

## Annual Technical Symposium a Success!



*Bill Parsons, STS Program Director, accepts an Evolution of Flight poster from Executive Council Member Norman Chaffee at the 2004 Annual Technical Symposium. See Page 5.*

# Horizons

May / June 2004

AIAA Houston Section



ONLINE



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News

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Education

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Are you interested in becoming a member of the AIAA or renewing your membership? You can fill out a membership application online by going to the AIAA membership website at [www.aiaa.org/information](http://www.aiaa.org/information).

This is the final edition of Horizons for this year, if you have information you would like to share with the AIAA community, please contact our Chairperson.

Attention: Michael Oelke  
[AIAAchair@aiaa-houston.org](mailto:AIAAchair@aiaa-houston.org)  
(remove 'AIAA' before sending)

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Brad Files, Young Professionals Chair  
Joy Conrad King, Pre-College Chair  
Ellen Gillespie, GN&C Committee Chair  
Michael Oelke, Chairman

Ron Sostraic, GNC Committee Member  
Nicole Smith, Public Policy Chair  
Douglas Yazell, Vice Chair Technical

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## Chair's Corner

It's hard to believe that a year has gone by since I was elected chair of the Houston Section. It is now my honor and privilege to announce in this edition of *Horizons* the officers who will be serving you next year. Please join us at our annual Awards Banquet on June 17<sup>th</sup> as we recognize the individuals who made this year successful and to formally introduce the new officers.

We began the year with high goals:

- Launching a new web site
- Improving our communications (e-mail, letter, phone)
- Rejuvenating our Annual Technical Symposium
- Conducting several Century of Flight events

And we've done well on all of those!

- Murugan Subramaniam and Glenn Jenkinson have done a fantastic job transitioning the website and we look forward to improving its capabilities to better serve you in the future.
- We've delivered seven high quality newsletters in a more timely fashion than before.
- Douglas Yazell and his committees developed and executed an outstanding ATS.
- Steve King, Joy Conrad King, Rakesh Bhargava, and others organized a fly-in, a glider build/fly event, and an educational poster to celebrate the Century of Flight.

In addition, we had numerous outstanding speakers, including Dr. John Lienhard and Congressman Chris Bell, we sent a strong delegation to Congressional Visits Day, conducted a Career Planning and Development Workshop for Young Professionals, we doubled the size of the Mars Settlement Design Competition, and reached out to the technical community with an outstanding series of Lunch and Learns. This was accomplished by an outstanding team of volunteers and their efforts have helped lay the foundation for continued success.

Throughout this year there were two themes I repeated to the AIAA team here as well as in *Horizons*: volunteering to build *community* and taking *the long view*. Our volunteers and their achievements this year have certainly fulfilled both of those themes. Through their efforts, our technical community has come together at numerous events and learned and exchanged. Also, we have laid a new infrastructure that will continue to pay dividends in the future. All in all, an outstanding year.

Come join us in celebrating it!

Michael L. Oelke  
2003-04 Chairperson, AIAA Houston Section

## Career Planning and Development Workshop

By Brad Files, Young Professionals Chair

The most recent in a series of career workshops sponsored by AIAA was held on Saturday, March 26th at the Gilruth Center. Following the format of the previous workshops, this event attracted 37 participants who were treated to a keynote address from former Apollo-era flight director and manager Glynn Lunney. The event targeted an audience 1-5 years out of college, and some co-op students also attended. A panel of experienced engineers from a variety of disciplines and companies got the day going quickly by talking about their career paths and how they got where they are today. Several of the members spoke of how AIAA had helped them in their careers, especially in knowing key people from other local area aerospace companies. Other presentations during the day related to Managing Your Money, Business Etiquette, Performance Appraisals, and Financial Planning. As with previous years, the financial sessions are always highly regarded by the young professionals who don't learn those lessons during their college years. During the initial panel session the attendees appreciated the candidness of the experienced people on the panel. The highlight of the day was hearing the career thoughts of Glynn Lunney, especially regarding integrity, a subject that is not often spoken of as being so important to a career. He also made sure he talked about balancing your life, as he spoke highly of his children and grandchildren. Overall the event was a big success, with other career workshops sure to follow in coming years.



Douglas Yazell and Jud Hedgecock speak at the Career Path Forum opening event for CPAD.

## Welcome Your New Officers!

*By Michael Oelke, Chairperson*

The results are in and we have a new set of officers to serve you in the coming 2004-2005 AIAA year. The newly elected officers will serve a term from July 1<sup>st</sup>, 2004 through June 30<sup>th</sup>, 2005. Over the next few weeks we will be transitioning the responsibilities to these AIAA members and preparing for our next year full of events. Their service will be greatly appreciated.

