



ASME International

Volume 12 Issue 1

Newsletter of the San Francisco Section of the American Society of Mechanical Engineers

The Bay Connection  
San Francisco Section News

November 2003

**ASME San Francisco & Mt. Diablo Sections  
Present:**

## Flight Mechanics of a Spinning Dimpled Spheroid



**Date:** Wednesday, November 19, 2003

**Time:** 6:00 PM – Registration/Social  
6:30 PM – Dinner Starts  
7:30 PM – Program Starts

**Place:** Holiday Inn Concord  
1050 Burnett Avenue  
Concord, CA 94520  
(925) 687-5501

**Dinner:** “Little Italy” Buffet dinner with a selection of soup, salad, chicken parmesan, ravioli, and vegetarian lasagna  
(Dessert and coffee or tea included)

**Cost:** \$20 for ASME Members  
\$25 for Non-ASME Members  
\$15 for Student ASME Members

Want to increase your driver distance off the tee? Improve your golf score by 10 strokes? Carry past fairway sand traps? Boom drives over trees to cut the corner? Come learn the factors influencing the aerodynamic flight trajectory of a golf ball - things like spin rate, launch angle, and launch velocity. This knowledge won't help cure your slice or hook, but surely you'll become the Tiger Woods of your foursome after you discover how

Newton's second law of motion ( $F = ma$ ) coupled with lift and drag aerodynamics due to spin applies to improving your game. As an educational sidelight, you will see how easy and effective it is to apply a Visual Basic for Applications macro in an Excel spreadsheet for simulation applications.

This Visual Basic tool can help improve your productivity in “quick and dirty” analysis of many engineering problems, and it's available for free (i.e., self contained) if you use Version 5 or later of Microsoft Excel. Diskette copies of the golfball Excel Visual Basic spreadsheet (and three additional engineering Excel Visual Basic spreadsheets) will be available for distribution at the meeting.

The speaker is **John C. Adams, Jr.**, a native of Laurinburg, North Carolina, located about 20 miles south of Pinehurst, “Mecca” of golf. He attended North Carolina State University where he received BS, MS, and PhD degrees in Mechanical Engineering. John is retired having spent his entire 34-year professional career with Sverdrup Technology, Inc., in Tullahoma, Tennessee, involving various engineering and management positions in support of the technical operating contract at the U.S. Air Force Arnold Engineering Development Center.

Internationally recognized as an authority in high-speed aerodynamics and aerothermodynamics, Dr. Adams is a Fellow of the American Society of Mechanical Engineers, a Fellow of the Arnold Engineering Development Center, and an Associate Fellow of the American Institute of Aeronautics and Astronautics. He has served as Associate Editor for High-Speed Aerodynamics of the Journal of Spacecraft and Rockets, which is published bi-monthly by the American Institute of Aeronautics and Astronautics.

**Please RSVP (leave number of attendees and menu choices) by November 14, 2003, to [rsvp@sf.asme.org](mailto:rsvp@sf.asme.org), or call ASME SF section's voice mail at (415) 721-4478.**

**For direction to event, see page 2.**

**(cont'd on page 2)**

## **Grants Available, First-Come, First-Serve**

The ASME Board on Diversity and Outreach's Partners in Mechanical Engineering Program provides grants to ASME sections for innovative projects and activities that support collaboration with local sections or chapters of organizations that support women and underrepresented minority groups in engineering.

Grants are awarded on a first-come, first-served basis and range from \$500 to \$1,000, depending on the size and scope of the activity.

Applications for grants may be submitted throughout the year. For additional information, go to  
<http://www.asme.org/communities/diversities/bdo/partners.html>

## **2003 Leonard Farbar Awards**

Each year the San Francisco Section presents awards to undergraduate mechanical engineering students to honor the memory of Dr. Leonard Farbar. The awards recognize students' commitment to enhancing our profession, developing leadership skills, and academic achievement. Last Spring's recipients were:

UC Berkeley: **Jon Sala, Rui Lam, Doris Huynh**  
California Maritime Academy: **Rien Libhart, Jared Petersen**

## **New ASME Fellows**

San Francisco Section members Paul K. Wright, Ph.D., and Ray B. Stout, Ph.D., P.E., have been elected as ASME fellows. ASME San Francisco section congratulates them for their promotion to this distinguished grade of ASME membership.

