Editor's Message

I have the distinct honor of becoming your newsletter editor for the next three years. I join the distinguished line of newsletter editors including Farsh Guilak, Chris Jacobs and Dan Nicolella that have served the BED membership over the past several years. They set high standards and published outstanding newsletters, and I hope to maintain this tradition.

The Bioengineering Division has been quite active over the past two years, reorganizing its scientific meeting structure, establishing a new ASME society level award, and organizing new technical committees. The primary focus of the BED will now be the Annual Summer Bioengineering Conference. The proposal to move to the new format was approved by a majority of the BED membership. Our division also established a new award, the Van C. Mow Medal, to recognize individuals in their mid-career. The award honors Dr. Mow for his outstanding achievements and leadership in the field of bioengineering. Finally, the Education Committee was established to organize sessions at the annual meeting with a focus on education and teaching in the multi-disciplinary world of bioengineering. These accomplishments highlight the growth and strength of our division and quickly fill the newsletter.

In this issue, we have the standard reports from our technical committees, award committees and the Journal of Biomechanical Engineering as well as articles on the division's major accomplishments. I would like to thank all of those individuals who have contributed to the newsletter, especially the committee chairs. I look forward to serving you in the upcoming years and welcome comments and input on the BED newsletter.

Please send your comments to:

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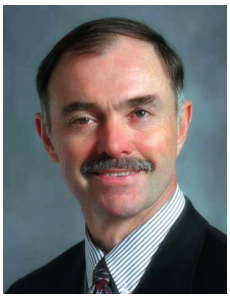
Message from Past Chair



Maury L. Hull

During this past year, it has been both a pleasure and an honor to serve the BED as the Chair. The pleasure has been in working closely with BED colleagues in a collegial atmosphere and also in managing the affairs of the Division. The honor has been to provide leadership for a group of such highly respected colleagues.

My service as Chair has been particularly challenging and rewarding because of the many important changes which have confronted our division. One of the most profound changes is in the structure of our scientific conferences. For many years, the topic of improving our conferences has been under discussion and various strategies have been implemented to strengthen the IMECE. In spite of these efforts, the Summer Bioengineering Conference has flourished. Consequently, in the interests of advancing our field and providing our membership with the highest quality conferences, the Executive Committee led by a subcommittee with Sohi Rastegar as chair, developed a proposal for an Annual Summer Bioengineering Conference. This proposal was eventually voted on by the membership and approved with an overwhelming majority of 94% of those who voted.

Once this proposal was approved, the implementation was another challenge. A new standing committee, called the Conference Oversight Committee, has been added and went into action on July 1, 2004. Among its many charges, the most important are to provide oversight of Division-sponsored conferences with primary focus on the annual Summer Bioengineering Conference and to provide continuity and memory to the conference planning and organization process. To successfully meet these charges, the membership of the Conference Oversight Committee will include the Summer Bioengineering Conference chairs for the past year, the present year, and two future years.

Another aspect of the implementation was to appoint the conference Chairs and select conference sites. The first annual Summer Bioengineering Conference chaired by Jennifer Wayne will be held in 2005 at the Vail Cascade Resort and Spa in Vail, Colorado. The second annual Summer Bioengineering Conference chaired by Vijay Goel will be held at the Amelia Island Plantation and Resort outside of Jacksonville, Florida. The third annual Summer Bioengineering Conference will be chaired by Jimmy Moore with the site remaining to be selected.

Another important change has been in our awards. A new societal-level mid-career medal has been introduced and named after Van Mow. This is a tremendous and well-deserved honor for Van who will be honored the first time that the Mow Medal is presented at the 2005 Summer Bioengineering Conference.