While we had a complete ballot and every elected position is full, there are always opportunities to serve on committees. As an active member in my technical and social community, I can't speak highly enough of the benefits volunteering brings to both the volunteer and the recipient.

Join me in welcoming our newly elected officers!

Chair:	T. Sophia Bright
Chair-Elect:	Steven R. King
Vice Chair – Operations:	R. Luke Mays
Vice Chair – Technical:	Tim Propp
Treasurer:	Padraig Moloney
Secretary:	Albert Meza

### Councilors:

Douglas Yazell  
Brett Anderson  
Barry Tobias  
Merri Sanchez  
Glenn Jenkinson  
Ellen Gillespie  
Elizabeth Blome

## Science and Engineering Fair Winners

*By Joy Conrad King, Pre-College Chair*

On March 26th the Houston section gave out awards at the Science and Engineering Fair of Houston for the best Aerospace Project in the Junior, Ninth, and Senior divisions. The fair was held in George R. Brown this year, and it serves as the regional fair for all public and private junior and high school students in the 16-county surrounding area. The Houston section winners were:

### Junior Division:

Title: "It's a Bird, It's a Plane, It's a Hovercraft"  
Author: Justin Parker from Kinkaid School

### 9th Grade Division:

Title: "How Accurate are Rocket Equations"  
Author: Andrew Wilson from Ball High School

### Senior Division:

Title: "Magnet Controlling Earth-Orbiting Satellites"  
Author: Erik Neal from Friendswood High School

All winners received the illustrated book '100 Years of Flight: A Chronicle of Aerospace History, 1903-2003' signed by several astronauts as well as an AIAA t-shirt, balsa wood glider, Celebration of Flight poster, and several stickers.

## Lunch-and-Learns

*By Douglas Yazell, Vice Chair Technical*

On Friday, May 14, 2004, Dr. Jiann-Woei Jang (Draper Lab) gave a presentation on Applied Spacecraft Control- A Constrained Optimization Approach. He included an historical overview of control systems design, with a photo of the famous Mr. Bode with familiar faces such as Abe Silverstein and Robert Gilruth. The presentation included a computer animation showing Orbiter Tile Inspection and Repair (OTIR). The shuttle orbiter grappled the space station using a robotic arm and then rotated for complete visual inspection, then moved into position for tile repair. The control effectors in this example were the space station control moment gyroscopes. The event sponsor was the EVA committee, chaired by Bill West (Hamilton Sundstrand).

On Tuesday, June 8, 2004, Dr. S. Fredrickson (NASA) will present Mini Autonomous Extravehicular Robotic Camera (AERCam, <http://aercam.nasa.gov>), in JSC bldg. 16, rooms 111 & 113. This event is sponsored by our section's Propulsion & Power Systems technical committee, chaired by Andrew Petro (NASA). Members include Dr. Franklin Chang-Diaz (NASA) and Mr. Norman Chaffee and Mr. Guy Thibodaux (both NASA, retired).

A LnL is tentatively set for mid-June on the subject of Trajectory Optimization, sponsored by our section's Astrodynamics technical committee, chaired by Dr. Albert Jackson, a Lockheed Martin engineer and a visiting scientist at the Lunar Planetary Institute. The speaker is Mr. Christopher D'Souza (Draper Lab). He provided a short description of his planned presentation. "The seminar will be an introduction to trajectory optimization. It will have a (brief) history of trajectory optimization starting with the first recorded optimization problem. The general trajectory optimization will be motivated and then posed. The necessary conditions will be presented (but not derived!). An example ascent vehicle trajectory optimization will be presented. Current research will be touched upon."

We have as many as five additional LnL's in work, so keep your eye on future issues of Horizons and [www.aiaa-houston.org](http://www.aiaa-houston.org).



## Annual Technical Symposium

*By Ellen Gillespie and Douglas Yazell*

The 2004 AIAA Annual Technical Symposium (ATS) was held on Friday, April 16th at the JSC Gilruth Center. This all-day event was open to JSC, JSC contractors, industry, and academia. Fifty-four presentations were given in three tracks: Space Shuttle, International Space Station, and Aerospace Technology & Exploration.



*Andrew Brodbeck (left) and Norman Chaffee working the registration table.*

ATS started at 8:00 am with Speaker registration. There was no early registration or registration fee for ATS, which allowed all interested parties to attend the conference as time permitted. Reservations for an optional lunch meal were the only arrangements that ATS attendees were required to make before the conference.

