

ASME INTERNATIONAL BIOENGINEERING DIVISION

SPRING 2010

MESSAGE FROM THE CHAIR



B. Barry Lieber

This year has been a yin yang one. The first half was very quiescent but the second half was truly an over compensation for the quite first six months. The ASME is undergoing many changes recently and some of

the initiatives taken by the ASME came to bare on the Bioengineering division in the last few months. Some of these changes will continue to impact the division beyond June 2010 when my role of Chair of the Bioengineering Division (BED) will end. I hope all these changes will make the division better, increase it viability and visibility and help in promoting the Bioengineering Division, improve our operations, and

enhance the service of our members. A summary of some of the changes and our achievements follows.

The Bioengineering Division has assumed administrative responsibility for the Frontiers in Biomedical Device Conference & Exposition. This conference is being held this year for the fifth time and has originated in Southern California due to joint effort between academia and Industry. The conference is had every year in southern California and has become a strong venue for the local medical device industry. The conference, while smaller in size from the Summer Bioengineering Conference (SBC), brings to BED the Medical device industrial component as a counterpart to the primarily academic

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EDITOR'S NOTE

Greetings from your friends in your favorite ASME division! The entire editorial staff looks forward to seeing you next month at the 2010 SBC. Don't forget to register by Saturday.

This newsletter contains updates from all of our administrative committees and open invitations to the meetings of our technical committees at this summer's SBC. Arrive early and join us!

Thanks to all who contributed to

this edition of the BED newsletter.

Please send comments and suggestions to:



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UPCOMING EVENT!

**2010 Summer Bioengineering
Conference**
Naples, Florida

2010 Summer Bioengineering Conference
June 16 - 19, 2010
Naples, Florida

Early registration deadline:
Saturday,
May 15!

MESSAGE FROM THE CHAIR (CONTINUED)

SBC. The executive committee of BED has elected one of its members, Jeff Bischoff, to serve on the organizing committee of the Frontiers conference.

The Summer Bioengineering Conference (SBC) continues to be our signature event with much effort devoted to its continued success. Elsewhere in this newsletter, the 2010 SBC in Naples is emphasized; it promises to follow in our strong tradition of exemplary research in gorgeous surroundings. I hope you will join us at this BED premier event. Our 2011 Summer Bioengineering Conference will be at the Nemacon Woodlands Resort in Pennsylvania, and while the altitude of the resort is below what we have been accustomed to in the past, we hope to take the conference to new heights. The plans for the 2012 SBC are well on the way and the venue for that conference is also a departure from our traditional Florida beach resorts.

The BED leadership has worked tirelessly to improve the operations of our SBC, some of which may only be evident “behind the scenes” but rest assured, they are undertaken with the goal of making specific operations more efficient and cost effective. As many of you have experienced,

ASME publications, under the direction of Philip DiVietro, is now handling the abstract submission webtool and publishing services for our conference CD and program book. Naturally, such a transition cannot go without some glitches but we expect the

transition to streamline our submission and publications process. We will evaluate this decision at the conclusion of SBC 2010 and make changes as appropriate. Transition to the electronic copyright form has been a long time in the making. You have experienced the new electronic copyright form during the submission process of your abstracts to the 2010 SBC. I hope that this change has substantially reduced, if not eliminated, the anguish in the old submission process. Your feedback on both the webtool and the electronic copyright form will help us and ASME to further improve the process.

Michael Sacks, the editor of our flagship journal, the Journal of Biomechanical Engineering, is pursuing many initiatives to expedite and improve the submission and production process. Philip DiVietro from the ASME publication office will be at our 2010 SBC to present the recent improvements that have been pursued by Michael this year. These improvements will supplement previous accomplishments achieved and already implemented under the leadership of Michael such as Published Ahead of Print. Our Journal of Medical Devices which is co-administered with the Design Division is in its 4th volume and is in the final stages of inclusion in PubMed. The journal continues to grow in reputation in the capable hands of co-editors Arthur Erdman and Gerald Miller.

