

CONGRESS DAILY UPDATE

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Peter Diamandis Keynotes 2008 ASME Congress

Last night, Peter H. Diamandis presented the keynote address at the 2008 ASME Congress. The chief executive officer of Zero Gravity Corp. shared his personal ambitions for commercial space travel and challenged engineers to bring technology innovation to bear on the lives of people around the world.

Engineers, said Diamandis, must do more than design products – they must create new markets for products and incorporate technology in the lives of people. He encouraged engineers to tap their entrepreneurial spirit to drive innovative ideas and concepts into the commercial marketplace for all to enjoy.



Peter Diamandis

Diamandis' foundation, X Prize, presents monetary awards in recognition of innovations that demonstrate the potential to impact the commercial marketplace and benefit humanity. He said in the keynote speech that X Prize Foundation is inspiring a new breed of maverick thinkers and problem-solving entrepreneurial innovators.

Diamandis also spoke about Zero Gravity, the successful firm that arranges private commercial flights into space for individuals and companies, and Rocket Racing League, which inspires young inventors to create new types of high-performing space aircraft.

Through his work, Peter Diamandis seeks to create a vibrant industry that could change the way people think about space flight and exploration – and about technology in general. A question-and-answer session followed the keynote speech.



Breakfast for Authors

A continental-style Authors' Breakfast will be available today through Thursday, Nov. 6, from 7:00 to 7:45 a.m., at the Boston Sheraton. The breakfast this morning and tomorrow will be held in the Constitution Ballroom A-B on the second floor of the

Sheraton. On Wednesday and Thursday the breakfast will move to the Grand Ballroom.

The breakfast will give authors an opportunity to review their presentations, meet with other authors and technical session chairs, and get a bite to eat.

Exposition Opens Today

The exposition at the 2008 ASME International Mechanical Engineering Congress opens today at 11:30 a.m. with the official ribbon cutting ceremony and complimentary lunch. The exposition continues to Wednesday, November 5. It will take place in ballrooms A, B and C on the third level of the John B. Hynes Veterans Memorial Convention Center. The hours of the exposition are 11:30 a.m. to 5:00 p.m. on all three days.

Exhibitors include technical publishers, engineering software companies, educational and research organizations, and developers of instrumentation and other analytical hardware for engineers. The exposition includes a career expo, in which students and other attendees may interface with prospective employers.

Stop by and support this year's exhibitors!

From the Chair of the 2008 Congress Committee



Warren R. DeVries

Welcome to Boston and the 2008 ASME International Mechanical Engineering Congress and Exposition. The 2008 ASME Congress is bringing together engineers and scientists from 61 countries around the world for an exciting and event-filled week of networking and information exchange.

The technical program and exposition open today. The program features 468 sessions grouped into 19 multidisciplinary technology tracks. A total of 2,017 presentations are slated for this year's Congress, including 1,288 papers that are published in the digitized proceedings available to attendees.

The sheer numbers aside, the technical program at the ASME Congress bases its success on the high quality of speakers from top corporations, design centers, universities and research institutes around the globe. The presentations reflect the latest research and engineering applications in a wide range of industry sectors from aerospace and automotive to energy systems and manufacturing. Several talks this week will highlight the emerging trends that will shape the engineering profession in the next 10-20 years, including sustainable technologies and micro-structures.

Other discussions will focus on trends in engineering education and project-based engineering collaboration and partnering.

The exposition this week showcases products and services that are enabling engineering practitioners and educators to do their jobs better. Exhibitors include engineering software developers and technical publishers, among other organizations. I encourage attendees to support the exhibit here at the 2008 ASME Congress.

I also want to remind you to pick up your free copy of the *Congress Daily Update* newsletter, available tomorrow and Wednesday near the Information Desks at the Sheraton Boston Hotel and the Hynes Convention Center.

On behalf of the 2008 ASME Congress Committee, I wish you a rewarding and enriching technical experience at this year's conference and hope you have an enjoyable stay in Boston.

HONORS ASSEMBLY SET FOR TONIGHT

Be sure to attend the 2008 Honors Assembly this evening at 5:30 p.m. in the Grand, Liberty and Independence Ballrooms of the Sheraton Hotel. Hosted by ASME President Tom Barlow and chair of the Committee on Honors Bill Durgin, this multimedia program will pay tribute to some of today's leading engineers, educators, entrepreneurs and innovators. Don't miss this special event. Admission is **FREE**. A reception will follow.

Two New Journals on Display in ASME Publications Booth

Two new ASME technical journals – *Journal of Mechanisms and Robotics* and *Journal of Thermal Science and Engineering Applications* – along with publications of ASME Press and a sampling of ASME codes and standards are on display in the Society's publications booth at the 2008 Congress. The booth, located on the exhibit floor in the John B. Hynes Veterans Memorial Convention Center, is open today through November 5, from 11:30 a.m. to 5:00 p.m.



