaut information are also described. A number of related links are accessible from the LSDA, and you may help to improve its utility by providing online feedback.

Thank you to Dr. Krauhs for her presentation and to all of the people who attended. I hope everyone has an opportunity to check out the LSDA website soon. Tell your family, friends, and colleagues. Watch for our February "Lunch 'n' Learn" entitled, "Protection against Decompression Sickness on Mars," by Dr. Johnny Conkin on Tuesday, February 15, 2000 in B37, Conference Room 2 at 11:30 am.

Dinner Meeting *continued from page 1*

observation platform for low earth orbit has resulted in program expansion again. NASA now has accumulated over 400,000 photos of the earth's surface. Astronauts have shown that they are better than machines for getting pictures mainly because they can make real time decisions about the potential target-clouds, the best angle, time of day, etc and can record unusual events. They also can provide documentation about the photo. This ability feeds into what is known as 'data fusion' where the data from many different observations of the same scene are gathered together or fused to provide a more comprehensive interpretation.

Using Apollo era photos to compare with recent shuttle photos provide useful data for seeing long term changes. Examples are dying, fires, and shrinking habitat. During the Shuttle-Mir program, the phenomenon known as "El Nino" was shown to have effects all over the globe which could be documented from space.

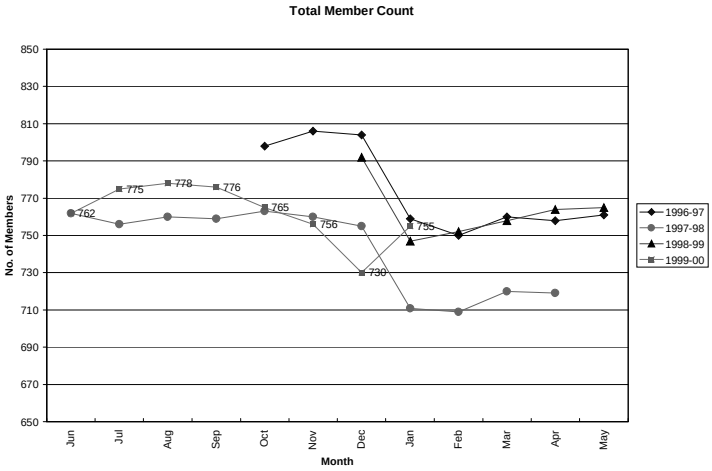
For the ISS program plan are being made for observations to be made during EVAs, utilizing the optical quality observation window on the station and using attached payloads. The best may be yet to come as far has using earth observation data to further understand our earth. To view some of the results to date go to http:\\eol.jsc.nasa.gov.

Houston Section Gains 47 New Members!

By Darby Cooper

The Houston Section was selected to participate in a pilot AIAA program called Trial Membership Campaign. This Program provides an opportunity for current AIAA members to recruit co-workers and friends by offering a FREE nine-month membership in AIAA. The trial members receive full benefits, including *Aerospace America,* discounts on AIAA journal subscriptions, and inclusion in all of the exciting Houston Section events. These new AIAA members will receive a special welcome kit along with the January edition of *Aerospace America.* The Houston section was able to recruit 47 new members through this program. These members will have the opportunity to continue their AIAA membership at the end of the trial period. Please welcome these new members to AIAA and encourage them to continue reaping all of the rewards AIAA membership has to offer.

Section Membership Grows!!



With the addition of our 47 new members from the Trial Membership Program (not shown in the above graph) the Houston Section has just broken the 800 member mark!! The sudden increase from December can be attributed to a database error.

Professional Development

By Merri Sanchez

AIAA offers several training courses for your continued professional development. You can travel to the short courses or sign up for a home study course. Many employers in the area will pay for these courses. Continuing Education Units are available for these courses. For more information or to register for one of these courses, pleases contact AIAA Customer Service at 800-639-2422 or go to the Professional Development section of the AIAA web site at www.aiaa.org/calendar/index.html.

Upcoming short courses include:

- ***Introduction to Aircraft Loads Analysis***
  April 1-2, Atlanta, GA
- ***Aeroelasticity: State of the Art Practices***
  April 1-2, Atlanta, GA
- ***Elastic Stability Analysis***
  April 1-2, Atlanta, GA
- ***Adaptive Structures: Practice and Promise***
  April 1-2, Atlanta, GA
- ***Satellite Structures and Design***
  April 8-9, Oakland, CA
- ***The Space Environment***
  April 8-9, Oakland, CA

Upcoming home study correspondence courses include:

- ***Introduction to Computational Fluid Dynamics***
  March 31-August 31
- ***Advanced Computational Fluid Dynamics***
  March 31-August 31
- ***Computational Fluid Turbulence***
  March 21-August 31
- ***The Space Environment***
  March 31-August 31.