Each of the three conference tracks started at 8:45 am with introductory remarks by the NASA Session Track Chairs. Three hours of 20-minute presentations were conducted in nine one-hour sessions in three rooms, which included: ISS Software, ISS Activities, Spacecraft Control, Global Positioning Systems, Space Shuttle Technology, Risk Management, and New Process for Space Exploration.

Lunch was served in the Gilruth Grand Ballroom, and was followed by a Space Shuttle Return-to-Flight seminar given by William W. Parsons, NASA STS program manager. ATS attendees were provided a valuable opportunity to take part in a Question and Answer session on Return-to-Flight topics.

Individual presentations resumed at 1:30 pm after introductory remarks given by each of the afternoon Session Track Chairs. Three hours of afternoon ses-

sions in each of three rooms were held on the following topics: Robots in Space, ISS Systems & Software, Sensor and Navigation Systems, Shuttle Real-Time Systems, Shuttle Subsystems, Image Analysis, Power System Upgrades, and Information Technology Applications.

An evening reception, with free snacks and a cash bar, was held prior to the evening speaker. NASA Director of Space Exploration, Dr. Michael Lembeck, gave a presentation on the current status of the President's Space Exploration Program. This provided a forum for discussion on a trip to the Moon and Mars.



*Co-authors Michael Hazen and Joe Williams (seated) of Raytheon provided a presentation on System-Level Reuse of Space Systems Simulations*

ATS 2004 had an excellent program, and attendance was 162 in the sessions and 179 overall. ATS was made possible with the support of NASA, and was organized by the ATS Planning Committee. The ATS Planning Committee was composed of AIAA volunteers from Honeywell (Douglas Yazell), Boeing (Sophia Bright, Darby Cooper, Chester Vaughan), Dynacs (Murugan Subramaniam), United Space Alliance (Ellen Gillespie), and NASA retirees (Norman Chaffee and Guy Thibodaux), and thanks go to Dr. Larry Friesen of UHCL for his support. Our committee also recognizes the outstanding contributions from 9 track chairs, 17 session chairs, 54 authors/presenters, and many others whose work made this event a success. If things go according to plan, we will keep the program document at [www.aiaa-houston.org](http://www.aiaa-houston.org), linking to an abstract (no paper required) or a PowerPoint presentation for each author.

## Yuri's Night 2004

By Ronald Sostaric, GN&C Committee Member

April 12, 2004, marked the 43rd anniversary of the first human into space, Russian cosmonaut Yuri Gagarin, and the 23rd anniversary of the flight of the first American space shuttle, Columbia. It also marked the date of the 4th Annual Yuri's Night Celebration in Houston, TX!

Yuri's Night is a global celebration of human space achievement designed to raise awareness and support for space exploration. This year's local events included the 5k Fun Run/Walk, Educational Outreach at the Houston Museum of Natural Science, and the Celebration at Outrigger's in Seabrook.

YN 2004 kicked off early in the morning on April 3rd, at Challenger Park with the Fun Run/Walk (of which AIAA was a sponsor—thanks AIAA!) This year was the first year for the Yuri's Night Fun Run/Walk event. Though the weather reports predicted rain, it turned out to be quite a nice morning for a walk or jog. According to Fun Run organizer Sarah Graybeal, "The first Yuri's Night 5k was a great success—we had almost 150 participants and made more than \$1,000 for the Yuri's Night Houston charities. We hope to do even better next year!" The event also included a Kids 1k, which was a lot of fun for the younger crowd.



Runners enjoyed the Yuri's Night 5k.

The very next day, on April 4th, the second portion of the Yuri's Night activities took place at the Houston Museum of Natural Science. The Educational Events included such activities as a Space Art Contest and Balloon Rockets, which allowed kids of all ages to launch a balloon rocket made from straw, balloon, and string. Other activities included a

Scavenger Hunt, Russian Name Tags, Space Race Trivia Contest, and History Lectures. This year's educational events were a big success and volunteers were able to reach out to many kids to convey the



interesting aspects of space. Yuri's Night—Houston organizer Jen Mendeck stated, "the Yuri's Night 5k Fun Run/Walk and the Yuri's Night Education Day at the Houston Museum of Natural Science helped us to connect people from all over our city and even from other cities and states to the people who work in the human space flight field."

