

AIAA SAN FRANCISCO SECTION



IN4M-LETTER

VOLUME XLIV, NUMBER 3
JANUARY-FEBRUARY, 2003

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS SAN FRANCISCO SECTION
P. O. BOX 1548, MOUNTAIN VIEW, CA 94042 <http://www.aiaa-sf.org>



V-22 Osprey in forward flight.

Thursday, January 23, 2003
Wyndham Hotel, Sunnyvale, CA

Tiltrotor Airplanes

Daniel Dugan

**Deputy Director, National Rotorcraft Technology Center
NASA Ames Research Center, Moffett Field**

Don't look now - the tiltrotors are coming!

The history of the tiltrotor goes much farther back in years past than most people realize and the United States was not the only country interested in the concept. The concept of an aircraft that could take off and land vertically like a helicopter, but cruise efficiently like an airplane, has been elusive.

As the V-22 Osprey gets through the hurdles encountered in its development and the Bell-Augusta 609 begins its trials as the first civil tiltrotor, the world's aviation community awaits the outcome and this breakthrough in air transportation.

About the speaker

Daniel Dugan graduated from the United States Military Academy (BS) and Virginia Polytechnic Institute (MS). He also graduated from US Naval Test Pilot School in 1965 and was assigned to the US Army Aviation Test Activity at Edwards Air Force Base until 1968. He undertook performance and HQ testing of the YUH-1C, ACH-47 (Guns-A-Go-Go), YCH-47B APE and various

Tiltrotors, continued on page 3

Friday, February 21, 2003
Marriott Hotel, Santa Clara, CA
**Silicon Valley Engineers Week 2003
Banquet**

Engineers Week is a national celebration and recognition of the profession of engineering, celebrated around the birthday of George Washington. The Silicon Valley Engineers Week Banquet is sponsored by the Silicon Valley Engineering Council (SVEC), which is made up of various engineering professional societies with chapters in Silicon Valley. The San Francisco Section of AIAA is helping this year to organize the banquet.

In 2003, the world will celebrate the first powered flight of the Wright brothers -- an engineering integration of aerodynamics, structures, propulsion, and controls. The keynote speaker for the 2003 banquet will be Dr. Hans Mark, a distinguished aerospace engineer and former center director of NASA Ames Research Center. The banquet will also honor three inductees to the SVEC Engineering Hall of Fame, and award several engineering scholarships.

Keynote Speaker

Dr. Mark is a Professor of Aerospace Engineering and Engineering Mechanics at the University of Texas at Austin, where he occupies the John J. McKetta Centennial Energy Chair in Engineering.



He has served as Director of NASA Ames Research Center, Secretary of the U.S. Air Force, and Deputy Administrator of NASA.

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Dr. Mark previously taught at Boston University, Massachusetts Institute of Technology, University of California at Berkeley, and Stanford University. He served as Chancellor of the University of Texas from 1984 to 1992. He has published over 180 technical reports, and authored or edited eight books.

Dr. Mark is a member of the National Academy of Engineering. He received the 1999 Joe J. King Engineering Achievement Award and the George E. Haddaway Medal for Achievement in Aviation.

Engineering Hall of Fame

Each year, SVEC recognizes selected Bay area engineers by inducting them into the Engineering Hall of Fame. This year's inductees are:

- **Kumar Malavalli**, co-founder and advisor, Brocade Communication Systems, Inc.
- **Dr. Mihir Parikh**, chairman of the board, Asyst Technologies, Inc.
- **Roy L. Clay, Sr.**, founder and CEO, ROD-L Electronics, Inc.

Brief biographies of the inductees can be found at the banquet reservation website.

Engineering Scholarships

Each year, around the time of Engineers Week, SVEC awards Engineering Education Awards. These are presented at the banquet to deserving students in local community colleges and university programs. The application deadline for the 2003 awards is Friday, January 31.

Behind the Scenes

Getting the banquet organized this year falls to a team of SVEC regulars, plus some additional help. The banquet chair this year is **Gano Chatterji**, past chairman of the AIAA San Francisco Section, who is leaning on the talents of the section council to bring many aspects of the banquet together.

A new on-line reservation system has been built by the AIAA SF Communications Committee, and is hosted on the section website. Users of the system can add/update their lists of guests and meal selections up to a week before the banquet. (For web developers: it is written in PHP4, running on an Apache server. This is the first PHP project attempted for AIAA SF.)

About SVEC

Founded in 1989, The Silicon Valley Engineering Council (SVEC) is the alliance for engineering leaders in Silicon Valley. It is composed of representatives from member engineering societies which have presence in Silicon Valley. SVEC coordinates activities and assists communication among local engineering societies. It also sponsors engineering educational activities, programs, and outreach.

Chief among the educational outreach programs is *Discover "E"* (E for engineering), a nationwide program to elementary, junior and senior high school students to engineering and cultivate their interest in math, science, and engineering. This outreach program

Silicon Valley Engineers Week

Banquet 2003

Friday, February 21, 2003
Santa Clara Marriott Hotel
Great America Parkway
Santa Clara, CA

takes place annually in Silicon Valley from the beginning of National Engineers Week until the end of March.