A final important change is the restructuring of ASME itself. Our society is decentralizing and divisions are being encouraged to form self-managing groups called Institutes. The BED has been invited to join the ASME Institute for Engineering Sciences. Other divisions which have been invited to participate as well include Applied Mechanics, Fluids Engineering, Heat Transfer, Materials, and Tribology. At the present time, it is unclear whether joining such an Institute would be advantageous for our Division so that no concrete action has been taken. However the options will need to be weighed carefully in the coming year so that the Division is best positioned to serve the membership while remaining a strongly functioning entity within the greater society.

As I pass the torch of leadership to my successor Ajit Yoganathan, I am profoundly grateful to all of those who served in the many capacities to make our Division the success that it is. It has been my privilege to serve along side each of you.

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Journal of Biomechanical Engineering

Editor's Report

The journal is in good shape!!. The impact factor for 2003 was 1.62, up from 1.37 in 2002. During the past year, 88 full-length papers and 17 technical briefs were published — exceeding our page allotment of 840. Therefore, ASME has agreed to increase our allotment for 2005 to 1000 pages. In addition, we plan to publish a special issue late in 2005 focusing on design of medical devices with Art Erdman serving as guest technical editor.

The following Associate Editors will complete their two-year terms at the end of this calendar year: Ross Ethier, Ph.D., Jay Humphrey, Ph.D., James Moore, Ph.D., and Marcus Pandy, Ph.D. In addition, David Beebe has requested to be relieved of his role after one-year of service. On behalf of the entire BME community, we wish to thank them for their past support and service.

Chris Jacobs, Ph.D., Andrew McCulloch, Ph.D. and Jennifer Wayne, Ph.D. completed their first three-year terms and agreed to serve an additional term. Several new Associate Editors have also been nominated and approved by the publication board: Andrew Amis, Ph.D. (Imperial College, London), Ellen Arruda, Ph.D. (University of Michigan), David Fitzpatrick, Ph.D. (University College, Dublin), Yoram Lanir, Ph.D. (Technion, Israel), and David Steinman, Ph.D. (Robarts Research Institute, Canada). Thus, as promised when I assumed the editorship, the international scope of the journal has been considerably broadened compared to the recent past and we hope for more international activity in the future.

Frank C.P. Yin, Editor

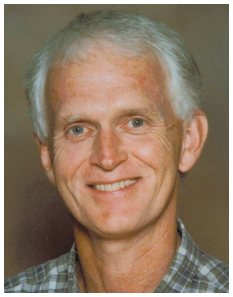
ASME - Van C. Mow Medal

In 2004, the Bioengineering Division established a new ASME Society level award to recognize individuals in their mid-career who have demonstrated outstanding achievements in Bioengineering and their commitment to the field of Bioengineering. The new award is named the *Van C. Mow Medal* in honor of Van C. Mow, Ph.D., Fellow of ASME, for his outstanding achievements and leadership in the field of Bioengineering, as a researcher, a teacher, a mentor to young bioengineers, for his service to the bioengineering community, in general, and to the Bioengineering Division of ASME, in particular.

Dr. Mow attended Rensselaer Polytechnic Institute (RPI), where he received his bachelor's degree in Aeronautical Engineering in 1962 and his doctoral degree (Ph.D.) in Applied Mechanics and Applied Mathematics in 1966. From 1966-1968 he was a postdoctoral fellow in Applied Mathematics at the Courant Institute of Mathematical Sciences at New York University in New York City, and from 1968-1969 he was a Member of Technical Staff at the Bell Telephone Laboratories in New Jersey. Dr. Mow then joined the faculty of RPI (1969-1986) where he was the John A. Clark and Edward T. Crossan Professor of Engineering. In 1986 he relocated to Columbia University as Professor of Mechanical Engineering and Orthopaedic Bioengineering, and Director of the New York Orthopaedic Hospital Research Laboratory at Columbia College of Physicians and Surgeons. In 2000, Dr. Mow became the first Chairman of the newly formed Biomedical Engineering Department, and was named the Stanley Dicker Professor of Biomedical Engineering. Dr. Mow's research efforts are directed towards understanding the mechanics of human joints, articular cartilage and other somatic tissues, and the causes of osteoarthritis. He has edited 7 books and published over 275 full-length papers and more than 375 meeting abstracts. Dr. Mow has received numerous honors, including Fellow of ASME (1979), American Academy of Orthopedic Surgeons Kappa Delta Award (1981), ASME Melville Medal (1982), ASME HR Lissner Award (1987), Giovanni Borelli Award of the American Society of Biomechanics (1991), U.S. National Academy of Engineering (1991), ASME RH Thurston Lectureship (1998), and U.S. Institute of Medicine of the National Academy of Sciences (1998), to name but a few. Dr. Mow was chair of the ASME Bioengineering Division in 1984. Finally, the achievement that Dr. Mow is most proud of is the mentorship of his numerous Ph.D. students and postdoctoral fellows over the years.