Thanks to our past chair Jennifer Wayne (2008-2009) who has put together a poster of the past

- The 2011 SBC will be held at the Nemacon Woodlands Resort near Pittsburgh, PA.
- Dates will be announced at the 2010 SBC in Naples, FL.
- Planning of the program for the 2011 SBC will begin at the technical committee meetings at the 2010 SBC on Wednesday, June 16. All are invited.

chairs of the bioengineering division and it is now also available through our website at: <http://files.asme.org/Divisions/BED/22606.pdf>. Please continue to visit our website (<http://divisions.asme.org/bed>) regularly for additional timely information. The website for the 2011 SBC will be accessible very shortly as well.

Finally, I wish to express my deepest gratitude to all the members of BED and particularly all those who are attending the SBC regularly. Our success is due, no in small part to all of these members of BED who volunteer countless hours serving as chairs and members on the various committees, from the executive committee, through the SBC organizing committee to the various technical and administrative committees and many of the participants who served as reviewers of the abstract. Special thank to the Editors and Associate Editors of our journals, to the reviewers of Journal submissions, to BED representatives on ASME committees and external agencies. A tremendous thank you to all who have supported my term as chair and for the direction you provide the Division.

*B. Barry Lieber, Chair
ASME Bioengineering Division
2009 - 2010*

2010 SUMMER BIOENGINEERING CONFERENCE, JUNE 16-19, 2010

On behalf of the 2010 Conference Committee, we invite you to join us in sunny Naples Florida for the 12th ASME Summer Bioengineering Conference (SBC). This is the 6th year of annual programming of this conference and we expect another successful and stimulating conference experience. The SBC is one of the premiere Bioengineering conference events of the year and is a great opportunity for our community to come together to discuss outstanding research, see old friends and meet and network with new friends and colleagues. This year's 2010 conference features over 500 poster and podium presentations. Workshop topics include FEBio: Finite Elements for Biomechanics, a Panel on Careers in Industry, Challenges in Pediatric Cardiovascular Research, the Grand Challenge Competition to Predict In Vivo Knee Loads, and Lego Robotics and K-12 Outreach.



Rita Patterson
2010 SBC
Conference Chair



Jeff Holmes
2010 SBC
Program Chair

Plenary lecture by Chris Rogers, PhD, director of the Center for Engineering Education Outreach at Tufts University: Promoting Engineering with Lego Robotics. As society becomes more dependent on science and technology, we need to ensure that all students graduate from high school with a fundamental understanding of math, science, and engineering. Without this knowledge, they will not be able to make informed decisions on issues like the energy crisis, climate change, drinkable water, and so on. At Tufts, we have been working with children, teachers, and corporations for over 15 years to put engineering in the classroom. In this talk, Chris will show what teachers and children are doing around the world with LEGO robotics and stop action movies to promote engineering. He will show how this is helping engage more students, motivating science and math learning, and promoting creativity, and talk a little about how everyone can help get engineering into their local classrooms.



Chris Rogers

2010 ASME SBC:

Early registration ends this Saturday, May 15.

Be sure to arrive early so you can join us at the technical committee meetings starting the morning of Wednesday, June 16.

If you see Barry Lieber, be sure to remind him that New Yorkers need to wear sunscreen in Florida.

BEDrock plays on Friday night, June 19.

OTHER HAPPENINGS IN NAPLES

The BED's unofficial band is pleased to announce the greatest biomedical musical event of the year:

Friday, June 18, 2010, 7-10 pm
Vista Room, Naples Grande Resort

475 Seagate Drive, Naples, Florida

All are invited to this informal gathering.

This event is endorsed by discerning musical audiences worldwide, but by neither the American Society of Mechanical Engineers nor the ASME Bioengineering Division.

BEDROCK!



René! Jeff! Joel! Alan! Clark! Justin! Luke! Danny!