The *Journal of Mechanisms and Robotics* is a compilation of research articles discussing the latest theoretical analyses and applications in machine systems. It contains articles on walking machines, electro-mechanical robots, compliant mechanisms, and articulated systems ranging from micro devices to large-scale space structures.



The *Journal of Thermal Science and Engineering Applications* covers thermal energy transport, thermodynamic processes, chemical systems, and other subjects. Intended as a complement to the *ASME Journal of Heat Transfer*, the new book focuses on solutions to common problems in industries ranging from aerospace and biotechnology to power systems and chemical processing.

The ASME Press titles in the publications booth include *Biomedical Applications of Vibrations and Acoustics in Imaging and Characterization*; *Becoming Leaders: A Practical Handbook for Women in Engineering, Science and Technology*, and *The Elements of Mechanical Design*.

Four Technical Tours at 2008 ASME Congress

Attendees at the 2008 ASME Congress may register for technical tours of manufacturing facilities and engineering research centers in the Boston area. Four technical tours have been organized at Congress. The schedule is as follows:

- ▶ Monday, November 3, 7:45 a.m.–12:30 p.m.
Osram Sylvania
- ▶ Tuesday, November 4, Noon–3:45 p.m.
DePuy (Johnson & Johnson)
- ▶ Wednesday, November 5, 1:15 p.m.–4:30 p.m.
BOSE Corp.
- ▶ Wednesday, November 5, 3:00 p.m.–6:45 p.m.
Northeastern University Nano-manufacturing Center

There is a fee for each tour. Please visit the general registration area to obtain information, including bus departure times from the Sheraton.

Experience the ASME Digital Library



Tutorials on the ASME Digital Library will take place twice a day in the ASME publications booth on the exposition floor. At noon and again at 3:00 p.m. today through November 5, representatives of ASME will present the features of the Web-based digital library and demonstrate the way in which users navigate the site to access many of the Society's technical publications.

Sessions to Focus on Sustainable Products and Processes

The technical program at the 2008 ASME International Mechanical Engineering Congress features a track on sustainable development, which begins this morning and continues to Tuesday, Nov. 4 at the Sheraton Boston. Presentations and panel discussions will examine engineering-based methodologies for developing energy sources and other technologies that have marginal impact on ecological systems.

"The Sustainable Products and Processes Track is broadly focused, cutting across numerous disciplines," said Ahmad Fakheri, a professor at Bradley University and co-organizer of the track, one of 19 in the 2008 Congress program. "Sustainability is important to diverse industries ranging from automotive and paper to pharmaceutical and agricultural."

The presentations in the track will cover alternative fuels for energy production, water management, environmentally benign materials, and solar energy, among other topics. A session scheduled for this morning will explore sustainability in the automotive industry and feature a panel of speakers debating the role of fuel cells in the future of transportation.

The session *Energy and Water Reuse* scheduled for Tuesday afternoon, beginning at 3:30 pm, will examine technology research and development programs aimed at managing decreasing water supplies around the world.

The ASME report titled *2028 Vision for Mechanical Engineering* says that engineers over the next two decades will collaborate on solutions that foster a cleaner, healthier, safer and sustainable world.

Fakheri, a fellow of ASME and member of the Society's Board for Research and Technology Development, believes it is a chief responsibility of industry to embrace the environmental mandate.

"Industries are expected to utilize raw materials and energy more efficiently, promote recycling, and minimize environmental emissions and waste products," he said. He added that sustainability can be a profitable enterprise for many companies due to the high cost of raw materials and more stringent regulatory compliance standards.

Educators also must play a role in the sustainable future, Fakheri says. "Academia must make sustainable development a part of the teaching curricula," he says.

Sustainable development has been on ASME's radar, as the Society has initiated much activity in the area. Last year, ASME invited Bernard Amadei, the founding president of the humanitarian group Engineers Without Borders-USA, to present the keynote address at the 2007 International Mechanical Engineering Congress in Seattle. Also in 2007, the ASME Center for Research and Technology Development sponsored the Water Management Technology Vision and Roadmap Workshop, which identified priorities in R&D, education and training.

The results of the workshop will be summarized in tomorrow's session, *Energy and Water Reuse*.

The ASME Digital Library, which resides on www.asme.org, consolidates the Society's 22 technical journals and more than 100 conference proceedings, while offering users a comprehensive range of functions and links for searching and cross-referencing. The content of the digital library includes current ASME transactions journals and other journals dating back to 1990, more than 30,000 conference proceedings papers, and ASME Press e-Books dating back to 1999.