The Van C. Mow Medal will recognize individuals who are committed to pursuing research and/or teaching in the field of bioengineering and have demonstrated outstanding contributions to the field of bioengineering in their mid-career years within 10 to 20 years following graduation with a Ph.D. or equivalent degree. Criteria for the award include significant contributions in bioengineering research, education and professional development, as a mentor, and for service to the bioengineering community. The award includes a certificate, a two-sided bronze medal bearing the name of the award and a bust of Van C. Mow on one side, and the ASME logo on the other side inscribed with the recipient's name, and an honorarium of $1,000. Nominations can be submitted to the chair of the ASME Van C. Mow Medal Selection Committee: John M. Tarbell, Ph.D., Biomedical Engineering Department, City College of New York, 138th Street and Convent Avenue, New York, NY 10031, telephone 212-650-6841, email: Tarbell@ccny.cuny.edu.

H.R. Lissner Medal



John Tarbell, Wallace Coulter Distinguished Professor of Biomedical Engineering at the City College of New York, received the H. R. Lissner award at the 2004 International Mechanical Engineering Conference and Exposition in Anaheim, CA.

The H.R. Lissner Medal recognizes accomplishments in the area of bioengineering such as significant research contributions; development of new methods of measuring; design of new equipment and instrumentation; educational impact in the training of bioengineers; or service to the bioengineering community and/or the ASME Bioengineering Division. The award was established by the Bioengineering Division in 1977 and operated as a division award until 1987 when it was elevated to a Society award. This is the highest award for achievement given by its Bioengineering Division.

Professor Tarbell is just the third chemical engineer to have received this award and he joins Professors Cowin and Weinbaum as Biomedical Engineering's third Lissner awardee making CCNY the only institution other than Georgia Tech to have received this distinction. Professor Tarbell, Chair of Biomedical Engineering, is widely recognized for his pioneering contributions to the Penn State artificial heart program, the mechanics of heart valves, in vitro experiments on the effect of fluid shear stress on the permeability of vascular endotheium and mass transfer aspects of arterial disease. He is the author of over 140 technical papers and is past President of BMES (2003).

Albert I. King, Chair

News from the Committees

Biofluids Committee

David Vorp replaced Barry Lieber as the Chair of the Biofluids Technical Committee at the IMECE in November, 2004. David will serve the three year term from 2004-2006. Danny Bluestein was elected by the Committee membership to serve as Vice-Chair and standard operating procedures call for Danny to take over as Chair in 2006.

At the 2004 IMECE, the Biofluids Committee hosted 7 sessions with a total of 37 abstracts. One session each was jointly hosted by the Cell and Tissue Engineering Committee and the Solids Committee of BED. The Biofluids Committee also contributed to all levels of the student paper competition.

Recent trends in biofluids show that there are new areas of interest to the members of the committee including flow mechanics in cellular and molecular transport, flow in micro- and nano-scale engineered systems and flow in drug delivery systems. These trends were reflected in the abstracts submitted to the 2004 IMECE that resulted in the dedication of two sessions for the new topics, entitled "Fluid Mechanics in Drug Delivery and Bioreactors" and "Micro Fluid Mechanics". We see similar trends in abstracts submitted to the 2005 Summer Bioengineering Conference that will be held in Vail, Colorado.

