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2003-2004**

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Brian Werner
Chandra Jain

House/Attendance
OPEN

**College Relations &
Vocational Services**
OPEN

**Electronic
Communications**
Jason Emperador

Fellowship & Welfare
Dave Yakubek

Finance & Budget
Greg Hollinger

**Government Relations/
Ohio Council**
OPEN

History & Heritage
OPEN

Honors & Awards
OPEN

Industry Relations
OPEN

Member Initiative Sys.
Rick Borowski

**Member Interest /
Membership Development**
Brian Werner

Minorities & Women
Kathy Grant

**Newsletter Editors /
Public Relations**
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Nominating
Bruce Allmon

**Professional
Development**
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Program
OPEN

Unemployed Members
OPEN

The American Society of Mechanical Engineers



Canton Alliance Massillon Section News

Editor: Kathy Grant

September 2003



C.A.M. SECTION WEBSITE

<http://www.asme.org/sections/cam/index.html>

September Dinner Meeting Fuel Cells for Aerospace Applications



When: September 9, 2003
Where: Holiday Inn-Belden Village
4520 Everhard Rd., North Canton

Social Hour: 6:00 p.m.

Dinner: 7:00 p.m.

Presentation: 7:30 p.m.

Menu: marinated chicken breast or
baked scrod

Cost: \$10 members and guests
\$8 students / \$15 non-members

Contact : Kathy Grant at 330.678.1275 or
grantk1@asme.org for reservations and
menu selections by **September 5.**

See page 2 for more information

From the Executive Committee

Welcome to the 2003-2004 program year for the CAM section of ASME.

This first newsletter is being sent via US mail to all members. Beginning next month, newsletters will be sent by e-mail in PDF format to all members with an e-mail address on file. Paper copies will be sent by US mail only to those members without an e-mail address on file. Newsletters will also be posted on the CAM section website.

Please verify your e-mail address and keep it current at the "Members Only" tab at www.asme.org.

2003-2004 CAM Executive Committee

Other Upcoming Events

- Oct. 14 - FIRST Robotics presentation
- Oct. 18 - Career Development Seminar "Economics of Doing Business: Financial Evaluation for Engineers"
- Nov. 5 - "Flight Simulators"
- December - Canton Opera Madrigal Dinner
- March 10 - "Commercially Pure Titanium"

CAM Section Board Meetings

6:00 p.m., Timken Research Conference Room 11
Tentative Schedule, first Tuesday of each month

September 2, 2003	January 6, 2004
October 7, 2003	February 3, 2004
November 4, 2003	March 2, 2004
December 2, 2003	April 6, 2004

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NASA's Emerging Efforts in Fuel Cell Development for Aerospace Applications

NASA has a long history with fuel cell development starting in the Sixties with the manned space program. NASA is now pursuing the development of Proton Exchange Membrane (PEM) fuel cells and investigation of Solid Oxide Fuel Cells (SOFC) for 21st century aerospace applications. The PEM fuel cell is being developed for future reusable space vehicles and the NASA Helios vehicle, leveraging technology advancements being made by the automotive industry and Department of Energy. The Helios aircraft, an experimental vehicle, represents the potential of uninhabited aerial vehicles (UAVs) for scientific and homeland security missions.



The SOFC is being considered for commercial transport secondary power generation applications. This emerging fuel cell serve to introduce fuel cell technology to the airline industry prior to the country's conversion to a hydrogen economy. The airline industry will likely continue to use fossil fuels for the foreseeable future because of the infrastructure, production, storage, and cost challenges associated with hydrogen fuel. While the full benefits of fuel cells will not be realized until a hydrogen based economy is established, interim benefits including fuel savings, emission and noise reductions can be achieved with SOFC due to its high temperature operation and compatibility with jet fuel reforming. Additionally, in a hydrogen based economy, SOFC system has the potential to offer greater benefits than a PEM fuel cell system because of higher efficiency and longer life.

Regardless of the type of fuel cell, aerospace applications present unique design and operational challenges that are not being addressed by the automotive and DOE programs. The main focus of the automotive and DOE programs is to reduce fuel cell cost to make them competitive with current technologies such as the internal combustion engine. While cost is important to aerospace, system size and weight are equally if not more, important. In addition, reliability and durability present greater challenges for flight systems considering the extreme operating conditions including vibration and shock loads, and environments (e.g. low temperatures and pressures) that aircraft systems are subjected to. Thus, NASA's fuel cell development plan addresses these unique challenges while leveraging the significant effort underway for ground based applications. A strawman technology plan covering SOFC for commercial transport secondary power generation and SOFC/PEM for UAVs will be presented.

About the Speaker ... Anita Liang is chief of the Aeropropulsion Projects Office at NASA's Glenn Research Center, Cleveland.



Among her many responsibilities, Ms. Liang is Glenn's focal point for the integration and coordination of all aerospace fuel cell efforts, including planning, advocacy and communication of NASA Glenn aerospace fuel cell activities, addressing U.S. energy security and efficiency challenges.