2010 SBC FINAL PROGRAM

SBC 2010 PROGRAM						
	Orchid 1	Orchid 2	Orchid 3	Royal Palm 4-5	Acacia 1-3	Acacia 4-7
Wednesday June 16, 2010						
7:00 am-3:30 pm	Committee Meetings (various rooms)					
3:45-5:15 pm	Cardiovascular Design & Devices I	Cardiac Mechanics	Tissue Engineering	Accident and Injury	Cell and Tissue Transport I	Biomechanics of Growth and Remodeling I
5:15-5:30 pm	Break (no refreshments)					
5:30-7:00 pm	Cardiovascular Design & Devices II	Vascular Mechanics	Musculoskeletal Tissue Engineering	Injury Biomechanics	Cell and Tissue Transport II	Biomechanics of Growth and Remodeling II
7:00-9:00 pm	Opening reception (Mangrove / Palm Terrace Pools)					
9:00 -11:00 pm	Business Meeting/ Open Executive Meeting					
Thursday June 17, 2010						
6:30-7:30 am	Breakfast					
7:30-8:30 am	PLENARY - Chris Rogers (Royal Palm 4-5)					
8:30-8:45 am	Break					
8:45-10:15 am	Fluids: Imaging	Heart Valves I	Mechanotransduction I	Joints	Biotransport in Device and Design	Mechanical Properties of MSK Soft Tissue
10:15-10:30 am	Break					
1:30 am-12:00 pm	Fluids: Image-Based Modeling	Heart Valves II	Mechanotransduction II	Spine I	Bionanotechnology in Diagnosis and Treatment	Computational Modeling of MSK Soft Tissue
12:00-2:00 pm	Poster Session I, with Lunch: includes BS & MS Student Paper Competitions (Royal Palm 1-3; 6-8)					
2:00-3:30 pm						Special Workshop: ABAQUS
Friday June 18, 2010						
6:30-7:30 am	Breakfast					
7:30-9:00 am	Workshop: Lego Robotics and K12 Outreach		Workshop: Knee Challenge	Workshop: Mow and Fung Winners		
9:00-9:15 am	Break					
9:15-10:45 am	PhD Student Paper Competition: Biofluids, Biotransport, Other		PhD Student Paper Competition: Tissue, Cellular Biomechanics & Engineering	PhD Student Paper Competition: Solids, Design, Rehabilitation		
10:45 - 11:00 am	Break					
30 am - 12:30 pm	Fluids: Modeling	Atherosclerosis	Spatial Variation in Tissue Properties	Spine II	Simulation in Human Motion	Biologic Effects on MSK Soft Tissue
12:30-2:30 pm	Poster Session II, with Lunch: includes PhD Student Paper Competition (Royal Palm 1-3; 6-8)					
Saturday June 19, 2010						
12:00 am-12:30 pm	Workshop: Challenges in Pediatric CV Research		Workshop: FEBio	Workshop: Panel on Careers in Industry		
12:30 - 1:30 pm	Lunch					
1:30 - 2:30 pm	Plenary: Lissner lecture (Royal Palm 4-5)					
2:30-2:45 pm	Break					
2:45-4:15 pm	Fluids: Pediatric Challenges	Cerebral Aneurysms	Effects of Mechanical Confinement on Cells & Tissues	Structural Mechanics of Bone	Design and Devices	Solid Mechanics
4:15-4:30 pm	Break					
4:30-6:00 pm	Fluids: Respiratory	Abdominal Aortic Aneurysms	Multiscale Modeling	Mechanics of Bone Tissue	Orthopedic Design and Devices	Ocular & Neural Mechanics
6:00-6:30 pm	Break (no refreshments)					
6:30-9:00 pm	Reception and Banquet (Royal Palm Foyer & Ballroom)					
Sunday June 20, 2010 - NO PROGRAMMING						

BIOENGINEERING DIVISION TECHNICAL COMMITTEES

BIOTRANSPORT

The Biotransport Committee will meet on Wednesday, June 16, from 2:30 pm to 3:20 pm during the SBC. The major topics of the committee meeting include informing all about the Biotransport sessions at the SBC, SHTC, and IMECE; planning a one-day workshop for the biotransport community in 2012; and discussing specific strategies for helping junior researchers with career advancements. Everyone, including students, is welcome. If you would like to be included on the biotransport email list, please contact Liang Zhu at zliang@umbc.edu .