We are trying to increase the active membership of the Biofluids Committee, especially our newer colleagues (post-docs and new investigators) to ensure strong future leadership. We invite all with interests in biofluid mechanics to participate in our next Committee meeting, which will be held during the Summer Bioengineering Conference from 1:30pm-2:30pm on Wednesday, June 22, 2005, in the Mountain View Room at the Vail Resort and Conference Center.

David A. Vorp, Chair

Education Committee

The Education Committee is a relatively new committee within the Bioengineering Division (BED). Our goal is to organize a small number of high-quality sessions at each conference with information of immediate practical use to BED members, while minimizing overlap with other sessions on education and teaching such as those at the ASEE annual meeting.

For example, at the IMECE 2004 in Anaheim a session titled "Educational Components in NSF Grants" was targeted primarily to younger investigators based on the following premise: "Successful NSF research grants, particularly CAREER awards, typically have a substantial educational component. Designing an educational component that goes beyond simply making a website yet is achievable within the grant resources presents a challenge, especially for new investigators. This session will highlight educational components of successful NSF grant applications to help stimulate ideas for future proposals." The session consisted of short summary talks from BED members with experience as CAREER recipients and reviews, followed by a panel discussion with the speakers.

At the 2005 Summer Bioengineering Conference, a session on "New Models for Cross-Disciplinary Graduate Education" will mix brief talks with a panel discussion to examine emerging ideas for how to best mix graduate students with different backgrounds in the multi-disciplinary training programs receiving attention at the NIH and other funding agencies. In addition, a tutorial session will focus on web-accessible resources likely to be of use to BED members in the courses they teach.

Anyone who would like to join the committee, suggest and/or organize an education session, or contribute URLs for electronic resources you have found valuable in your own teaching, please contact the Education Committee chair, Jeff Holmes, by email: jh553@columbia.edu.

Jeffrey Holmes, Chair

Heat and Mass Transfer in Biotechnology Committee

The chairmanship of the Heat and Mass transfer in Biotechnology Committee is currently under Charles Lee, University of North Carolina at Charlotte, 2005-2007. This committee has decided to make the Summer Bioengineering Conference its annual meeting. We look forward to our greater involvement at SBC every year. At the 2004 IMECE, the bioheat committee sponsored 7 sessions in a variety of areas including Biothermal Modeling, Thermal Injuries, Image Guided Thermal Therapy, Thermal Aspects of Molecular Surgery and Molecular and Nanoscale Biopreservation.

Bioheat and Mass transfer in Biotechnology is entering a very exciting era with nanoscale and multi-scale areas emerging. These areas will have commonality with other BED committees including Biofluids, Tissue and Cellular Engineering. Joint sessions are being planned for future meetings.

The group would also like to report that Ken Diller has been involved in developing course material for Bioengineering Education - a project funded by NSF grant. They have developed a HyperLearning (HPL) Undergraduate Biotransport Course Material which includes lecture material, problems, solutions, and exams. This is available to members wishing to teach this course at their university. The instructor must agree to provide pertinent data on the teaching experience to Ken (kdiller@mail.utexas.edu) in order to collect data on the effectiveness of the method. The material will ultimately be available on the VaNTH website (http://www.vanth.org/).

Lastly, a website has been set up for the Heat and Mass transfer in Biotechnology Committee. The link is http://www.me.umn.edu/info/links/asme/. Information on this site includes minutes from the Committee's meetings, membership information, updates, and upcoming events. The committee will also use this website as a means to communicate issues that are currently under consideration including the formation of the Institute.

