

Ultrasonics in Medical Device Applications

Speaker: Claudio I. Zanelli, Ph.D.
C.E.O., Onda Corporation, Sunnyvale
Date: Thursday, January 20, 2005

Ultrasonics waves are used in many forms in the realm of medical device applications, beyond the now familiar imaging for obstetrics, cardiology and other soft tissue organs. For instance, ultrasound is used in doppler flow measurement of cardiac output, thickness gauges, and sensors for flow in arteries or vessels – to assist doctors in making decisions during surgery.

At the forefront of ultrasound R&D is its use in *High Intensity Focused Ultrasound* (HIFU), where the amplitude of the waves is such that nonlinear effects cause heating and destruction of tissue. This use of focused ultrasound allows destroying tissue without affecting the intervening tissue – the holy grail of surgery without disrupting the skin.

About the speaker

Claudio Zanelli founded Intec Research Corporation in 1990, a consulting, research and development organization recognized for its ultrasonic quantitative schlieren testing systems that are used by NASA, Mayo Clinic, General Electric, Siemens, Philips, and many other centers of technical leadership.

In 2002, Specialty Engineering Associates, a leader in the design, prototyping and manufacturing of custom ultrasonic transducers and hydrophones, merged with Intec to form Onda Corporation. More information is available on the website <http://www.ondacorp.com/>.

January Dinner Meeting

Details, Details:

Date: Thursday, January 20

Location: The PRIME Hotel Sunnyvale (formerly The Wyndham)

6:30 p.m. Registration

7:00 p.m. Dinner: Roast Beef or Wild Mushroom Ravioli

8:00 p.m. Guest speaker

\$25 ASME Members / \$15 Students / \$30 Non-members
(+ \$5 without RSVP)

RSVP: Elise Engelhardt (408)360-0669 / engelhardt@asme.org

Directions: Take 101 to Lawrence North; turn left at Baylands Park (Moffet Park); turn left into Caribbean Corporate Center. Hotel is at end of driveway.

SVEC Banquet 2005

Engineers Week / Feb. 23 (Thurs)

To commemorate the 125th anniversary of ASME, we will be the host organization for the Silicon Valley Engineering Council (SVEC) Banquet on February 23, 2005 during National Engineers Week. The banquet will be

held at the Westin Santa Clara.

The theme for this year's banquet is "**Education is the Economy**". In keeping with the theme, SVEC will be awarding five scholarships to outstanding student members of local SVEC member organizations. *The scholarship applications, available on the SVEC website, are due on Monday, Jan. 26.*

During the banquet, SVEC will also induct five outstanding individuals to the Silicon Valley Engineering Hall of Fame. These Hall of Fame inductees are recognized for their professional achievements in engineering and technology, and for their significant contributions to the local community.

Please turn to page 3 of the newsletter for a list of this year's Hall of Fame inductees, as well as the banquet reservation form. For further information on this event, please visit the website <http://www.svec.org/banquet>.

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Dr. Winncy Du Recognized with ASME Diversity Award

Dr. Winncy Y. Du, P.E., past chair of the Santa Clara Valley Section and assistant professor at San Jose State University, received the 2004 Diversity and Outreach Award presented by the ASME Board on Diversity and Outreach to an outstanding member of ASME in recognition of that individual's work *to make ASME a welcome place for all to participate and to encourage inclusiveness and the participation of women and underrepresented minorities in the Society.*



Dr. Du is being recognized for her leadership of our section, which was recognized as the leading section in the nation for four consecutive years (2000, 2001, 2002 and 2003), and for her success as the student advisor for the ASME Student Section at SJSU. Under Dr. Du's leadership and guidance, the SJSU Student Section experienced significant growth with 81 percent of the section comprised of women and underrepresented minorities.

Dr. Du is director of the Robotics and Manufacturing Lab at SJSU's Department of Mechanical and Aerospace Engineering. She has served as ASME Student Section Advisor since 2000. She served as vice chair of our section from 2002-2003, and from 2003-2004, served as chair of the section.

Dr. Du received a Ph.D. in mechanical engineering from Georgia Institute of Technology (Atlanta) and holds master's degrees in both electrical engineering and mechanical engineering. In 2002 and 2003, she was awarded the SJSU Distinguished Faculty Mentor Award.

The 2004 ASME Diversity and Outreach Award was presented to Dr. Du on Nov. 14 in conjunction with the 2004 ASME International Mechanical Engineering Congress and RD&D Expo in Anaheim, Calif.



SJSU Student Project Seeks Assistance

By Henry Martinez

Students of ETHOS – Engineering To Harness and Optimize Sustainability, a non-profit student organization at SJSU – are building the **Grand Tilting Racer**. This is an electric 3-wheel tilting concept vehicle that can help relieve some of the problems in our current transportation infrastructure. Students on the project are looking for assistance in the forms of material, tooling, technical advice and financial support.

For more information, please contact:

Stuart Davis

(408) 924 3821 / <stuart.davis@sjsu.edu>

or visit the website <www.engr.sjsu.edu/ethos>



Engineers Provide Sustainable Solutions Through International Volunteerism

ASME members around the world have the chance to get involved in real-world engineering projects, gain exposure and training in internationally responsible and sustainable engineering through ASME's partnership with Engineers Without Borders™ – USA (EWB-USA).

Offering a unique opportunity for professional engineers – active or retired – and engineering students, EWB-USA is a non-profit organization established in 2000 to help developing areas worldwide with their engineering needs.

EWB-USA projects may involve the design and construction of water, waste-water, sanitation, energy, and shelter systems. Projects are initiated by, and completed with, contributions and support from the local host community, which is trained to operate the systems without external assistance. In this way, projects are appropriate and self-sustaining. The projects are conducted by groups of students under the supervision of faculty and professional engineers from partnering engineering firms and professional societies.

ASME members should contact Diedra Hackley (hackleyd@asme.org) if they are interested in any of the above projects, or would like to propose a project of their own.

MEMS design services

- Building concept MEMS models using CAD systems
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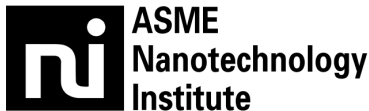
Contact:



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<http://www.engobjects.net>
info@engobjects.com

Register now for the Miniaturization in Biomedicine Impact Forum!



If you are an engineer, a student, or a professional interested in the development of Nanotechnology in biotech and biomedical device companies, then this forum is for you!

The Miniaturization in Biomedicine Impact Forum will take place from April 7-8, 2005 in Irvine, Calif. at the Hilton Irvine/Orange County Airport

Learn how biotechnology and biomedical device sectors can benefit from Nanotechnology. Explore solutions that can help transform healthcare.

For more information, visit

<http://www.asmeconferences.org/nanobio05/index.cfm>

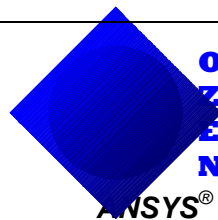


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The following has been quoted from the Constitution of the American Society of Mechanical Engineers, revised to November 16, 2001.

Article C5.1.2: 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.



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