

Gateway News



American Institute of Aeronautics and Astronautics, St. Louis Section

<http://www.aiaa.org>

<http://www.me.wustl.edu/ME/orgs/aiaastl/>

SEPTEMBER 2000 Chairman's Remarks

INSIDE THE SECTION

This is the last Chairman's Corner that I will be writing. I want to take this opportunity to thank everyone that helped the St. Louis Section of AIAA during the 1999-2000 year. We want to thank the membership for their support of the various activities this year. Without your suggestions, attendance, and volunteerism, these events would not have been successful. We would also like to thank the Section Council for their many hours and dedicated effort in planning and executing these activities. As in the past, the Council included new recruits as well as long-standing members – a combination that has always made this section a success. We thank the faculty and students of the local chapters in coordinating activities with us to strengthen the bridge between business and academia. Finally, thanks to our co-sponsors and corporate sponsors for their role and support in managing the 1999-2000 events. We look forward to working with these groups even more in the future.

The St. Louis Section had a very busy year in 1999-2000. We continued with the traditional dinner meetings, participation in the Greater Missouri Science Fair and public policy events. We continued the Pilot Safety Seminar for its 25th anniversary and drew more sponsorship and attendance than before. New activities this year were; the Linda Kral memorial and Scholarship at Washington University, Family Fun Day, and the Micro Symposium. Activities that will be prominent in the coming year(s) will be the Evolution of Flight and career enhancement activities. Leading our way into these and other events will be Larry Brase, the Section Chair for 2000-2001. Larry had been a long-time supporter of AIAA and a dedicated volunteer. His leadership skills and beliefs in the vision and mission of AIAA make him an excellent choice for this position. Please provide Larry with the support that you have always given this chapter.

Thank you again,

Dianne Chong

BOEING ST. LOUIS LEADERSHIP ASSOCIATION



Mike Sears

The Boeing Company
Senior Vice President &
Chief Financial Officer

Strategies for Ensuring our Success

BSLLA Members/Retirees: no cost
AIAA (non-BSLLA) members: \$5.00
Non-Members: \$12.00

e-tickets available on the Leadership Association and the Recreation homepages. Members must have reservation/Retirees must bring their invitation for entry.

THURSDAY, SEPTEMBER 21

Bldg 33 Cafeteria

Hor d'oeuvres and Soft Drinks Provided

Doors Open 4:00 PM

Program 4:30 - 6:00 PM

Your St. Louis Section AIAA provided judges for the April St. Louis Science Fair at Queeny Park. Five AIAA awards recognized aerospace projects or related aerospace technologies. AIAA judges were Gary White, John Mohr, Dave Guanio, Sherry White with Megan White provided administrative assistance. Gary White, committee chair, presented five awards, plus a \$50 check, to each winner at the Science Fair Awards ceremony. The Science Fair coordinator commented how attractive the AIAA certificates have been over the years, with the AIAA gold seal making the certificate special.

Two of the award winners attended the May 2000 AIAA Awards banquet at Creve Coeur Airport: Katie Perko and Craig Goodloe. Craig will be pursuing aerospace related studies at Rolla next year and was referred to the Rolla student AIAA chapter.

**Michelle Stein,
Pattonville Hts Middle
School**

"Shapes and Viscous Effects"-examined the relationship between shape and viscous forces. The hypothesis was that viscous coefficients applicable for spherical shapes would not apply to non-spherical shapes. Test data proved the hypothesis for liquids of differing viscosity.



**Katie Perko, Parkway
School District**

"Helium – Lighter Than Air"-examined the relationship between the temperature of a constant mass of helium and the corresponding lifting force.



**Alex Edmunds, Ritmour
School District**

"Which Paper Airplane will Fly the Farthest?"-examined the relationship between various paper airplane folding patterns and distance. Each folding pattern was created in different types of papers and multiple trials of a specific pattern/paper to understand variability.



**Craig D. Goodloe,
Webster Groves High**

"Downforce in a Racecar Rear Wing"-examined the effects of airfoil shape, of a racecar wing, and the resulting downforce on the wheels. Several airfoil shapes were studied including changes of camber. Conclusions were based on data trends. However, the data had a lot of scatter and many lessons were learned about wind tunnel data acquisition.



**Katy Sherfy, Pattonville
Hts Middle School**

"Who says This is not Rocket Science"-examined the relationship between rocket motor configuration and maximum flight path. The hypothesis was that using the maximum number of rocket firing all at once would provide the maximum height. Flight testing showed the hypothesis was wrong and staging the motors provided the maximum height.

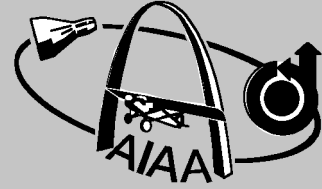


Katie Perko, Parkway

AIAA Young Professional Award

Rhonda Blum received the prestigious 'AIAA Young Professional of the Year' award, at the May Awards Banquet, for noteworthy contributions to the field of Operations Analysis. Rhonda, with minimum supervision, developed a completely new modeling technique for a high visibility program. This modeling technique was so successful that the model and process have since been used on subsequent programs. Rhonda applied her physics and mathematics training to develop and validate these innovative new models that proved useful to key program decision-makers. Her initiative and technical accomplishments are especially significant, given her freshman level of experience and training in this new area. She exemplifies the pioneering spirit of AIAA and is deserving of the "Young Professional" award.

AIAA '00



American Institute of Aeronautics and Astronautics , St. Louis Section

Technical MicroSymposium : **Recent Developments in Structural Technology**

Thursday 12 October, 5-7:30 PM

PROGRAM

- 5:15 "Ground Demonstration of the Smart Inlet"**
Jim Dunne, Boeing (AIAA Paper #2000-1630)
- 5:45 "PACKS: A Structural Definition Process for Composites"**
Virginia Vasey-Glandon , Boeing (2000-1478)
- 6:15 "Numerical Simulation of F/A-18 A/B/C/D Limit Cycle Oscillations
and an Active Oscillation Controller"**
Dale Pitt, Boeing and David Manor, Saint Louis University (non-AIAA)
Presented at the Seventh International Conference on Recent Advances in Structural Dynamics
- 6:45 "Probabilistic Analysis of an Advanced Fighter/Attack Aircraft Composite Wing
Structure"**
Herb Smith, Boeing (2000-1567)

The goal of this and subsequent MicroSymposia is to provide a local forum comparable to a national AIAA technical conference, but without attendant costs, for the benefit of St. Louis section AIAA members. Each of the scheduled papers has been presented at a recent national AIAA meeting or international conference.



Location: Boeing Prologue Room Auditorium (Airport and McDonnell Roads) Enter at employee entrance immediately North of main lobby.

Non-Boeing employees planning to attend should contact Joe Stemler by 5 October.

Attendance is Free

For more information contact:
Joe Stemler (314)232-3362



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AIAA FUTURE EVENTS



STRATEGIES for ENSURING our SUCCESS

**Featuring Mike Sears
The Boeing Company
Senior Vice President &
Chief Financial Officer**

Thursday, September 21, 2000

Building 33 Cafeteria

Hor d'oeuvres and Soft Drinks Provided

Doors Open 4:00 PM – Program 4:30 - 6:00 PM

Technical MicroSymposium: Recent Developments in Structural Technology

Thursday, 12 October 2000

5:00 PM to 7:30 PM

Boeing Building 100 -

Boeing Prologue Room Auditorium

Attendance is Free