BIOENGINEERING DIVISON

ASME
SETTING THE STANDARD

NEWS

ASME INTERNATIONAL BIOENGINEERING DIVISION

SPRING 2006

SPRING NEWS 2006

EDITOR'S MESSAGE

The Bioengineering Division is gearing up for another exciting summer! A list of the activities can be found at our website (http://divisions.asme.org/bed/) and include the 2006 Summer Bioengineering Conference in Amelia Island, Florida. The conference looks to be just as exciting as last year's extravaganza in Vail, Colorado.

In addition, the Bioengineering Division was quite excited to have Savio L-Y. Woo, Ph.D. receive the 2005 R.H. Thurston Award. He is one of only four members from our division to receive this prestigious honor, which was presented at the 2005 International Mechanical Engineering Conference and Exposition.

I would like to thank everyone who has contributed to the news bulletin and welcome input for future issues.

Please send your comments to:

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Editor, BED Newsletter
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405 Center for Bioengineering
300 Technology Drive
Pittsburgh, PA 15219
or email: genesis1@pitt.edu

UPCOMING EVENTS

2006 Summer Bioengineering Conference
Amelia Island, FL
June 21-25, 2006

See Page 6 for Additional Details

2007 Summer Bioengineering Conference
Keystone Resort, CO
June 20-24, 2007

Abstract Deadline: Jan 31, 2007
Student Competition Deadline: Jan 31, 2007
See Page 7 for Additional Details

SAVE THE DATE

2008

Summer Bioengineering Conference

At a Beach Resort

June 25-29, 2008

2005 ROBERT HENRY THURSTON AWARD

Savio L-Y. Woo

Lecture Title: "Going from In-vitro to In-vivo—The New Challenge for Bioengineers to Keep Your Knee and Shoulder Healthy"

Presented at the 2005 International Mechanical Engineering Congress & Exposition.

Savio L-Y. Woo, Ph.D., D.Sc.: W.K. Whiteford Professor of Bioengineering and director of the Musculoskeletal Research Center, University of Pittsburgh, for leadership in the field of biomechanics, particularly research and development of state-of-the-art technologies for the treatment of ligament and tendon injuries.

The Robert Henry Thurston Lecture Award was established in 1925 in honor of ASME's first president. It provides an opportunity for a leader in pure and/or applied science or engineering to present to the Society a lecture that encourages stimulating thinking on a subject of broad interest to engineers. The Robert Henry Thurston Lecture Award was elevated to a Society award in 2000.

Dr. Savio L-Y. Woo is the Founder and Director of the Musculoskeletal Research Center (MSRC), a diverse multidisciplinary research and educational center in the Department of Bioengineering at the University of Pittsburgh. Over 450 orthopaedic surgeons, biologists, bioengineering students and staff have studied and worked in the MSRC. He joined the faculty at the University of Pittsburgh in 1990 following 20 years of service at the University of California, San Diego as a Professor of Surgery and Bioengineering.

Dr. Woo's research interests include biomechanics; experimental, theoretical and numerical analyses of the nonlinear material properties of biological tissues and developing new viscoelastic theories for soft tissue. He has studied the homeostatic responses of ligaments and tendons secondary to decreased as well as increased levels of applied stress and motion as well as the effects of stress and motion on healing and repair of tendons, ligaments, and meniscus. His work has led to the concept of "controlled motion is good."

For the last 25 years, Dr. Woo's research has focused on knee ligament healing and repair, particularly the medial collateral ligament (MCL) and anterior cruciate ligament (ACL). More recently, his work focuses on functional tissue engineering of ligament healing and regeneration by examining the processes from molecular to cellular to tissue levels, as well as the use of robotic technology to examine the function of ACL replacement grafts.

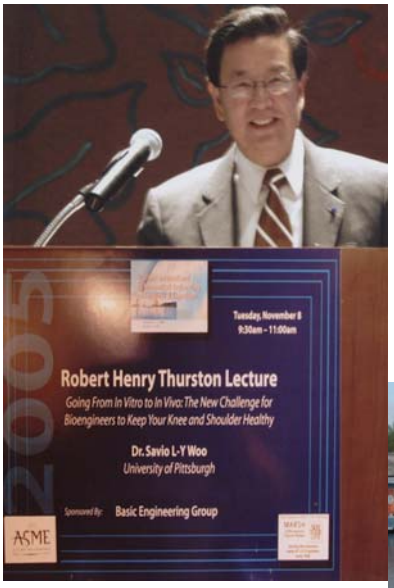
Dr. Woo has published 290 refereed journal papers and 125 book chapters, has edited 10 books and has given numerous invited and keynote lectures. He serves on the editorial board of numerous journals and is on a number of advisory committees.