Chairman

Continued from page 3

positions are Young Professionals Chair, Professional Development Chair, and the SR&QA Technical Committee Chair. If we don't fill the SR&QA chair this year we will abolish the position. I highly encourage you to volunteer for these positions. They are not high-workload, and are very rewarding. We are specifically looking for a member under 35 years of age for the Young Professionals Chair.

Speaking of open positions, Garland Bauch will be heading the nominating committee for 2000-2001 officers. If you would like to participate on the committee or nominate yourself or someone else for a position for the next council, please contact Garland at 281-483-1309.

And it's that time of year to think about membership upgrades. Rakesh Bhargava, our Honors and Awards Chair, is starting to pull together the list of candidates to nominate for upgrade to Associate Fellow and Fellow. Pleases contact Rakesh at 713-977-7770 x1319 if you would like to suggest yourself or someone else for an upgrade.

We also need volunteers from the membership in the following areas:

- **Student Paper Competition** written judges, oral judges, and general helpers. The section is hosting the competition for Region IV on April 6-7 and we need help. Contact Darby Cooper at 281-538-6100, x20 to volunteer.

- **Annual Technical Symposium** session chairs, registration, and general helpers. The ATS will be held in conjunction with the student paper competition on April 6-7 so that we can cross-pollinate between the students and professionals. We are also looking for professionals to present papers at this symposium. The abstract deadline will be in February, so start writing now! Contact John Vollmer at 281-336-4623 to volunteer.

- **Human Space Transportation and Exploration Workshop** registration worker. This workshop will be held Feb 28-March 1 at Moody Gardens. Contact Steve King at 281-333-6646 to volunteer.

I hope to see you at our next dinner program on Monday, February 28 at the Walter Hall Pavilion in League City when Michael Coats, who is a former astronaut and is currently a Lockheed Martin Vice President, will be speaking to us on "The Demands and Challenges of a Spacefaring Race."

Space 2000

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Space Launch/ Space Access
The success of all space endeavors - military, scientific, exploration, development of commercial business - depends upon low-cost, highly reliable access to space. A major reduction of the cost of access to space will come about through advances in critical technologies, timely resolution of regulatory/policy issues and, business case viability.

Orbital Transfer & Operations
Most space missions depend to some degree on orbital transfer and operations. This is a critical aspect of accomplishing future missions. We can envision a future space infrastructure of orbiting manned and unmanned platforms, depots and satellites. How do vehicles move within and between orbits? Should we assemble large systems? Will it be cost effective to repair satellites in orbit? What support to future large satellite constellations will be required? What are the issues in intra-space transportation?

Enabling Technologies
Future space missions require that we continue to push the state-of-the-art in critical technologies and also discover and develop new technologies with which to revolutionize space transportation, systems, and operations. What evolving requirements are imposed on systems, subsystems and components for which key technology advance is the answer? What technological progress needs to be made to meet these requirements?

Strategic Planning & Policy
Existing government policy or the absence of such policy that represent potential barriers to the pursuit of the major space missions. Involved and affected government agencies include NASA, DOD, FAA, EPA, and the Departments of Commerce and Energy. Addressing many of these concerns early will enable progress in space efforts, left unaddressed, they may become real barriers. Not addressed, they may become real barriers.

Calendar of Events

February 2000

TBD	AIAA National Elections
TBD	Spirit of Apollo Scholarship Applications due
2/1	Region IV RAC Telecon, 4pm, 4S/5920A
2/1	Texas A&M University Student Branch Visit at College Station
2/2	Executive Council Meeting
2/4	SPC Abstracts Due
2/9	Newsletter inputs due
2/15	Identify Associate Fellow Nominations
2/15	Lunch and Learn: "Protection Against Decompression Sickness on Mars" with Dr. Johnny Conkin, 11:30-12:30 B37, Conference Room 1
2/17	*NASA Connect Series* Proportionality: The X-Plane Generation
2/20-26	Engineer's Week
2/28	Dinner Program with Col. Michael Coats, Lockheed Martin Astronautics
2/29-3/1	Human Space Transportation and Exploration Workshop at Galveston