Charles Lee, Chair

Honors Committee

The Honors Committee is responsible for administering the awards activities of the BED–ASME. These duties include the awarding of the ASME H.R. Lissner Medal, ASME Van C. Mow Medal, ASME Y.C. Fung Young Investigator Award, BED Richard Skalak Best Paper Award (ASME Journal of Biomechanical Engineering), BED Student Paper Awards (Undergraduate and Graduate levels presented at the IMECE), ASME Fellow Awards, and interacting with the Basic Engineering Technical Operating Board (BETGOP) in awarding the ASME R.H. Thurston Lecture Award and the ASME Dedicated Service Award. At the 2004 IMECE held in Anaheim, California, awards were presented to the following individuals: Lissner Medal was presented to John M. Tarbel, City College of New York, for outstanding accomplishments in the area of bioengineering; Y.C. Fung Award to Richard E. Debski, University of Pittsburgh, for substantial contributions to the field of bioengineering; Skalak Best Paper Award (JBME, v. 126, 2003) to Leonidas G. Alexopoulos, Mansoor A. Haider, Thomas P. Vail and Farshid Guilak, Duke University, for their paper Alterations in the Mechanical Properties of the Human Chondrocyte Pericellular Matrix with Osteoarthrits; and ASME Fellow Awards to Thomas A. Buchanan, Mohammad S. Hefzy, Roger D. Kamm and Marcus G. Pandy.

Peter A. Torzilli, Honors Committee Chair

Tissue and Cellular Engineering Committee

For the 2005 SBC, the Tissue and Cellular Engineering Committee has organized a Symposium on the Mechanics of Growth and Remodeling In Native and Engineered Tissues. Despite its early success, tissue engineers have faced challenges in repairing or replacing tissues that serve a predominantly biomechanical function. An evolving discipline called "functional tissue engineering" seeks to address these challenges. The principles of functional tissue engineering address biomechanical considerations of tissue engineering approaches to repair and replacements for load-bearing structures. The long term in-vivo fate of any engineered tissue is currently unknown. Clearly, a complete understanding of the in-vivo remodeling process requires multi-length scale approaches. Further, the degree of cellular function and similarity to the native tissue has yet to be determined. The focus of this symposium is to explore how state-of-the-art work in the Mechanics of Growth and Remodeling in native tissues can be applied to the development of Native and Engineered Tissues. The symposium will present the latest theoretical concepts and experimental applications to explore how these concepts can be applied to Engineered Tissue development. Moreover, Drs. Holzapfel and Humphrey, Editors of Biomechanics and Modeling in Mechanobiology (BMMB), have graciously offered a special issue of this new Journal to publish full length papers derived from the invited lectures. Please note that the page limits for BMMB are significantly extended, allowing for a more complete presentation.

The C&T committee also strongly encourages interested BED members to participate in the committee and to propose symposia for the 2006 SBC.

Michael Sacks, Chair

Student Paper Competitions

The Student Paper Competition continues to be an important part of the Bioengineering Division's meetings. Our goals are to encourage student participation in the meetings, to provide students with an opportunity to demonstrate and refine their communication skills, to provide professional members with an opportunity to see some of the finest work being done at our colleges and universities and to meet some of the students who represent the future of our society.

The 2004 IMECE in Anaheim, CA, included Ph.D., M.S., and B.S. Level competitions, with six oral presentations in each category. Finalists were selected based on review of two-page abstracts by several judges. Oral presentations were then judged on technical content, communication skills and ability to answer questions. Awards were given to the top three at each level.

Doctoral Level

1. Nadeen Chahine, Columbia University
   "Effect of Dynamic Deformational Loading on the Transport of Dextran Molecules into Agarose Gels"
2. Michelle Oyen, University of Minnesota
   "Variability of Nanoindentation Responses of Bone and Artificial Bone-Like Composites"
3. Michael Rosenbluth, University of California-Berkeley
   "Contribution of Cell Mechanics to Acute Leukemia"

Masters Level

1. Jenni Buckley, University of California-Berkeley
   "Sensitivity of Vertebral Strength to Endplate Loading Distribution"
2. Joseph Olberding, Tulane University
   "Validation Studies for the Dual Optimization of Indentation Creep and Stress Relaxation of Biological Soft Tissues Using Biphasic Poroviscoelasticity"
3. Mohammed El-Kurdi, University of Pittsburgh
   "Regulation of Cell Adhesion and De-Adhesion Proteins in Veins Perfused Under Arterial Conditions Ex-Vivo."