An ASME Fellow, Dr. Woo has served the Bioengineering Division in various capacities including chair of the National and International Affairs Committee (1989-1993) and the Honors Committee (1978-1983). He also served on the Executive Committee of the Bioengineering Division (1984-1989) and was co-chair of the Joint Biomechanics Committee (1979-1983). He was honored with ASME's H.R. Lissner Medal in 1991.

2005 ROBERT HENRY THURSTON AWARD (CONT)

Dr. Woo was elected to the institute of Medicine, the National Academy of Engineering and Academia Sinica, and is a member of 17 professional societies. Among his extensive list of honors, Dr. Woo most recently received the Biomedical Engineering Society's Distinguished Lecturer Award (2005) and was elected to the University of Pittsburgh's School of Engineering Hall of Fame (2003). In 1998, he was the winner of the International Olympic Committee's Olympic Prize for Sports Medicine and the first Olympic Gold Medal in Nagano, Japan.

Dr. Woo received his bachelor's degree in mechanical engineering at Chico State College, California in 1965. He earned his master's degree in mechanical engineering and his Ph.D. in bioengineering at the University of Washington, Seattle, in 1966 and 1971, respectively. He holds an honorary D.Sc. (1998) from the California State University at Chico.



Dr. and Mrs. Savio L-Y. Woo

KEEPING IN TOUCH: ASME ENGINEERING COMMUNITIES OF PRACTICE

The Bioengineering Division of ASME is driven almost entirely by the efforts of its members, who volunteer their time and energy toward advancing our community. Our members participate in various Division activities, such as conference organization, participation in technical committees, and award committees. One of the challenges of an organization run mostly by volunteers is the maintenance of records over the long term. For example, minutes of meetings, membership lists, and standard operating procedures for various committees may reside only on the local hard drives or e-mail boxes of select members. This makes it difficult to maintain continuity in the division's activities, and strains the collective memory of division members.

To help overcome this challenge, the BED Executive Committee encourages all BED members to join the ASME Engineering Communities of Practice (COP). As stated on its website (http://cop.asme.org/COP/Public/Home):

"ASME's Communities of Practice is an online interaction tool designed with mechanical engineer's needs in mind: links to helpful resources, industry news and, more importantly, solutions and ideas from peers. It's much more than discussion boards, because there are many tools integrated into this site to help Communities of Practice members connect with each other. Access to the Communities of Practice site is open to both members and non-members of ASME."

The BED has created a community of practice appropriately titled 'ASME Bioengineering Division'. Posted on this COP are the standard operating procedures for the various committees of BED. Anyone is welcome to join this COP to participate in online interactions.

The Executive Committee of the BED encourages all BED committee chairs to create a COP for their committee and enroll its members into it. For example, the Executive Committee has formed its own COP to share minutes of meetings and other pertinent information. These COPs can serve as repositories of information relevant to BED. They have the benefit of residing on servers maintained by ASME, thereby ensuring continuity over rotating committee memberships.

To create a personal account, go to https://cop.asme.org/COP/Public/Login/index.fusion, click on the link 'First-time ASME member login' and follow the instructions. You will need your ASME membership number to proceed. Once you have created your account, you can join the ASME Bioengineering Division COP.

To create a new COP for your committee, please contact me (ateshian@columbia.edu) and I will assist you with this process.

Gerard Ateshian

THE NEW ASME AND WHAT IT MEANS TO THE BIOENGINEERING DIVISION

In celebrating ASME's 125th anniversary in 2005, ASME implemented a new organizational structure, a new budget model, and new strategic objectives in an effort to revamp itself into a knowledge-based, market-focused organization. These changes were the focus of the 2006 Leadership Training Conference (LTC) where leaders from sections, technical divisions, institutes, centers, the staff, and senior management were brought together to learn how to better serve our members. As the Bioengineering Division representative at the Conference, I would like to share a few of the things that I have learned. Please refer to the list of websites at the end of the article for more detailed information.

ASME's Mission and Core Values have remained the same [1], however, the Society has been reorganized and includes five sectors: Knowledge and Community [2], Codes and Standards [3], Centers [4], Institutes [5], and Strategic Management [6]. The Knowledge and Community sector includes most of the programs and activities in the former Council on Engineering, and the Centers sector encompasses education, volunteer training and public awareness. Several new and expanded programs have evolved from this reorganization and include: 1) the Innovative Technologies Institute; 2) the Communities of Practice [7] - an online communications tool enabling common groups to exchange information and ideas; and 3) the ASME Connections website for commentary and studies on the new direction of the Society. The Communities of Practice offers a unique tool for BED to better communicate within the Division.