March 2000

TBD	Lunch and Learn: "Contribution of Inner Ear to Cardiovascular Regulation" with Dr. Todd Schlegel, 11:30-12:30 B37, Conference Room 1
3/1	2000-2001 Officer Nominating Committee Named
3/2	Executive Council Meeting
3/3	SPC Registrations Due
3/8	Newsletter Inputs Due
3/15	Identify Fellow Nominations
3/15-16	Congressional Visits Day
3/16	Dinner Program with AIAA Distinguished Lecturer Seth Shostak on the Search for Extraterrestrials
3/17	SPC Papers Due
3/23-25	Houston Science and Engineering Fair

April 2000

TBD	Lunch and Learn
TBD	Telecon with Australian Section
4/5	Written Judging Complete on SPC Papers
4/6-7	Student Paper Competition
4/6-7	Annual Technical Symposium
4/8	Region IV RAC at Houston
4/12	Newsletter inputs due
4/13	Executive Council Meeting
4/15	Associate Follow Upgrade Nominations Due to National
4/15	2000-2001 Officer Election Ballots Mailed
4/20	Dinner Program with John Lienhard on "Engines of Our Ingenuity"

May 2000

TBD	Lunch and Learn
TBD	Workshop on Automation and Robotics and Innovations 2000
TBD	Clear Lake City Technical Societies Annual Awards Banquet
5/1	Houston Section Spirit of Apollo Scholarship Applications Due
5/4	Executive Council Meeting
5/4	Space Day 2000
5/10	Newsletter Inputs Due
5/10-12	Global Air and Space 2000 International Business Forum and Exhibits in Washington, D.C.
5/15	2000-2001 Officers Announced
5/15	Spirit of Apollo Scholarship Winner Announced
5/18	Dinner Program

American Institute of Aeronautics and Astronautics

1999-2000 Houston Section *Executive Council*

Chairman
Merri Sanchez
281-244-8461 NASA

Chair-Elect
Garland Bauch
281-483-1309 NASA

Past-Chairman
Russ Filler
281-483-6904 USA

Treasurer
Michael Oelke
281-228-5410 Oceaneering

Secretary
Jorge Molina
281-336-5048 Boeing

Vice Chair -Ops
Michael Lisano
281-483-7144 LinCom

Vice Chair -Technical
John Vollmer
281-336-4623 Boeing

Programs
Open

Young Professionals
Open

College and Co-Op
Nicole Smith
281-333-7450

Scholarship
Dr. Suzan Voss
281-244-7935 NASA

Pre-College
Joy Conrad
281-480-4101x220 Averstar

Honors & Awards
Rakesh Bhargava
713-977-7770x1319

Evolution of Flight
Russ Filler
281-483-6904 USA

Membership
Darby Cooper
281-538-6100x20 NeoStar

Public Policy
John Bendle
281-483-6935

Professional Dev
Open

Webmaster
Glenn Jenkinson
281-336-4528 Boeing

Publications
John Keener
281-333-7086 Lockheed

Publicity
Steve King
281-333-6646, Lockheed

Councilors

William Atwell	281-282-5474, Boeing
Dr. Winston Goodrich	281-244-0122, NASA
William Hartwell	281-244-8665, Boeing
Neil Johnson	281-228-5462, Oceaneering
Steve King	281-333-6646, Lockheed Martin
William Langdoc	281-483-5970, NASA
Dr. Karin Loftin	281-244-1122, Wyle Lab
Joseph Mayer	281-336-5372, Boeing
Quin Shepperd	281-244-4953, Boeing
Phillip Puddy	281-326-1457

Conference Chairs

- Student Paper Competition/Annual Technical Symposium: Darby Cooper/TBD
- Workshop on Automation and Robotics: Dr. Zafar Taqvi
- Service Vehicle Conference: Dr. Michael Lisano

Astrodynamics
Dr. Albert Jackson
281-483-5037 Lockheed

Automation & Robotics
Dr. Zafar Taqvi
281-244-4436 Boeing

In-Space Imaging
Dr. Kamlesh Lulla
281-483-5159 NASA

History
Edward Jablonski
281-336-4294 Boeing

Intr Space Act
Dr. Zafar Taqvi
281-244-4436 Boeing

Space Sc& Astronomy
Larry Friesen
281-334-5268

GNC
Douglas Yazell
281-244-3925

Comm &Tracking
Dr. Zafar Taqvi
281- 244-4436 Boeing

Systems Engineering
Stuart Corns
281-336-4291 Boeing

SR&QA
Open

LifeSci & SpaceProc
Dr. Karen Loftin
281-244-1122 Wyle Lab

EVA
Robert Yowell
281-483-4074 NASA

Italics implies will or has been asked, but has not accepted yet

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