The YN Celebration was held this year at Outriggers under the Kemah Bridge in Seabrook. Over 200 people braved the wind and cold (the celebration was in a pavilion-type area) and came to celebrate. The evening started off with live music by Delusion and a vodka toast from the JSC Center Director, General Howell. Following the music, the crowd was entertained by the excellent performance of the Russian dancers. The classic and bluesy rock cover tunes of Vintage kept the party going along with a couple more vodka toasts. The evening was brought to a close by LTS, whose modern and hard rock cover tunes helped the crowd keep warm in spite of the evening's frigid weather.

Mendeck said that this year's celebration was very successful. Though there are parties all over the world each year, the Houston party is one-of-a-kind. "Our party is unique because we draw people who have personal connections to the US and Russian space programs. You can meet astronauts and cosmonauts at our party or speak with the director of Johnson Space Center," said Mendeck. "Yuri's Night in Houston is about tapping into this great resource of space history and enthusiasm that we have at Johnson Space Center and reaching out to the greater Houston community with our message."

Any proceeds from the Yuri's Night Events were donated to the Challenger Center for Space Science Education and Permission to Dream.

Special thanks to all those who volunteered or participated in any of the events—the Yuri's Night organizers hope to see you again next year!!!

More information about Yuri's Night can be found at:

Houston Yuri's Night: <http://www.sparx.net/yuri/>  
Yuri's Night Global: <http://www.yurisnight.net/>



## 2004 Congressional Visits Day a Success

*By Nicole Smith, Public Policy Chair*

On April 21, 2004, AIAA hosted its annual Congressional Visits Day in Washington, D.C. Four members from the Houston Section joined forces with other members from the North Texas Section, San Antonio, and Fredricksburg to meet with their local congressional members and discuss pressing aerospace issues.

Houston representatives Sophia Bright, Bill Atwell, Luke Mays, and Nicole Smith met with Representatives Lampson, Smith, and Green. They also met with staff from the offices of Senators Hutchison and Cornyn, as well as staff from the offices of Representatives Hall, Jackson-Lee, Burgess, Barton, Paul, DeLay, and Carter.



*Team Texas at CVD (right to left): Brett Williams (Fredricksburg), Nicole Smith (Houston), Luke Mays (Houston), Cory Tallman (Ft. Worth), Russell Conkling (San Antonio), Eleanor Aldrige (Houston), Sophia Bright (Houston), Jay Bradshaw (Texas A&M), Bill Atwell (Houston), Jim McLane (Ft. Worth), Michael Beavin (AIAA National Office)*

AIAA Nationals publishes an annual "Top Issues" list that is included in informational packets that are distributed to the congressional members.

The Houston Section also included JSC- and NASA-related economic data for each member's district and all of Texas combined. The members were very excited to get such information. In addition, the Houston Section elaborated on a number of issues that are closer to home. These issues were: National Exploration Vision (including current programs such as Shuttle Return To Flight and International Space Station, as well as future programs such as the Moon and Mars), Space Commercialization, Workforce Issues, and the National Aerospace Re-

search and Technology Plan. Members were extremely receptive to our issues and we stressed that they can always contact the Houston Section for more aerospace industry grassroots information.



*Visiting Congressman Lampson: Luke Mays, Nicole Smith, Russell Conkling, Jim McLane, Sophia Bright, Schedir Illodi*

For more information on the Houston Section's public policy activities, please contact Nicole Smith, Houston Section Public Policy Chair, at [Space-Girl2376@yahoo.com](mailto:Space-Girl2376@yahoo.com), or Sophia Bright at [Tsutsumi.S.Bright@boeing.com](mailto:Tsutsumi.S.Bright@boeing.com).

## The Honorable Rudolph Giuliani Visits Houston

*by Lynne Barends, Councilor*

In a downtown Houston Hotel, at a mid-morning meeting on April 30, 2004, The Honorable Rudolph Giuliani stepped onstage as the crowd stood up and applauded. The audience of over 1000 attendees included members of local and national businesses and representatives from various organizations and the local academic community.



*Rudolph Giuliani*

*America began to take terrorism seriously." He further emphasized that while people with similar val-*

In a throaty voice he uttered, "I'm glad you all could come to the meeting of the families," and right away broke the ice. He asked, "Do you believe that America is more dangerous now, than before September 11?" He explained, "While terrorism existed long before September 11, it was after September 11, when

ues can negotiate and reach a compromise, this cannot be accomplished with terrorists, who do not have the same values, and furthermore, should not be given the opportunity to perpetuate through the negotiation process. One key to fight terrorism, he added, is to take away the money and resources, thereby weakening terrorism.