## **2004 ARTHUR L. WILLISTON AWARD CONTEST**

**THE WILLISTON AWARD IS PRESENTED ANNUALLY BY ASME  
TO THE STUDENT ENGINEER OR RECENT GRADUATE WHO AUTHORS THE BEST ACCEPTABLE PAPER IN  
THE AREA OF CIVIC SERVICE**

**TOPIC AREA:** The Future Role of Mechanical Engineers in Bioengineering

**ASSIGNMENT:** The rise in biological applications of engineering has been dramatic, with several of the major biomedical advances of the last decades having a distinctly mechanical engineering base. Indeed some undergraduate engineering programs now include a required course in biology as a first step toward preparing students for careers in which physics and chemistry are not the only basic sciences of importance to engineering applications. Some engineering colleges are forming new departments either in bioengineering, which focuses on the application of engineering principles to the study and control of biological processes, or in biomedical engineering, which applies these processes to improving health and human welfare. A recent study commissioned by ASME entitled "The Convergence of the Life Sciences and Engineering" provides a snapshot of the key forces changing and shaping engineering practice. There is clearly a growing role for mechanical engineers in this shift to engineering that is more biologically centered and the 2004 Williston Paper topic is meant to elicit your views on what this might be.

**DEADLINE:** Papers must be postmarked by Feb. 15, 2004.

*Flight Mechanics ..... (cont'd from cover page)*

## **DIRECTIONS TO EVENT:**

### **From San Jose/San Ramon/Walnut Creek:**

- Take 680 North towards Sacramento
- Take Burnett Avenue/Concord Avenue Exit
- Turn Right on Burnett Avenue
- Arrive at 1050 Burnett Avenue

### **From Benicia:**

- Take 680 South
- Take the Contra Costa Blvd Exit towards Concord/Pacheco
- Turn Left on Contra Costa Blvd
- Turn Left on Concord Avenue
- Turn Right on Diamond Blvd
- Turn Right on Burnett Avenue
- Arrive at 1050 Burnett Avenue

## **Come Celebrate 100 Years of Flight!**

To commemorate the centennial of the Wright Brothers' first flight 100 years ago, ASME will hold a special Plenary Session at this year's Congress at the Marriott Wardman Park hotel on Sunday, Nov. 16 from 5:45 to 7PM.

The session will feature a panel of aviation industry leaders.

A reception will follow the program, at which time an honorary medal will be presented to the descendants of Orville and Wilbur Wright.

For more information, log on to:  
[www.asme.org/events/flight/mesupp.shtml](http://www.asme.org/events/flight/mesupp.shtml)

## ASME SF SMALL BIZ NEWS

Eric E. Worrell, PE, Small Business Chair

### San Francisco Section Member wins R&D 100 Award!

Congratulations to Doug Jung and his team! Douglas Jung, P.E., President and CEO of Two-Phase Engineering and Research in Santa Rosa, and his Low Emissions Atmospheric Metering Separator (LEAMS), were recently honored at the 41<sup>st</sup> presentation of the "R&D 100" awards. The annual awards, presented by R&D Magazine, honor the "100 most technologically significant new products and processes introduced" into the marketplace during the previous year (<http://www.rdmag.com/scripts/awards.asp>).

LEAMS is one of several technologies that Two-Phase Engineering and Research has in operation or development for geothermal applications. By virtually eliminating carryover of brine and chemical pollution during geothermal well drilling and testing and power plant startup, LEAMS solves several serious environmental and safety problems.

Doug was one of the first members involved when we kicked off San Francisco Section's Small Business Committee in 1996. For more information, contact Doug at 707-523-4585 or [dougl123@juno.com](mailto:dougl123@juno.com).