Liang Zhu
Committee Chair,
2007–2010

DESIGN & REHABILITATION

The Design and Rehabilitation Committee will have its annual meeting at 1:30 pm, Wednesday, June 16, at the SBC. This committee covers a wide variety of topics including human movement measurement and modeling, rehabilitation, medical device design (orthopedic, cardiovascular, BioMEMS), engineering for surgery, and robotics. At the committee meeting, we will discuss our 2010 SBC sessions, goals for the 2011 SBC, workshops and special sessions for future meetings, and other strategic initiatives. Everyone with interest in design and/or rehabilitation is encouraged to attend, including students, post-docs, faculty members, and industry members. Those wishing to attend the fluids committee meeting (concurrent) but also interested in design are encouraged to contact Sara Wilson (sewilson@ku.edu) for details of the meeting. Please direct questions to the committee chair, Sara Wilson (sewilson@ku.edu) or co-chair, Lorin Maletsky (maletsky@ku.edu).



Sara Wilson
Committee Chair,
2007–2010

FLUID MECHANICS

The annual Fluids Committee meeting will be at 1:30 pm, Wednesday, June 16, room TBA. Our main agenda item will be to discuss plans for sessions and workshops at next year's SBC. I'm also hoping to clarify our liaisons with other BED committees, and stimulate some consideration of biofluids nominees for ASME awards. This is an open meeting, and we're always looking for fresh meat, er, the next generation of BEDers, so please feel free to join us. BED fluids members with an interest in medical device design may also be interested in attending the Industry Advisory Committee at 12:30pm, where Ryan Crane will briefly review ASME's efforts to establish a new standard on verification and validation in computational methods for medical devices.



David Steinmann
Committee Chair,
2009–2012

SOLID MECHANICS

The annual meeting of the Solid Mechanics committee will be held at the SBC on Wednesday, June 16, at 2:30 pm. We are not only the largest but also the friendliest committee in the BED, so please join us at this gathering for an overview of our 2010 SBC offerings and a beginning discussion of our programming for the 2011 SBC.



Dawn Elliott
Committee Chair,
2007–2010

TISSUE AND CELLULAR ENGR.

The Cell and Tissue Engineering Committee will hold their annual committee meeting at the SBC on Wednesday, June 16, at 12:30 pm. We have outstanding, well-focused technical podium and poster sessions organized for this year's SBC. We will discuss these and begin planning for next year's meeting. All are invited to attend and to join in the planning. Have ideas but can't attend? Email Dan Nicolella, chair (daniel.nicolella@swri.org), or Guy Genin, co-chair (genin@wustl.edu).



Daniel P. Nicolella
Committee Chair,
2009–2012

BIOENGINEERING DIVISION ADMINISTRATIVE COMMITTEES

The BED has four administrative committees: Education, Honors & Awards, Membership, and New Directions. This newsletter features reports from three of the four committees. All four will have open meetings at the 2010 SBC.

Additionally, the BED selects representatives to other bioengineering organizations and to committees within ASME. Within ASME, the BED has representatives to the Thurston Award Committee, the ASME annual meeting (the "IMECE"), and the Basic En-

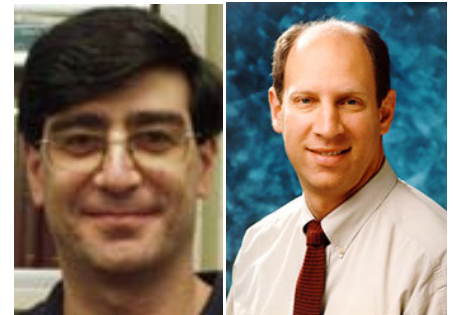
gineering Group Operating Board. Beyond ASME, the BED has representatives to the American Institute for Medical and Biological Engineering and the U.S. National Committee on Biomechanics .