Published in 2002, Giuliani's book, "Leadership" is the New York Mayor's account of the September 11, 2001 tragedy and the leadership qualities that prevailed, while leading the people of New York through the aftermath of the terrorist attack on the Twin Towers. In this book, Giuliani talks about the influences that great people have on our lives and discusses the six principles of a great leader.

He begins with the first and foremost principle, "strong beliefs," and talks about how a leader is always in search of what is most important. He cites Ronald Reagan, who spoke of his beliefs, even at a time when they were unpopular, Winston Churchill during World War II, and Martin Luther King, Jr., who had a dream.

To illustrate another principle of a great leader, "optimism," Giuliani walks over to the podium, holds down his head and says, "Things are really bad, and there is no hope." He then looks up, smiles and waves his arm for those to follow toward his direction and says, "Follow me." "But who would want to follow someone without hope?"

The principle, "courage," he describes, "is the management of fear and that we all have fear." And in order to manage fear, however, one must prepare for and anticipate outcomes based upon those fears. In essence, we must face our fears order to find ways to overcome them. He reiterates, "You cannot have courage, without fear."

Giuliani continues, "The fourth principle is relentless preparation." He tells a short story about how a judge may prepare for hours, in order to perform one hour of deliberation. He explains, "While we relentlessly prepare for all that could happen and what questions need to be addressed that we can possibly think of, we are then ready to deal with the unexpected. By preparing, we are capable of providing the best possible answer within our areas of expertise, to a given situation.

"Teamwork," he explains, "Is about knowing your weaknesses." Candidly he says that "The first thing that anyone should do, when asked to lead anything is to ask, what are my weakness"? Then they should find someone that can help fill that gap to create a strong and balanced team. Teamwork and balance,

he adds are accomplished by hiring those with the expertise needed.

The sixth principle of "communication, is accomplished once all the previous principles are successfully applied. This principle is about the communication and the articulation of the overall goals and objectives accomplished to people both internal and external. It is about identifying if the right goals were originally required, or needed, and if they were indeed met.

In the chapter titled, "Weddings Discretionary, Funerals Mandatory, he explains, "My father taught me that while weddings are a big party and everybody goes to them, it is at a funeral, when people are alone and need you the most." And the last principle, he closes with, "Is to love and to care about people, and leadership is about leading human beings."

### **"Americas Mayor"**

During two terms as mayor of New York, Rudy Giuliani's ideas, management and goal-driven style cut crime by 57 percent, welfare rolls by 50 percent, and taxes by \$2.5 billion while creating a record number of new jobs. With his leadership, the city is once again a great place to live and one of the world's most productive metropolises. But his toughest challenge had yet to come. With the tragic events of September 11th, Giuliani had to draw on his determination and leadership as never before. And what Americans and the world alike witnessed was remarkable strength and stability at a time of great uncertainty. During the crisis, he became, in essence, "Americas Mayor." He calmed, consoled and reassured the public, while urging them to return to their normal lives and not to let the terrorists achieve their aim of disrupting life.

### **The Houston Forum**

The Houston Forum is a totally independent non-profit educational organization. It is uniquely a Houston product. Our resources and vitality are provided by Houstonians who realize this community's commitment to be open to diverse ideas and the people of our world. <http://www.thehoustonforum.org>



## Cranium Cruncher

by Douglas Yazell, ViceChair-Technical

Norman Chaffee/NASA (retired) continued a tradition of publishing a monthly puzzle in Horizons, and the names of the people who sent him the correct answers were published. Sophia Bright/Boeing suggested that our section's technical branch committees continue the tradition. Please send your answers to me at douglas.yazell@honeywell.com or phone me (for hints or discussion or to deliver an answer) at 281-244-3925. I am submitting this one as a member of our section's Guidance, Navigation, and Control technical committee, which is chaired by Ellen Gillespie/USA. Like all of our committees in the technical branch of our section, we are always looking for new members: students, young professionals, experts, etc. We don't impose much on our members' time, but there are many potential benefits. Other members on the GN&C TC are: Daniel Nobles (Oceaneering), George Platanitis (Texas A&M, recent PhD graduate in aerospace engineering), Jeff Tave (Lockheed Martin), Ron Sostaric (NASA), and Murugan Subramaniam (Dynacs).

"Given an aircraft's velocity vector's coordinates in two coordinate systems with the same origin, can we find the orientation between the two coordinate systems? Is it unique? If not, describe all solutions."

### Hints:

- 1) This can be solved for full credit with no equations, using words like circles, cones, lines, axes, coordinate systems, etc.
- 2) There is more than one solution.