SVEC also recently instituted the *Keeper of the Flame Award*, a program to recognize excellence in middle and high school math and science education. This year's recipient is **Bruce Kawanami**, an engineer turned high school teacher.

Additional Information and Reservations

- Reserve on-line at <http://www.aiaa-sf.org/svec/banquet2003/svec2003.php>
- Reservation payment by check payable to SVEC. Mail to: Silicon Valley Engineering Council
c/o AIAA San Francisco Section
P.O. Box 1548
Mountain View, CA 94042-1548

Galileo Memorial Scholarship

Applications are now being accepted for the NASA Ames/AIAA SF Galileo Memorial Scholarship. The scholarship was 1973 by the National Aeronautics and Space Administration's Ames Research Center and the San Francisco Section of the American Institute of Aeronautics and Astronautics. It is a memorial to the men who perished in the Galileo I aircraft accident on April 12, 1973. The Galileo I was a Convair 990, which was operated by Ames as an airborne laboratory for research in aeronautics, astronautics, astronomy, and earth observations.

The scholarship program awards range from \$1,000 to \$2,500. Any high school senior who intends to pursue a career in engineering, mathematics, or physical or natural sciences is eligible to apply. Past finalists have had grade point averages near 4.0, high SAT scores, and involvement in numerous extracurricular activities. Applicants must be either residents of the eight counties comprising the AIAA San Francisco Section (San Francisco, San Mateo, Santa Clara, Santa Cruz, Alameda, Contra Costa, Marin, and Solano) or children of NASA Ames Research Center civil service employees, retirees, or on-site contract employees.

Scholarship winners are recognized at an AIAA SF dinner meeting in May. The selection process sometimes yields some surprising talent. At the dinner meeting and other events, section members get a chance to interact with promising engineers and scientists of the future.

Additional Information

- Scholarship application form and detailed requirements at <http://www.aiaa-sf.org/pco/galileo/galileo2003/announce.html>
Application deadline: February 28, 2003

weapons systems. He served in Vietnam from 1968 to 1969 as a helicopter pilot (BSM(2), AM(2), ACM).

From 1970 to 1990 he worked as a Research Pilot at NASA Ames Research Center and tested the XV-5B Lift Fan, YOY-10A Rotating Cylinder Flap Research Aircraft, and was Project Pilot for the XV-15 Tiltrotor Research Aircraft for 14 years. He was also Project Pilot on the UH-1H V/STOLAND aircraft which had the first digital flight control system in a helo.

Other developmental flying included XV-15 aeroelastic and dynamic stability tests and new techniques (frequency domain investigation) for dynamics testing. He participated in the development of a 2 and 3 axis sidestick controller in the XV-15 (the only sidestick to date in a tiltrotor) and flew it as Project Pilot in 1985. He was assigned to the V-22 Multiservice Test Team (later ITT) at Patuxent River, MD from 1990 to 1995 as a Deputy Program Manager for NASA to participate in the development of the Osprey. His current position is Deputy Director of the National Rotorcraft Technology Center.

He maintains flight status at NASA Ames and holds Airline Transport Pilot ratings for Airplanes and Rotorcraft. He has over 7500 hours logged including 2052 hrs jet time. He has received two NASA Achievement Awards for XV-15 development. He has authored 30 technical papers and reports - the most recent presented at the AIAA Conference on X Vehicles, at Santa Clara, CA, May 2002.

Additional Information and Reservations

- Reserve on-line at <http://www.aiaa-sf.org>.

The **AIAA SAN FRANCISCO SECTION IN4M-LETTER** is a publication of the San Francisco Section of the American Institute of Aeronautics and Astronautics, a non-profit society whose primary purpose is to advance the arts, sciences, and technology of aeronautics and astronautics and to foster and promote the professionalism of those engaged in these pursuits.

Section Officers and Council: A complete directory of the section council can be found at <http://www.aiaa-sf.org>.

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Production Notes: This publication was produced using Adobe FrameMaker 6.0 and converted to PDF by Adobe Acrobat Distiller.

AIAA SF Communications Committee staff: Rick Kwan, Katrina Thompson, Bruno Geoffrion, Corky Lakin.

Thursday, January 30, 2003

251 Castro, Mountain View, CA

Fermented Fluid Mechanics Forum

Imagine what it might have been like to go with your colleagues to a brew-pub after work to talk with Wernher von Braun about your favorite moon-landing ideas. This is the essence of the Fermented Fluid Mechanics Forum (FFMF), an informal technical discussion series brought to you by the San Francisco Section of the AIAA. FFMF events will usually be held periodically at "251 Castro" billiards club in Mountain View for technical professionals to enjoy some food, drink, and a maybe a couple of matches of every dynamicists favorite game (pool, of course!).