Part of the LEAMS development was funded with an Energy Innovations Small Grant award from the California Energy Commission. The CEC press release on the R&D 100 award for LEAMS is at [http://www.energy.ca.gov/releases/2003\\_releases/2003-08-25\\_awards.html](http://www.energy.ca.gov/releases/2003_releases/2003-08-25_awards.html).

Applications for the 2004 R&D 100 competition are due February 2, 2004 (earlybird) and March 1, 2004. (Any new technical product that was first available for purchase or licensing between Jan. 1, 2003, and Dec. 31, 2003, may be entered.)

### While we're on the topic...

The CEC recently issued another press release on a technology developed by a Small Business headed by an ASME SF Section member ([http://www.energy.ca.gov/releases/2003\\_releases/2003-10-02\\_line\\_mitigator.html](http://www.energy.ca.gov/releases/2003_releases/2003-10-02_line_mitigator.html)). The Sagging Line Mitigator (SLiM), developed by Material Integrity Solutions, Inc. (MIS), uses shape memory technology to counteract the sag in power lines caused by high loads on hot days. The recent east coast blackout involved sag of an overloaded high voltage transmission line into lower voltage lines. The 1996 West Coast Blackout involved sag of power lines into trees.

MIS president Manuchehr Shirmohamadi, PhD, PE, has made many contributions to San Francisco Section, including two terms as Section Chair, since serving as a panelist for our Small Business kick-off meeting in 1996.

### SECTION HISTORY STATUS REPORT

Eric E. Worrell, PE. History & Heritage Chair

On June 21, 2003, San Francisco Section kicked off the preparation of an on-line Section History with a work party and barbecue hosted by Eric & Nancy Worrell. Four executive committee members and three new volunteers sorted through boxes of ASME records and began scanning old newsletters for filling in archives (a special thanks to Michael Gudz for taking home and scanning the big pile of newsletters). Eventual plans are to add narrative to on-line copies of newsletters, other key records of section history, and new narrative. The web-based format will allow this to be a living history project, growing and maturing, piece by piece, as members have time.

We still have gaps in the collection, especially in the 80s and earlier. If you have old newsletters or other items of interest for the section history, please contact Eric Worrell ([eric.worrell@ergoenergy.com](mailto:eric.worrell@ergoenergy.com)).

## ASME International San Francisco Section

ARTICLE C.5.1.2 of the Constitution of the American Society of Mechanical Engineers (revised to March 18, 2000) states; The provisions of the Constitution and By-Laws and Society Policies established by the Board of Governors of the Society shall govern the procedure of all units of the Society but no action or obligation of such units shall be considered an action or obligation of the society as a whole. This provision shall be imprinted on any publication issued by such units

### S. F. Section Executive Committee for 2003 - 2004

#### Chair/Programs

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#### Vice Chair/Mem Interest

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#### Member Dev/Nomination

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#### Secretary

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*We value your contributions.  
Please submit your comments  
and suggestions or any news  
items to the San Francisco  
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Chair's email address.*

#### Unemployed Mem. Coord./ Industry Relation

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#### Interested in volunteering with the San Francisco Section?

Contact the Chair directly, attend  
an executive committee meeting,  
or talk to a committee member at  
one of our events. For voicemail,  
call (415) 721-4478 or contact us  
through our website at  
<http://sf.asme.org> and join the  
fun.

#### News Editor/Prof Dev.

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### New ASME Web Site for CMA Student Section

The mechanical engineering students of  
the California Maritime Academy have set  
up a new ASME web site. For information  
on their section events, refer to:

<http://www.cmaasme.org>



The American Society of  
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## 2003 ASME International Mechanical Engineering Congress and Research Development and Design Conference



Don't forget to register for the 2003 ASME International Mechanical Engineering Congress and RD&D Expo!

The 2003 Congress will be held in Washington, D.C. at the Marriott Wardman Park and the Omni Shorham Park hotels.

All technical sessions, registration, publication sales and the RD&D Conference will be held at the Marriott Wardman Park Hotel. All other meetings or events will be held at the Omni hotel. The program overview, registration hours, ticket, travel and hotel information can be found at <http://www.asme.org/Congress03>