### Applications and background:

One of many applications is a flight control system design engineer who has a trim case (equilibrium among the rotational forces on the vehicle) for a new vehicle's flight simulation, where the velocity vector is horizontal and due north in the North, East, Down coordinate system. Having trimmed the vehicle, the same vector is known in the body-fixed coordinate system. New trim cases for simulation can be created easily if the direction cosine matrix (describing the orientation between the two coordinate systems) is known. For example, the velocity vector could point due east and horizontal.

Thanks are already due to Murugan Subramaniam. I created this puzzle (creativity: the art of concealing one's sources), and he helped me to find and visualize a complete solution. Thanks also go to Guillaume Francois (Awty International School), a French ninth grade student who visited our office for a week as part of his school's curriculum. He and others listened and helped in other ways.

## Calendar

### June 2004

- 8 Lunch n Learn: AERCam
- 17 Awards Banquet

### July 2004

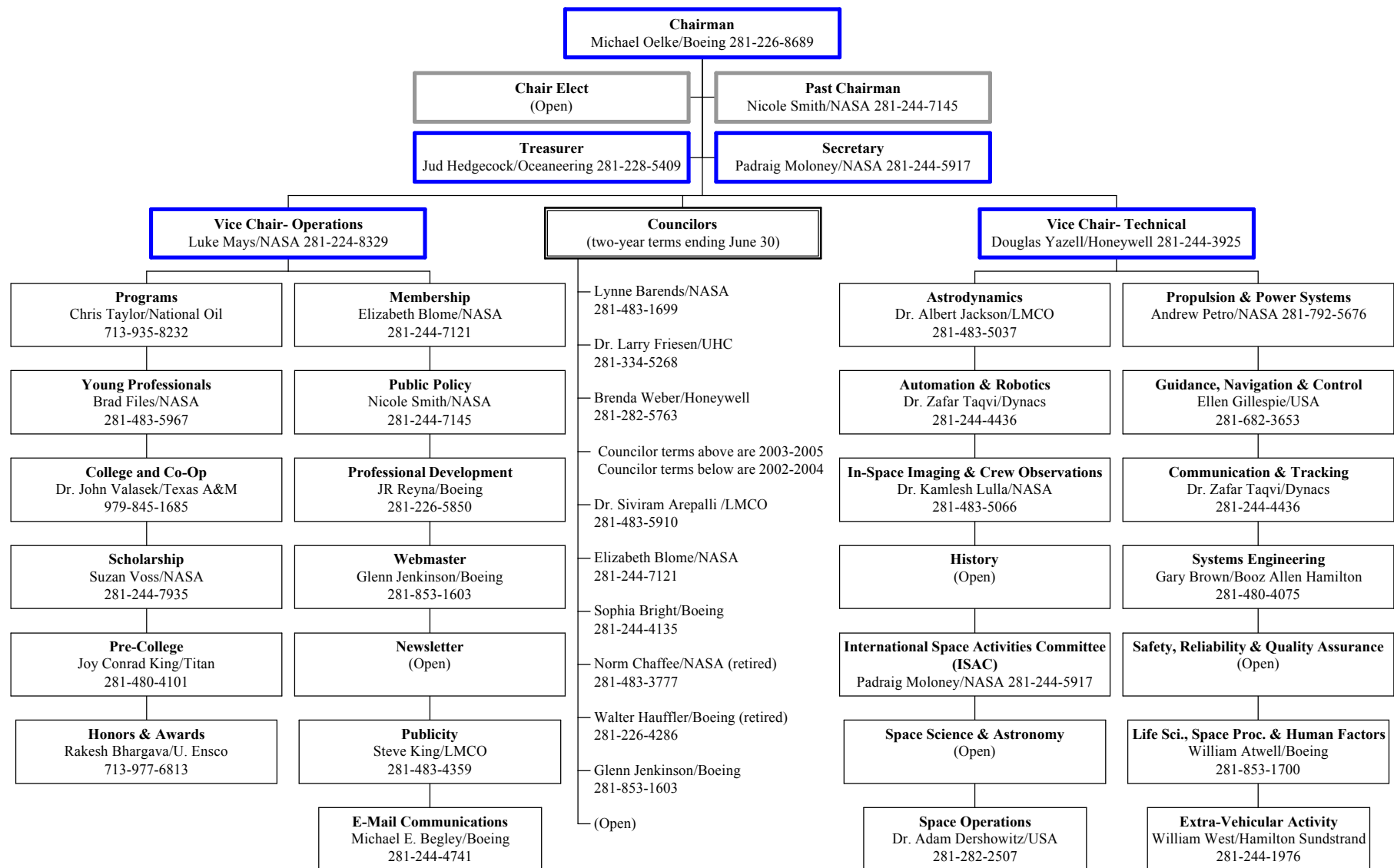
- 15 – 16 Regional Leadership Conference
- 17 Space Education in Area Schools