AMERICAN INSTITUTE FOR MEDICAL & BIOLOGICAL ENGINEERING

The BED is one of the eighteen scientific organizations that comprises the American Institute for Medical and Biological Engineering's "Council of Societies." AIMBE aims to promote awareness of the field of biomedical engineering, public policy that furthers advancements in biomedical engineering, and cooperation within the field. The Council of Societies aims to coordinate positions on issues of importance to the entire community through establishing a dialogue at the AIMBE "Annual Event," held each winter in Washington, DC. The 2010 meeting last February, the AIMBE's 19th Annual Event, was a focused symposium entitled "Balancing Risk, Benefit, and Ethics through Medical and Biological Engineering: Implications for Public Policy." The interactive program at this year's annual event was particularly important: in the College of Fellows

Meeting several new and innovative ways were discussed to improve medical and biological engineering literacy in the United States. As our president, Eugene Eckstein, put it, this work of AIMBE "has the potential to transform the way the world at large perceives medical and biological engineering."

AIMBE is proud to report the launch or impending launch of several new programs this year, including a Fellow-in-Residence program at AIMBE's National Headquarters, new programming for AIMBE's Women in Medical and Biological Engineering Committee and Committee on Under-Represented Minorities, and a broad new database of medical and biological engineering innovations, organized by state and by company or university, which constitutes a new and innovative tool for demonstrating the value



Gerard Ateshian **Lou Soslowsky**

of medical and biological engineering to Congress.

Details of the 2011 AIMBE Annual Event will be posted soon on the AIMBE website (www.aimbe.org). We look forward to seeing you there!

*Gerard Ateshian
BED Representative to the AIMBE
2008 - 2011*

*Lou Soslowsky
BED Representative to the AIMBE
2009 - 2012*

ASME BASIC ENGINEERING GROUP OPERATING BOARD

The Bioengineering Division participates actively in the activities of the ASME's Basic Engineering Group Operating Board (BEGOB), whose primary mission is to provide representation for a variety of technical divisions in the ASME bureaucracy.

Through its participation in BEGOB, the BED has assisted with the organization of two exciting conferences. The First Global Congress on NanoEngineering for Medicine and Biology (NEMB2010) was held in February in Houston, Texas, with many of the 300 or so participants coming from the BED membership. Based on the great success of this inaugural event, a second event is being planned. Contact one of your BEGOB representatives to learn how you can participate.

The BED has recently decided to incorporate the organization of

the Frontiers in Medical Devices into its activities. This exciting conference has largely been organized by industry participants in Southern California for several years now. BED will provide assistance as necessary, but plans to leave the principal organizational responsibilities in the capable hands of those who have made the conference such a success. The conference will be held September 20-21, with abstracts due on July 19. <http://www.asmeconferences.org/BIOMED2010/>

Finally, we are happy to report that BED will be participating in the sponsorship of the brand new ASME Journal of Nanotechnology in Engineering & Medicine. Vijay Varadan of the University of Arkansas will serve as Technical Editor. [http://journaltool.asme.org/Content/JournalDescriptions.cfm?](http://journaltool.asme.org/Content/JournalDescriptions.cfm?journalId=25&Journal=NANO)



Ozan Akkus

James Moore, Jr.

journalId=25&Journal=NANO

Your BED representatives to BEGOB are Ozan Akkus (Purdue University) and Jimmy Moore (Texas A&M University). As of July 1, 2010, Jennifer Wayne (Virginia Commonwealth University) will take over for Moore.

*Ozan Akkus and James E. Moore
BED Representatives
to the ASME BEGOB
2008 - 2011*

ASME IMECE

The ASME BED is amongst the most vibrant of the ASME divisions, and one of only a handful to host its own annual conference. The 12th ASME SBC will be held in Naples, Florida.