Also, to give you an idea of the directions that ASME is taking, five market directions have been identified: young engineering, servicing the needs of the 20-39 year olds; industry, six industry potential growth sectors have been identified: pressure technology, energy, bio-pharmaceutical, waste management, homeland security, and computer hardware and software; government; globalization; and new revenue generators.

Aside from these organizational changes, significant fiscal changes have been implemented which affect the organization across the board. The resulting new ASME Balanced Scorecard which includes a Full Cost Accounting Initiative, and three strategic objectives were identified: 1) Grow revenue through new projects and global growth; 2) Sunset low value programs, and 3) Run a cost effective operation. As a result of the switch to Full Cost Accounting, the cost of using (or not using) ASME services should (hopefully) be more transparent for the Division. Although the Divisions and Institutes will be affected (and perhaps benefit) by these changes, the most profound changes have occurred at the Section level. Their budgets have been cut dramatically across the board. The Sections serve a tremendous number of members – particularly young engineers, from a variety of disciplines at the local level. As a result there was an emphasis during the LTC to determine ways that the Divisions such as BED, Institutes, and Sections can better work together. This was the most significant message that I took away from the conference. Ideas for working together include things from volunteering to speak at local Section meetings to working together in planning conferences – particularly those at the regional level.

This is just a snap shot of some of the changes going on at ASME. I encourage you to visit some of the websites below to learn more. I also encourage you to think about ways that the BED and your local Sections can better work together and to share these ideas with other BED members.

Elaine Scott

Important Websites

1) http://www.asme.org/about/Vision_Mission_Core_Values.cfm
2) http://www.asme.org/Governance/KnowledgeCommunity/
3) http://ctools.asme.org/csconnect/CommitteePages.cfm?Committee=A01000000
4) http://www.asme.org/Governance/Centers/
5) http://www.asme.org/Governance/Institutes/
6) http://www.asme.org/Governance/StrategicManagement/
7) http://cop.asme.org/COP

2006 SUMMER BIOENGINEERING CONFERENCE

Amelia Island Plantation,
Amelia Island, FL
June 21 - June 25, 2006

Start your summer on the beach and enjoy the stunning scenery and amenities at Amelia Island Plantation a premier AAA Four-Diamond resort, and experience a great Summer Bioengineering Conference! The meeting is endorsed by the Biomedical Engineering Society (BMES), United States National Committee on Biomechanics (USNCB) and IEEE/EMBS. An outstanding scientific program has been planned with Plenary Lectures, Symposia, Workshops, and Student Competitions with both oral and poster sessions in spectacular surroundings.

This site is well known for its charming village and quaint shops, and a variety of activities including golf, tennis, nature programs, recreation programs, fishing, spa and salon, children's program, all set against the spectacular blue water of the Atlantic on the east and the green marshland and Intracoastal Waterway on the west.

As in the past, the meeting will feature a student-friendly casual atmosphere with outstanding plenary speakers, original science, educational opportunities, and free time to enjoy the venue.

Conference Chair:	**Program Chair**:
Vijay Goel, Ph.D.	Sohi Rastegar, Ph.D.
University of Toledo	National Science Foundation

Preliminary Announcement

2007 SUMMER BIOENGINEERING CONFERENCE

Keystone Conference Center, Keystone, Colorado

June 20-24, 2007

The Bioengineering Division of the American Society of Mechanical Engineers cordially invites you to attend the 2007 Summer Bioengineering Conference. An outstanding scientific program has been planned, including Plenary Lectures, Symposia, Workshops, and Student Competitions. Both oral and poster sessions will be presented in spectacular surroundings. Keystone is one of the top mountain resorts in the country, with a state of the art conference center (http://keystone.snow.com/).

Further information about the meeting is available at: **http://divisions.asme.org/bed/events/summer07.html**

Student Paper Competition: Abstracts are solicited for a student paper competition at three separate levels: BS, MS and PhD. Students selected for the competition will be able to present their work in sessions where only student presentations are given – both in dedicated student poster sessions and in highlighted PhD oral sessions. Cash awards will be made to the top papers at each level in multiple technical areas. Funds are being sought that would allow for reduced conference registration for Student Paper Competition participants. In addition, conference organizers are currently negotiating for reduced lodging costs for all students attending the conference. Further information and instructions for the submission process is available at:
http://divisions.asme.org/bed/events/stu_comp07.htm

Important dates:

January 31, 2007: Submission deadline for two-page abstracts
[Note that student papers are due the same date as regular papers.]
April 3, 2007: Notification of Authors

Conference Chair:	**Program Chair**:
James E. Moore Jr., Ph.D.	C. Ross Ethier, Ph.D.
Texas A&M University	University of Toronto

http://divisions.asme.org/bed/

BIOENGINEERING DIVISON

Spring 2006

News Bulletin

American Society of Mechanical Engineers

ASME BED ROSTER 2005-2006

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