### August 2004

- 20 Workshop on Automation and Robotics
- 20 Innovations 2004

### September 2004

- 16-17 ISMCR 2004



### Submission

Contributions to the mentioned topics are welcome. Please send extended abstract in English by email (PDF or Word format) to the secretariat of the conference before 15<sup>th</sup> May 2004. Extended abstract may include up to 2000 words including figures and tables. Final paper for publication will be needed before 15<sup>th</sup> August 2004

**Please structure the first page as follows: title, authors, complete address(s), affiliations, phone/fax number, email address, keywords.**

The extended abstract should clearly indicate the merits of the new contributions and the relevance to the Symposium theme.

Note: US papers are subjected to ITR jurisdiction.

### Important Date

Abstract Deadline: 15<sup>th</sup> May 2004  
Acceptance Notification: 15<sup>th</sup> June 2004  
Full Paper Submission: 15<sup>th</sup> August 2004

### Venue

The Symposium will be held in the Gilruth Center at NASA Johnson Space Center in Houston, Texas

### Registration Fees

Participants: \$300 (before 15<sup>th</sup> August 2004)  
\$375 (after 15<sup>th</sup> August 2004)  
Students: \$120 (before 15<sup>th</sup> August 2004)  
\$100 (after 15<sup>th</sup> August 2004)

Accompanying persons: \$50 (Symposium Dinner)

Regular participant's fees include registration, proceedings, free access to exhibition, refreshments, lunch, and symposium dinner. Students fees does not include symposium dinner

### APPLICATION FORM ISMCR 2004 16-17 September 2004

Paper Title \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Author(s) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Primary author to whom correspondence should be addressed:

Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

If not already sent by email, please send your paper together with this form to the secretariat of the conference:

### ISMCR 2004 SECRETARIAT

c/o Dr. Trung T. Pham  
Dlcentral Corporation  
17625 El Camino Real, Suite 200  
Houston, Texas 77058  
ISMCR2004@Dlcentral.com  
*Accommodation*

Hotel accommodation will be facilitated by the Local Organizing Committee. Further details can be found on the Conference website.

### Partners' Program

A nice program for accompanying partners will be organized, including visits the NASA Space Center Houston.

### Call for Papers

14<sup>th</sup> International Symposium on Measurement and Control in Robotics

ROBOTICS FOR THE CHANGING WORLD

## ISMCR 2004

16-17 September 2004

Gilruth Center

NASA Johnson Space Center  
Houston, Texas USA

### Organized by

International Measurement Confederation TC 17  
(IMEKO TC17)



Clear Lake Council of Technical Societies



IEEE Galveston Bay Section





### *International Organizing Committee*

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Norm Chaffee

### *Local Program Committee*

Dr. Trung Pham  
Dr. Thomas Harman  
Dr. Jane Malin

### *Scope*

The 14<sup>th</sup> International Symposium on Measurement and Control in Robotics (ISMCR-2004) follows the very successful 13<sup>th</sup> ISMCR03 held at Madrid (Spain) last year and it is aiming to gather high quality original contributions in the robotic field and associated measurements with the final goal of assessing the most recent developments in this utmost domain of science and technology.

The Symposium scope covers a broad spectrum ranging from advanced conceptual design and methodology, sensors, actuators, instrumentation, and real-time control algorithms to innovative robotics applications.

Fundamentals for Robotics is considered as a major topic where people from different specialties will contribute to provide a full picture of the state of the art in this area. The key words you will use are essential to organize the different sessions for this conference.

### **Publication**

All papers will be included in the Proceedings and the CD.

### **Inquiry and Submission**

All papers should be submitted electronically to

[ISMCR2004@Dlcentral.com](mailto:ISMCR2004@Dlcentral.com)

All conference registration should be submitted electronically on the standard form from the web site.