Prior to this appointment, Liang served as Acting Chief of the Aeropropulsion Project Office since 1999 and was selected as the Deputy Chief of the Subsonic Systems Office in 1997. She joined Glenn in 1989 as the Earth-to-Orbit Program Manager and began her professional career at Babcock and Wilcox in 1981 as a research and project engineer. Liang earned her bachelor's and master's degrees in engineering from McGill University, Montreal, Canada. She has also received several NASA honors, including the Medal for Exceptional Achievement and the Space Flight Awareness Award.

**2003-04 ASME
Member-Get-A-Member Campaign**

Recommend a paid new member during the 2003-04 Member-Get-A-Member (MGAM) campaign now through June 30, 2004 and ASME will contribute 50% of their first year dues to scholarships for student members.

At the same time, you will receive recognition for volunteerism - a certificate of appreciation for two or more paid new members signifying your support of the mechanical engineering community.

**IT'S EASY TO RECOMMEND
MEMBERSHIP TO YOUR
COLLEAGUES!**

New members will experience the benefits of ASME membership - technology transfer, access to a network of engineering experts, assistance with career advancement, leadership opportunities and much more.

Learn more about how to start recommending your colleagues at <http://www.asme.org/membershipdrive>

Professional Education Courses

Two new products at the **ASME PE and FE Exam Review Center. New FE Workbook and CD-Rom and the PE Exam Review on DVD**

<http://www.asme.org/education/disted/examprep.htm>

ASME Online Short Courses-New titles include Project Management and Advanced GD&T.

<http://elearn.asme.org/courses/courselist.htm>

Many new courses will be added for the fall.

<http://www.asme.org/education/disted/library.htm>

Prefer training on CD-Rom? go to

<http://www.asme.org/education/disted/computer.htm>

Titles include B31.3, GD&T and Section VIII, Div 1.

New ASME Corporate Online Training Library-

Meet all your mechanical engineering training needs in one economical package tailored to your company.

Go to:

<http://www.asme.org/education/disted/library.htm>

Grants of up to \$1,000 are available to ASME senior Sections wishing to sponsor events promoting diversity and inclusiveness within the engineering community. For more information on the Partners in Mechanical Engineering Program, go to

<http://www.asme.org/communities/diversities/bdo/partners.html>

The Board on Minorities and Women (BMW) transitioned into the Board on Diversity and Outreach (BDO) at the end of the Summer Annual Meeting. For more information on the BDO, its mission and new members, go to <http://www.asme.org/communities/diversities/bdo/>

Grants of up to \$1,500 are available to ASME student sections for projects and activities that promote diversity and inclusiveness in the student sections. Applications for the 2003-04 Diversity Action Grant (DAG) Program must be received by Nov. 1, 2003. For additional information, go to

<http://www.asme.org/communities/diversities/bdo/dag.html>

ASME'S MEMBER INITIATIVE SYSTEM ON THE WEB – NEW PROPOSALS

ASME'S Member Initiative System encourages any member or operating unit of ASME to propose improvements to Society policy or procedure or to make any suggestions which would improve the operation or activities of the Society. It's easier than ever to propose improvements and to view proposals submitted by your peers. We will now highlight selected Member Initiatives that have been recently received.

"Leave a Mechanical Engineering Magazine"- Spread the word!

Do you keep your back copies of ME Magazine? If not, please pass them along to others. You can keep them on your desk at work, put them in the employee lounge, donate them to your local library, high school library or local college - or anywhere else you can think of where people congregate. Circulating readership is important - it extends the reach of ASME at no cost to the Society. So don't throw your magazines away - pass them along. You never know when an article might spark an interest in ASME or in mechanical engineering.

To submit a proposal, or to view other current and archived proposals, visit the Member Initiative System web page at <http://www.asme.org/cma/mis.cfm>.

ASME Launches Anti-Spam Service

ASME is providing a new junk mail filtering service to protect your "@asme.org" forwarding address. We have contracted this service for our members from a top provider of email security services.

We are providing this service to our members in response to the growing problem of unsolicited email messages. It has been reported that as much as 70% of all new email is classified as spam. If you are a member who has an asme.org email alias, then you have already have been activated.

At this time, only addresses with the asme.org domain can be registered for this service. To create your ASME email alias, visit the "Members Only" site at www.asme.org. Approximately one week after your alias has been established, you will receive your account information and temporary password.

For more information, please contact junkmail@asme.org.

Call For Nominations: 2004 New Faces of Engineering

It's time to start gathering nominations for 2004's New Faces of Engineering. Sponsored by National Engineers Week, 'New Faces of Engineering' is a recognition program that seeks young engineers who are interested in working on a high-profile project.

Top candidates (two to five years out of school) will participate in an email and/or online Question and Answer discussion forum with engineering undergraduates globally at a future date.

The deadline for nominations is Sept. 30, 2003. All nominations should be forwarded to June Scangarello, director of Public Information at scangarelloj@asme.org

For more information on the program, log on to: http://www.eweek.org/site/News/Eweek/2004_nomination.shtml