The BED also has a small but significant presence at the ASME annual "International Mechanical Engineering Conference and Exhibition" (IMECE) each fall, and 2009 was no exception. Drs. Al-Jumaily and Wilson organized another "Biomedical and Biotechnology Engineering Track." This track, which focuses on the implementation of engineering principles in the conception, design,

development, analysis and operation of biomedical and biotechnological systems and applications, will be repeated once again at the 2010 IMECE in Vancouver. Abstract submission is closed, but it is not too late to join us for the talks. As in previous years, papers will be presented in eleven symposia:

1. A Biomedical and Biotechnology plenary presentation
2. BioMEMS, Micro and Nano Systems in Medicine and Biology
3. Vibration and Acoustics in Biomedical Applications
4. Application of Composites in

5. Biomaterials and Bioengineering
5. Viscoelasticity of Biological Tissues
6. Dynamics and Control of Biomechanical Systems
7. Bioengineering and Medical Applications
8. Frontiers in Cardiovascular Engineering
9. Biomedical Heat Transfer and Biomedical Fluid Mechanics
10. Computational Modeling and Device Design
11. A poster symposium entitled "New Trends in Biomedical Applications"

HONORS & AWARDS COMMITTEE

The BED's Honors and Awards Committee selects recipients for three special recognition awards from the pool of active members of the BED.

The Y.C. Fung Young Investigator Award recognizes outstanding investigators, early in their careers, for significant potential to make substantial contributions to the field of bioengineering and a demonstrated commitment to bioengineering. Candidates must have earned a relevant Ph.D. or equivalent degree within seven years of their nomination and must be under 36 years of age on June 1 of the year of nomination.

The Van C. Mow Medal is bestowed upon an individual who has made significant contributions to the field of bioengineering through research, education,

professional development, leadership in the development of the profession, mentoring of young bioengineers, and service to the bioengineering community. The individual must have earned a Ph.D. or equivalent degree between ten and twenty years prior to June 1 of the year of the award.

The H. R. Lissner Medal was created in 1977 by the Bioengineering Division of ASME to recognize significant contributions to bioengineering. These may be (1) research contributions; (2) new methods for measurement; (3) new equipment and instrumentation; (4) educational contributions; and/or (5) service to the BED and/or the bioengineering community.

Please join us this summer as we recognize the recipients of the

2010 awards at the SBC banquet.

Nominations are now open for the 2011 awards! To learn more about all of the BED awards and to nominate yourself or a colleague, please visit:

http://divisions.asme.org/BED/Honors_Awards.cfm

Nominations for the 2011 awards are due September 1, 2010.



Ajit Yoganathan

*Ajit Yoganathan
Chair, Honors & Awards Committee
2008 - 2011*

INDUSTRY ADVISORY COMMITTEE

The ASME BED Industry Advisory Committee is charged with developing new aspects of the Summer Bioengineering Conference and its programming to better serve industry and those interested in interacting with industry. We look to our industry partners for direction in achieving the practical side of BED's mission of "application of mechanical engineering knowledge, skills and principles to the design, development, analysis and operation of biomechanical sys-

tems." We also look to our colleagues in academia who have experience or a desire to interact with industry to participate in this committee and its charge. All are invited to join us for the committee's meeting on Wednesday, June 16, from 12:30 to 1:20 pm! The committee meeting will focus on reviewing industry-related programming for the 2010 SBC, including a professional networking event; programming opportunities for 2011; and a discussion of the

ASME effort to develop V&V (verification and validation) standards for computational mechanics as related to medical devices.



Jeff Bischoff

*Jeff Bischoff
Chair, Industry Advisory
and External Affairs Committees
2009 - 2012*

MEMBERSHIP DEVELOPMENT COMMITTEE



Clark T. Hung

The BED membership development committee has focused on facilitating the nomination of current active BED members of 10 years or more to rank of ASME fellow. The process involves identifying eligible individuals and respective nominators (generally an ASME fellow in

BED).