Bachelors Level

1. Eric Anderson, Case Western Reserve University
   "Performance Evaluation of Four Cell Flow Chambers: How Well is Stress Controlled at a Cellular Level?"
2. Kenichi Umezawa, Shibauru Technological Institute
   "Wall Shear Stress in Development Process of Aneurysm Around Anterior Communicating Artery"
3. Stephanie Bechtold, University of Pittsburgh
   "Repeatability of Establishing Anatomical Coordinate Systems and the Initial Configuration of the Knee"
4. David Korda, University of Vermont
   "Effects of Swelling Conditions on the Compressive Properties of Nucleus Pulposus form Bovine Intervertebral Discs"

Based on continued strong interest in the student paper competitions, we have chosen to include a combination of oral and poster presentations for the 2005 Summer Bioengineering Conference in Vail, Co. This strategy will allow broad and appropriate recognition of the quality of work being done by our students. The competition chairs (Sheldon Wang (BS), James Iatrides (MS) and Michele Grimm (PhD)) and I are very grateful to the many judges who have helped with selection of the finalists and encourage you to join us in congratulating these students for their hard work and excellent presentations.

Amy Lerner, Chair

ANNOUNCEMENT

THE INTERNATIONAL CENTRE OF ORTHOPAEDIC RESEARCH, EDUCATION, AND TREATMENT (I.C.O.R.E.T.)

The I.C.O.R.E.T. is pleased to announce a special award for young researchers of orthopaedics, biomechanics/biology, operative techniques, and sports - the **Y-ROBOTS Award**. Manuscripts in the areas of orthopaedic biomechanics, orthopaedic biology, operative techniques in orthopaedics or sports medicine are being accepted for consideration of this outstanding research award. The first author must be less than 40 years or within no more than 8 years after his/her last academic degree (Ph.D. or M.D.) at the time of submission.

All applications will be reviewed and up to 10 finalists will be selected and invited for presentation at the 9th International Conference on Orthopaedics, Biomechanics, Sports Rehabilitation in Assisi/Perugia, Italy, between 11-13 November 2005. The winner of the **Y-ROBOTS Award** will be selected following the presentations by the finalists. The Members of the Award Committee are:

Chair:	Savio L-Y. Woo, Ph.D.	
Members:	Giuliano Cerulli, M.D.	Mario LaMontagne, Ph.D.
	Ejnar Eriksson, M.D., Ph.D.	Ronny Lorentzon, M.D.

The award consists of:

- 5.000,00 Euro
- Award Certificate
- Consideration for Publication in *Knee Surgery, Sports Traumatology, Arthroscopy* after the peer review process

The deadline for receipt of manuscripts will be **October 1, 2005**. Six (6) copies of the completed application and manuscript should be submitted to:

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c/o Let People Move
Via G.G. Pontani, 9
06128 Perugia - Italy
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Fax: 011-39-075-501-0921
Email: letpeoplemove@tin.it
Website: www.letpeoplemove.com

Note:

- *Submissions, including papers, photographs, illustrations, etc. submitted will not be returned unless a self-address stamped envelope is included.. Members of the research groups of the Award Committee are **not** eligible.*

2003 and 2004 ASME Y.C. Fung Young Investigator Awardees

The ASME Committee on Honors and the Bioengineering Division is pleased to present the winners of the ASME Y.C. Fung Young Investigator Award for 2003 and 2004. This award is given annually to encourage young investigators to pursue research in bioengineering. The recipients of this award are acknowledged early in their careers for innovative and quality research as well as a demonstrated commitment to bioengineering. The award is given in the honor of Yuan Cheng Bertram Fung, Professor of Bioengineering at the University of California at San Diego. The Y. C. Fung Young Investigator Award was established by the ASME Bioengineering Division in 1985 as a division award and was elevated to an ASME societal award in 1999.

