

# CONGRESS DAILY UPDATE

BOSTON, MASSACHUSETTS — VOLUME 3 WEDNESDAY, NOVEMBER 5, 2008

ASME  
SETTING THE STANDARD

## ASME Honors Assembly Salutes Engineering Excellence

The ASME Honors Assembly was held Monday at the Sheraton Boston. It set the scene for a gala tribute that recognized the engineering achievements and contributions of twelve outstanding individuals. “Tonight we pay tribute to our distinguished award recipients and celebrate their work and contributions to the engineering community and the world,” said ASME President Tom Barlow, who opened the program and co-hosted the event with Bill Durgin, chair of the Committee on Honors.



*ASME past presidents were given special recognition for their dedication to ASME at the 2008 Honors Assembly.*

Each year ASME, through the Honors Assembly, brings the character and importance of the engineer’s work to the attention of their peers and the public.

This year’s Honors Assembly recipients included **Kyriacos A. Athanasiou** (Thomas A. Edison Patent Award); **Kenneth R. Balkey** (Melvin R. Green Codes and Standards Medal); **Robin S. Sharp** (Soichiro Honda Medal); **James B. Bryan** (M. Eugene Merchant Manufacturing Medal of ASME/SME); **Shirley Ann Jackson** (Ralph Coats Roe Medal); **Sia Nemat-Nasser** (Timoshenko Medal); **David G. Lilley** (Holley Medal); **Peter Maggiore** (Dixy Lee Ray Award); **Klod Kokini** (ASME Johnson & Johnson Medal); **Frank E. Talke** (ASME Medalist), and Honorary Members **Nancy D. Fitzroy** and **Robert A. Bennett** (deceased). In 2008, ASME presented 58 awards to 66 individuals.



*The 2008 Melvin R. Green Codes and Standards Medal was presented to Kenneth R. Balkey, P.E., consulting engineer at Westinghouse Electric Company, Pittsburgh. Left to right: Thomas G. Loughlin, ASME executive director; Thomas M. Barlow, ASME president, and Balkey.*

“Your extraordinary work and contributions to the engineering profession in industry, government and academia is why we celebrate and honor you tonight,” said Durgin.

The ASME Honors and Awards program is funded through The ASME Foundation by individual and endowment funds.

## Yes, We Do Windows – The Robotic Way

The challenge of the 2008 ASME Student Design Competition was to design, build and demonstrate a robotic device that can clean a residential double-hung sash window. Winrobo was the name of this year’s competition, held on Nov. 2 at the Sheraton Boston.

Ten teams competed for top honors. The window washing prototypes were designed to assist homeowners, particularly those with mobility problems, to clean the outside of their windows by remote control. Each Winrobo device had to carry 50 millimeters of water and was required to include a safety cord to secure the robot to the window.



*The first-place design team from Michigan State University. Left to right: Kyle Koepf, Emily Duszynski, Joshua Thomet and Jonathan Luckhardt.*

This year’s first place winner was the engineering team from Michigan State University. Second place was awarded to Hong Kong Polytechnic University, and third place went to Colorado State University.

The ASME Student Design Competition showcases the extraordinary talents of mechanical engineering students, while encouraging the development of innovative ideas towards an improved quality of life. Each year, several teams of up to four students compete at Student Professional Development Conferences in districts worldwide. Special thanks to our sponsors The Boeing Company and Pella Windows.



*The Michigan State University window cleaning device, Winboni, and the team trophy.*

Looking to next year, the 2009 design competition is called “Mars Rocks.” Students will need to build a vehicle that will retrieve rocks and bring them to a designated spot. The purpose of collecting the rocks is to discover if life ever existed on the Red Planet.

## Holt Named ASME President-Elect

Amos E. Holt of Southwest Research Institute® was named president-elect of ASME at the ASME Business Meeting held on Oct. 31. Holt, a fellow and honorary member of ASME, will become the Society's 128th president when he begins his one-year term in June 2009.

Holt has served in many leadership positions during his 26-year affiliation with the Society, most recently as secretary and treasurer. He served on the Board of Governors from 2003 to 2006. Other offices have included chair of the Committee on Finance and Investment, chair of the Continuing Education Institute, and vice president of the Pressure Technology Group.