We are pleased to report that over a dozen BED members have been promoted to the rank of ASME fellow over the past year: While a sneak preview of the citations for these fellows is available on the ASME website, the official announcements of promotion to fellow occur at the SBC banquet, and the citations of new fellows are published in this column in the fall edition of the SBC

newsletter.

The membership development committee will hold its annual meeting at the 2010 SBC on Wednesday June 16, 2009 from 10:30 to 11:20 am at the conference site. All are invited!

*Clark T. Hung
Chair, BED Membership Committee
2008 - 2011*

NEW DIRECTIONS COMMITTEE



Gerard Ateshian

The New Directions Committee meets each year at the SBC to discuss areas of focus for the BED for the upcoming year, and reports on these ideas in the fall newsletter. The areas of focus for the past year have addressed procedural aspects as well as attention to emerging areas relevant to the BED.

The Committee acknowledged ASME's efforts with improving the efficiency of paper submissions to the Journal of Biomechanical Engineering, but emphasized the need for ASME to meet production timing of other publishers. The Committee also renewed its recommendation to the Executive Committee for endowing the Skalak Best Paper Award, and establishing a new legacy paper award acknowledging JBME papers that have demonstrated a lasting impact on the field. With regard to the organi-

zation of the SBC, it was recommended that the Executive Committee should provide stronger support and greater guidance for organizing joint sessions that span the traditional areas of the standing Technical Committees. It was also recommended that BED should identify emerging areas that can find a home at the SBC (such as the rapid emergence of interdisciplinary efforts using imaging to probe tissue mechanics non-invasively) and encourage attendance at the meeting by promoting sessions and workshops in those fields.

Other suggestions include making an effort to increase the profile of our membership by highlighting achievements of the 'giants' of our field, perhaps by creating accurate profiles of their achievements on Wikipedia and other venues. For example, Wikipedia entries were recently created for Dr. Richard Skalak (http://en.wikipedia.org/wiki/Richard_Skalak) and Dr. Van C. Mow (http://en.wikipedia.org/wiki/Van_C._Mow), complementing the existing page for Dr. Y.C. Fung (http://en.wikipedia.org/wiki/Y.C._Fung). These pages refer to the participation of these bioengineers in ASME activities and their recognition within our society. Other potential opportunities include publishing perspective and survey articles in JBME to provide a forum for the bioengineering community to promote new directions and review past achievements. Members of SBC should also be encouraged to participate in the review activities of NIH study sections and other similar panels, and contribute to the formulation of program announcements and new directions.

This year's meeting will be held at the 2010 SBC on Wednesday, June 16, from 10:30-11:20 am in a room that will be announced in the SBC program. All are welcome.

*Gerard Ateshian
Chair, New Directions Committee
2009 - 2012*

US NATIONAL COMMITTEE ON BIOMECHANICS



David Vorp

The US National Committee on Biomechanics (USNCB) is a trans-society committee that focuses on the needs and issues facing the biomechanics community. It is comprised of representatives from multiple professional societies that have a significant portion of their membership with biomechanics as their discipline.

The USNCB recently released a new update, authored by David Butler, Geert Schmid Shonbein, Jay Humphrey, and Roger Kamm, which I repeat here in its entirety: "Since its inception in 1982, the US National Committee on Biomechanics (USNCB) has been encouraging research in all branches of biomechanics

and speaking on behalf of the U.S. biomechanics research community. The USNCB provides an identifiable organization for numerous federal agencies; advises, coordinates, and facilitates international meetings; and promotes cooperation among key member societies in the area of biomechanics. In 2007, the USNCB conducted a Biomechanics Summit to develop a 10-year plan for biomechanics research over the hierarchy of structural levels. This summit culminated in four position papers from the organ to molecular levels. Earlier this year, officers from the Executive Committee held a subcommittee meeting in Chicago to chart its course and to re-engage Member Societies including ASME. At the next USNCB Meeting during the