Dr. Seth Shostak of the SETI Institute will be joining the January forum. (SETI stands for Search for ExtraTerrestrial Intelligence) He is an astronomer involved with Project Phoenix, and has a BA in physics from Princeton and a PhD in astronomy from Caltech. But he's also responsible for much of the outreach activities of the Institute. He edits the newsletter, oversees the Web site, gives talks and writes magazine articles (and books) about SETI. He also teaches a half-dozen informal education classes on astronomy and other topics in the Bay Area.

Additional Information

- Date and Time: January 30, 2003, 6:30pm until at least 7:30pm
- Place: "251 Castro," 251 Castro St., Mountain View, CA.
- Latest FFMF updates at <http://www.aiaa-sf.org/ffmf.html>
- Entertaining biography of Seth Shostak at http://www.seti.org/about_us/leadership/staff/seth_s.html

New Associate Fellows

The AIAA membership committee selected 192 members for upgrade to Associate Fellow during 2002. Among them are the following San Francisco Section members:

Ralph E. Bach, Jr.	Brian J. Glass
Daniel P. Bencze	Christophe O. Laux
Carol W. Carroll	Mark P. Loomis
Susan E. Cliff	Marshall Merriam
Nancy S. Dorigi	Thomas M. Morton
Jeff W. Fisher	Stuart E. Rogers
Michael W. George	Nancy F. Swinford

Short Notes

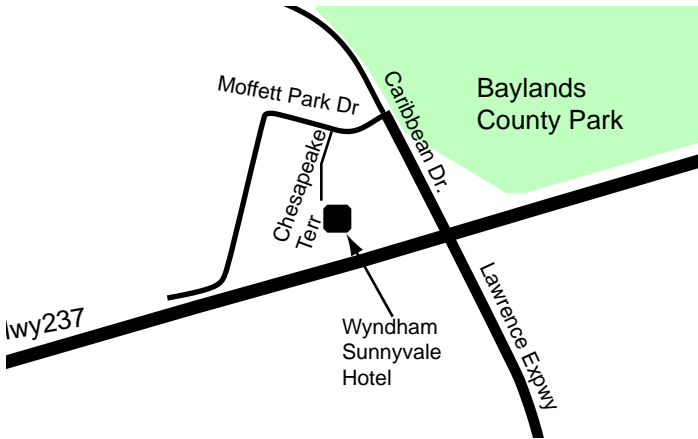
- The *AIAA Journal of Aerospace Computing, Information, and Communication* will begin on-line publication on 2004. In contrast to other journals, it will employ a "continuous publishing" model with rapid review of submitted papers. Editor-in-chief is Prof. Lyle N. Long of Pennsylvania State University. The journal is looking for a few more associate editors. Interested associate editor candidates can send mail to Prof. Long at ln1@psu.edu. Details about the journal are now posted at the AIAA national website.

Calendar

AIAA SF Section Events

- Thursday, January 23, 2003, Dinner meeting: Dan Dugan, *Tiltrotor Airplanes* - Wyndham Sunnyvale Hotel, 1300 Chesapeake Terrace, Sunnyvale, CA [Tel: 408-747-0999] Cost: AIAA members and guests - \$20, Students - \$14, non-members - \$25. Cash or check only. (See "Tiltrotor Airplanes" on page 1.)
- Thursday, January 30, 2003, Fermented Fluid Mechanics Forum: Seth Shostak - 251 Castro, 251 Castro St., Mountain View. (See "Fermented Fluid Mechanics Forum" on page 3.)

Dinner Meetings Agenda: No-host cocktails at 6:30pm, dinner & program from 7pm to 9pm. **Registration:** By Monday preceding



dinner. On-line at <http://www.aiaa-sf.org>, or contact Programs Director by e-mail or phone. **Cancellation:** By Wednesday preceding dinner. Please contact Programs Director. (AIAA pays for all reservations, including no-shows.) **More Info, Questions, Comments, Jokes:** Contact our Programs Director at programs@aiaa-sf.org.

Silicon Valley Events

- Friday, February 21, 2003: *Silicon Valley Engineers Week Banquet* - Marriott Hotel, Santa Clara, CA; sponsored by the Silicon Valley Engineering Council (SVEC). Keynote speaker will be Dr. Hans Mark, former NASA Ames center director and former secretary of the Air Force. \$60/person until Feb. 2; \$70 thereafter. (See "Silicon Valley Engineers Week 2003 Banquet" on page 1.) More info at: <http://www.svec.org/banquet/index.html>

AIAA National Meetings

Below are selected conferences and workshops sponsored or organized by AIAA.

- *41st Aerospace Sciences Meeting and Exhibit*, Reno, NV - Jan. 6-9, 2003. The meeting is the largest of AIAA technical conferences and one of the preeminent technical gatherings within the entire spectrum of aerospace activities. Early bird registration ends Dec. 6, 2002.

Additional details may be found on the national AIAA website at <http://www.aiaa.org/calendar>.

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Aeronautics & Astronautics
San Francisco Section**

**Post Office Box 1548
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