All inquiries should be addressed to:

Dr. Zafar Taqvi  
(281) 244-4436  
Z.Taqvi@IEEE.Org

Dr. Trung T. Pham  
(281) 480-1121, ext. 102  
tpham@Dlcentral.com

### *Symposium Topics*

- Fundamentals for Robotics
- Robot Design
- Sensor Integration / Fusion
- Actuators
- Advanced Control
- New Power Supplies
- Telexistence / Telepresence
- Augmented Reality / Mixed Reality / Virtual Reality
- Methods of Artificial Intelligence in Robotics
- Climbing and Walking Robots
- Humanoid Robots
- Autonomous Mobile Robots
- Service Robots
- Education and Entertainment Robots
- Medical and Healthcare Robots
- Micro and Nano Robots
- Innovative Robotics Applications

### *Robot Exhibition*

An exhibition of advanced robots and related technologies will be set-up to illustrate the most recent results that are just leaving from important Research Institutes and Universities world-wide. For all those that would like to join us and show the world their achievements in these field the Local Organizing Committee will provide their best help, so that your realizations will be displayed in the perfect environment with the covering of the main communication means (press, television, etc.). Exhibition stands for Research Institutes and Universities will be cost-free.

### *Language*

The official language of the Symposium will be English.

# INNOVATIONS 2004

Organized by  
**The Clear Lake Council Of Technical Societies**  
in cooperation with and co-sponsored by CLCTS member organizations:  
AIAA, IEEE, ISA, ISSA and INCOSE

**FRIDAY, AUGUST 20th, 2004**

**Gilruth Center, NASA/Johnson Space Center**

Registration starts at 11:30  
NOON LUNCHEON (Details will be announced soon)

## **PROGRAM**

1:15-2:00 PM	<u>Technical Sessions (A)</u> Parallel sessions
2:05-2:50 PM	<u>Technical Sessions (B)</u> Parallel sessions
2:55-3:35 PM	<u>Technical Sessions (C)</u> Parallel sessions
3:35-4:00 PM	RECEPTION Hosted by local Aerospace Companies

**INDIVIDUAL SESSIONS OF INNOVATIONS 2004 ARE ORGANIZED BY MEMBER ORGANIZATIONS OF CLCTS. Each session will consist of 2 to 3 papers.**

**Deadline for submission of Abstracts is Wednesday, May 12<sup>th</sup>, 2004**  
Please submit your abstracts to your society officers: AIAA, CASS, IEEE, ISA, ISSA, INCOSE

For any additional information on the conference, please contact:  
General Chairman: **Dr. Trung T. Pham** at (281) 480-1121 (tpham@Dlcentral.com) or  
Program Chairman: **Andy Lindberg** at (281) 532-4450

Track Chairs: Dr. Artem Ponomerov (Engineering in Medicine and Biology, artem@bcm.tmc.edu), Dr. Trung Pham (Robotics and Automation, tpham@Dicentral.com), Joe Khan (Power Engineering & Resources, tkhan1@swbell.net), Perry Hoffman (Computer Systems and Network, perry.hoffman@hp.com), Julian Morales (Aerospace Systems, jmorales13@houston.rr.com), Don Cravey (Communication Systems, don.n.cravey1@jsc.nasa.gov), and TBD (Other systems)

**FOR REGISTRATION Contact Sheryl at 281-483-8243**

<b>Full Day Program: \$12.00</b>	<b>Luncheon Only: \$7.50</b>
<b>Innovation 2004 Only \$5.00</b>	<b>WAR 2004 Only: FREE</b>

**REGISTRATION DEADLINE- August 18<sup>th</sup>, 2004**

**INNOVATIONS 2004 IS SPONSORED BY THE JAIPCC EXECUTIVE BOARD**

***The WAR 2004 Workshop will be held in the morning of August 20th, 2004 at the same location as INNOVATION 2004. Luncheon is common to both the activities***

# **Workshop on Automation and Robotics (WAR 2004)**

**8:00 AM    Friday, August 20th, 2004**

*Gilruth Recreation Center, JSC*

*Organized by*  
*Automation and Robotics Technical Committee of*  
American Institute of Aeronautics and Astronautics (AIAA) Houston Section and

Co-sponsored by the Instrument Society of America, Robotics and Expert Systems Division  
And IEEE GBS Joint Chapter

## **Theme: Robotic Tools**

**The workshop will include key presentations on recent robotic developments**

**8:00 AM        WAR 2004**

**11:30 AM       Luncheon and Keynote**  
(Combined lunch for attendees of **INNOVATION 2004** and **WAR 2004** )

**1:15 PM        INNOVATION 2004**

Discussions will follow the three technical presentations

**NO CHARGE for attending WORKSHOP ON AUTOMATION AND ROBOTICS**

**Registration is FREE but mandatory**

**Contact Sheryl (281-483-8243) for WAR2004, Innovation2004 registration and lunch reservations**





P.O. Box 57524  
Webster, TX 77598

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May / June 2004

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