2003 Awardee. Sangeeta N. Bhatia is the recipient of the 2003 Award. Dr. Bhatia is an Associate Professor in the Department of Bioengineering and an Associate Adjunct Professor in the Division of Gastroenterology (Department of Medicine) at the University of California, San Diego.

Professor Sangeeta N. Bhatia, Department of Bioengineering, University of California, San Diego

Dr. Bhatia's research interests are Bio MEMS (Biological Micro-Electro-Mechanical Systems) and Hepatic Tissue Engineering. She has integrated micro array tools with optical, microfluidic, and electrical methods for remote manipulation of living cells and tissues and for the generation of lab-on-a-chip devices for investigations on drug discovery, functional genomics, and tissue engineering. She has also developed a functional application of her Bio MEMS technology for the study of gene expression of neural stem cells with fluorescent reporters and used optical tweezers to manipulate live cells. Her research has made possible the elucidation of the mechanisms controlling cell functions under a variety of experimental and pathophysiological conditions. By correlating the gene expression profiles of different liver cell lines with their competence for hepatocyte induction, she has discovered three candidate genes that may play a significant role in inducing the differentiated hepatocyte phenotype.

2004 Awardee. Richard Debski is currently an Assistant Professor and recently became the Associate Director of the Musculoskeletal Research Center in the Department of Bioengineering at the University of Pittsburgh.

Professor Richard E. Debski, Department of Bioengineering, University of Pittsburgh

Dr. Debski's research interests are experimental and computational biomechanics applied to the musculoskeletal soft tissues at the shoulder and the development and application of innovative robotics technology for problems in bioengineering. His fundamental research in shoulder biomechanics has elucidated the structure and function of ligaments, tendons, and the joint capsule at the glenohumeral and acromioclavicular joints. Dr. Debski has characterized tissue repair and reconstruction, and quantified the effects of joint motion in injuries and repair procedures to provide surgical diagnostic and rehabilitation protocols. Most recently, he has been developing three-dimensional finite element models of the glenohumeral capsule to accurately simulate injury, repair, and the healing response. Novel experimental techniques, which include a Robotic/UFS testing system and Dynamic Shoulder Testing Apparatus for real time control of joint motion, may allow robots to perform clinical exams and surgical procedures in the future.

Bruce R. Simon, Chair

2005 Summer Bioengineering Conference

Vail Cascade Resort & Spa, Vail, Colorado

June 22-25 2005

The Bioengineering Division of the American Society of Mechanical Engineers is anxiously awaiting the arrival of June for our now ANNUAL Summer Bioengineering Conference! The spectacular surroundings of Vail Cascade Resort & Spa, a four-diamond resort in the beautiful mountains of Vail, Colorado, will be our 2005 venue.

The 2005 Summer Bioengineering Conference, endorsed by BMES, USNCB, and IEEE/EMBS, will feature an outstanding scientific program with oral and poster sessions, special symposia, and student paper competitions. The scientific program is being finalized and will be posted shortly on the conference website.

Additionally, we are pleased to announce that Dr. Firouz Naderi, Director of NASA's Solar System Exploration Programs and Mars Exploration Program, will be one of our plenary speakers. We also have workshops planned on bioengineering education, funding opportunities in bioengineering, and nanotechnology.

Conference registration and reservation information is already available on the Conference's website; reduced registration rates are available until May 5. Further information about the Conference is available at: http://divisions.asme.org/bed/events/summer05.html

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ASME BED ROSTER 2004-2005

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