ASME President Thomas Barlow presents a pin to President-elect Amos Holt during the announcement of new Society officers at the Business Meeting on Oct. 31.

Holt is a technical expert in the areas of non-destructive evaluation (NDE) and advanced engineering materials. As vice president of Environmental, Safety and Quality Systems for SRI, Holt is responsible for implementing necessary environmental, safety, and quality systems to meet client requirements and all applicable governmental standards, regulations, and codes.

Prior to joining Southwest Research Institute in 1985, Holt worked as section manager for Babcock & Wilcox, where he was involved in NDE inspections and diagnostic systems. During his career in engineering, Holt has published more than 40 technical papers and articles on acoustic holography and other subjects pertaining to NDE. He holds five patents.

Amos Holt received a B.S. in physics from Arlington State College and master's degree in physics from the University of Texas, Arlington. He continued his education and training at Nova Southeastern University, earning his Ph.D. in computer and information sciences in 1994.

Holt was named a fellow of ASME in 1993 and honorary member in 2002. He also was a lecturer in the ASME Distinguished Lecturers' Program and in 2000, became a recipient of the Society's Dedicated Service Award.

## Polytec Exhibits Measurement Systems

Polytec, Inc. is demonstrating its Laser Doppler Vibrometer and TMS Surface Profiling measurement instrumentation at the company's booth 307 in the Hynes Convention Center exhibit hall, Ballrooms A, B and C.

Both devices are non-contact systems that use light to measure the surfaces of engineered structures, including micro-structures. The instruments provide data to engineers on the specific characteristics of material surfaces, enabling improvements in product design and development.

The TMS Surface Profiling system uses a technique the company calls "white-light interferometry" to scan a static surface



The Polytec booth in the exhibit hall.

and return data on flatness, curvature, slopes, and other surface characteristics. According to Polytec, TMS can be used on precision machined parts and also on micro-electromechanical (MEMS) devices.

Polytec, Inc. is based in Tustin, Calif.

## Full Slate of Nano and MEMS Presentations Set for Today and Thursday

The Micro and Nano Systems track, which continues today, reflects current research and experimentation in nanotechnology and micro-electromechanical systems (MEMS) – activity that is laying the groundwork for possible near-future breakthroughs in energy, biomedical science, electronics, food processing, and other areas.

“Researchers are exploiting the strong coupling between the thermal, electrical, mechanical and chemical domains, which will spur a breed of new devices,” says Aman Haque, associate professor of engineering at The Pennsylvania State University and organizer of the Micro and Nano Systems track at the 2008 ASME Congress. Advanced nanotechnology research, Haque notes, will enable scientists and engineers to solve problems in thermal management and energy conversion and understand ways to increase efficiencies in products and systems.

Sessions scheduled for today will cover thermal transport in power generation, design of MEMS devices, atomistic schemes, and micro-fluidics.

“The track is particularly strong in micro and nano-fluidics,” notes Haque. He says the recent experimentations in nanotechnology-based thermo-physics and energy conversion are producing gains in the area of bio-fluidics.

Also today, the 3rd Micro and Nano Technology Society-wide Forum will be held from 11:30 a.m. to 3:00 p.m. in Ballrooms A, B and C of the Hynes Convention Center. More than 160 posters showing the latest research and experimentation in micro- and nano-scale systems will be on display, and attendees can vote in a competition for Best Poster Award.

The Micro and Nano Systems track continues on Nov. 6. Haque believes the ongoing research activity in the area of multi-physics could result in more improved materials for a variety of applications.

Haque also believes the biomedical field will be a chief beneficiary of the nanotechnology research, particularly in the area of surgical implants and prosthetics. Solar energy could grow, says Haque, as nanotechnology researchers continue to solve fundamental problems in energy conversion.

“I view our activities in the track to be important steps in emerging technology,” says Haque.

## Congress 2008 Technical Paper Receives Award

The paper, “Numerical Study of the Matching of the Volute with the Last Stage Centrifugal Compressor,” by Ji Chunjun and Wang Yu of Dalian University of Technology, is the recipient of the Johnson Controls Best Paper Award. Congratulations to the authors!