ASME SBC Meeting, the entire Executive Committee and Member Representatives will consider revising its bylaws, expanding its executive committee, and discussing numerous topics including an additional summary paper, refinement of our definition and mission statement, the 2014 World Congress on Biomechanics, re-engaging society representatives, an improved website, and methods to promote new areas within biomechanics including Summit and Frontiers meetings related to development, aging, neuroscience, disease, drug discovery and device development, and clinical trials. "

*David Vorp
BED Representative to the USNCB
2007 – 2010*

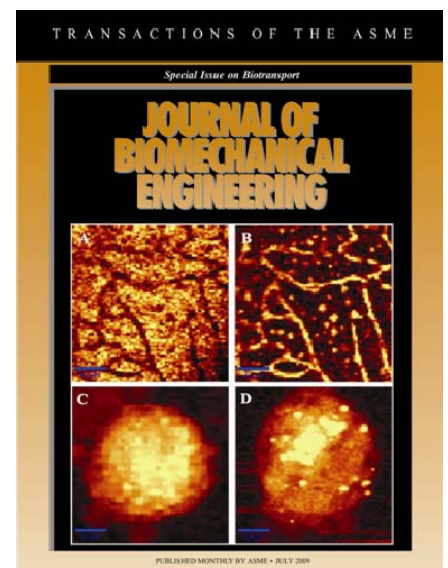
ASME JOURNAL OF BIOMECHANICAL ENGINEERING



Michael S. Sacks

The Associate Editors and Technical Editor Michael S. Sacks of our ASME Journal of Biomechanical Engineering heartily congratulates Bumsoo Han, Jeffrey D. Miller, and Jun K. Jung on the selection of their article as recipient of the 2010 Skalak Best Paper award. Their article, "Freezing-Induced Fluid-Matrix Interaction in Poroelastic Material," was cho-

sen by the editors as the best paper published in JBME in 2009 out of the five papers nominated. A particular aspect of this paper was the recognition that "The most impressive contribution of this paper is the rigorous experimental and theoretical demonstration of the importance of the extracellular matrix (ECM) microstructure on cryopreservation outcome. This was demonstrated using fundamentals of mechanics, heat transfer and mass transfer to promote the understanding of tissue-level bio-



JBME: SKALAK AWARD (CONTINUED)

physical phenomena during freezing. It is a remarkable study and one that has the potential to have a major impact." All three authors were at the University of Texas at Arlington when their article was written. Prof. Han is now on the faculty at Purdue, Mr. Miller is now pursuing doctoral studies at Auburn, and Mr. Jung is now pursuing doctoral studies at RPI. Their abstract will be republished in the Fall 2010 issue of this newsletter, and all three will be recognized at the banquet of the 2010 SBC conference in Naples, Florida. This is the first year wherein a broader nomination strategy was used

with success. Specific instructions for nominating articles are listed each year in the Bioengineering Division's fall newsletter each year, available at <http://files.asme.org/Divisions/BED/21517.pdf>.

*Michael S. Sacks, Editor
University of Pittsburgh*



Bumsoo Han



Jeffrey D. Miller



Jun K. Jung

FRONTIERS IN BIOMEDICAL DEVICES CONFERENCE

The BED is the technical co-sponsor of the 5th Annual Frontiers in Biomedical Devices conference, to be held September 20-21, 2010 at the Island Hotel, Newport Beach, California. The goal of this gathering is to provide a forum where participants involved in the development of the next generation of biomedical devices will meet and share their expertise, establish

collaborations, and discuss solutions to today's challenges. Leading authorities in the commercial and academic arenas will focus their expertise in three technical sessions plus one poster session:

Track 1 Orthopedics

Track 2 Cardiovascular

Track 3 Advanced Technology

Track 4 Posters

Details are available on the conference website: <http://www.asmeconferences.org/BIOMED2010>.

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