

American Society of Biomechanics Newsletter

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June 2006

No. 1

www.asbweb.org

From the President Ted Gross

As I sit down to write my column for this newsletter, I am already several days late for our internal deadline (sorry Andy). While I often lament my personal inability to finish tasks well ahead of deadlines (self imposed or otherwise). I sometimes wonder if I procrastinate, in part, to experience the thrill (?) of the deadline. Certainly, life as a scientist (and parent of a young child) offers frequent deadline opportunities.

In that context, I would like to remind everyone of our upcoming annual meeting, to be held in Blacksburg, Virginia (Virginia Tech) from September 6 to 9, 2006. Our Program Chair, Irene Davis (with Co-Chair Joe Hamill), and Meeting Chair, Stefan Duma (with Co-Chairs Mike Madigan and Kevin Granata), have been devoting substantial effort toward creating an outstanding meeting. The meeting will have a familiar general format, but Irene and Stefan have come up with several innovative twists, in part based on membership feedback we have received at previous meetings (including expanded thematic posters and a varied number of competing sessions through each day). These developments reflect an attempt to retain the informal and interactive feel of our meetings while accommodating the increased numbers of abstracts submitted over the past few years (creeping over 300). The meeting will be held on the Virginia Tech campus at an almost new conference center/hotel. The abstract review process is ongoing as I write and I encourage you to visit the meeting website and make your reservations (http://asb2006.org).

I would also like to remind everyone to visit and bookmark our new society website: http://www.asbweb.org. Both Trey Crisco, our outgoing Past-President, and Kathy Simpson, our outgoing Communications Committee Chair, have invested substantial effort in creating an improved look for our site that has the flexibility to incorporate further enhancements. As with many societies, we have discussed moving to a secure webbased system for dues and subscriptions, abstract submissions (building on the system developed for the society by Art Kuo during his recent service as Program Chair), etc. There are a number of challenges in this process, one of which being the

intertwined roles of our Secretary-Treasurer in dues collection, journal subscriptions, and maintaining the membership database. Given the importance of the website, the Executive Board has chosen to have an open call for our new Communications Chair. By the time you are reading this newsletter, you will have already received an e-mail soliciting nominations (how is that for a deadline?). The new Chair will play a critical leadership role in guiding this transition. Second, once the Communications Chair is in place, the Executive Board will go through a vetting process to sub-contract the web development to a highly qualified individual/company. It is our hope that by committing a small proportion of the Society's funds to enhance the website, we will be able to reduce the workload on the Secretary-Treasurer, keep our annual dues at an exceptionally low level compared to other societies, and provide a vehicle for expanding the impact of ASB.

At the 2006 mid-year Executive Board meeting in February, we also spent a considerable amount of time beginning a selfassessment process, led by Ken Kaufman, our President-Elect. The goals of this process include identifying our strengths and weaknesses as a Society, identifying future opportunities for the society, and developing a strategic plan to achieve these goals. An example of an opportunity would be whether and/or how the society should pursue science outreach. This goal could be achieved in a variety of manners ranging from financially teaming with other societies to lobby on behalf of science funding to drawing on the expertise of ASB to develop our own web based programs to enhance interest in science for high school (or younger) students. The self-assessment process will include feedback from the entire membership during the upcoming year.

Finally, please mark your calendars for the 2007 ASB annual meeting, which will be held at Stanford (August 23 to 25) with Chris Jacobs and Scott Delp serving as Meeting Co-Chairs. They, along with Francisco Valero-Cuevas (our Program Chair-Elect), have already begun planning our return to Stanford (for those ASB historians, the 1995 meeting was at Stanford). I will close by wishing everyone an enjoyable and restful summer and I look forward to seeing old friends and making new ones at Virginia Tech.

Cheers



ASB NEWSLETTER volume 19, number 1

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Editors Note:

All previous ASB newsletter have been converted into pdf documents and are archived on the ASB website:

http://www.asbweb.org/newsletters/ newsletters.html

Newsletter Advertising

The Editorial Board invites various businesses and corporations that have products or services of interest to members of the Society to advertise in the ASB Newsletter. Advertising space may also be purchased for job postings or other special announcements.

The current advertising rates are as follows:

1/4 page	\$100
1/2 page	\$200
full page	\$400
back page	\$600
separate insert	\$600

If you are interested in learning more about advertising in the ASB newsletter, please email Michelle Sabick at MSabick@boisestate.edu.

ASB Involvement

If you are interested in becoming more active in the Society (e.g., serving on a committee or chairing a conference session), contact Steve McCaw (smccaw@ilstu.edu), Education Committee Chair with your name, address, phone/fax number, email address, and your desired involvement. This information will be included in a database which is periodically updated and distributed to the Executive Board.



Student's Corner Melissa Scott-Pandorf

Greetings ASB student members! With all the signs of summer around us, we know that the ASB annual meeting is quickly approaching. In keeping with ASB's mission to foster the student members of the society, specific student events planned for the meeting include the ASB Mentor Program, Women in Science Luncheon, a Student Night Out, and the Student Luncheon.

The mentor program was established in 2004 to encourage interaction between senior scientists and the student members at the annual ASB meeting by pairing students and scientists with similar interests. Current ASB student members are encouraged to participate. This year the deadline for registering to participate if June 15th. More information on the program is listed on the ASB website (www.asbweb.org) under the "For Students" link.

The Women in Science Breakfast has been changed to a luncheon this year. This will hopefully allow more interaction time between female scientists. For those who have been unable to attend or are new to ASB, the Women in Science Breakfast was established to build networking between young female scientists and senior scientists. It offers informal opportunities for discussion on balancing a family and work, the challenges of being a woman scientist, and career path choices.

Also, the student night out is on the schedule again this year after a successful outing last year. Once again, a popular local destination will be chosen and the meeting place will be announced during the annual meeting. This is a great opportunity to meet other students in our field of study.

The 2006 ASB annual meeting marks the end of my time as your Student Representative. It has been a privilege to serve in this position and I encourage everyone to consider running for it. During the student luncheon, those running for the position will be allowed to introduce themselves and briefly discuss how they would represent the students of the society. If you are interested in being the next student representative, but would like more details, visit the "For Students" link at www.asbweb.org where the mission and responsibilities of the student representative are listed. If you decide to run please contact me (mmscottp@gmail.com) so I can include all candidates for the position in the Student Luncheon agenda. Following business matters, the Student Luncheon will also include a panel of scientists from various university paths. The ASB society is very integrative with different disciplines and several universities. Therefore, the career paths of the members vary greatly. In order for students to get an idea of just how vast options in the field of biomechanics are; scientists from various institutions (large and small) will be on the panel. Students will be able to ask questions in an open forum.

New to this year's annual meeting is the opportunity for students to serve as a moderator along side a senior scientist during a podium session. This would be a great experience and allow the student to see a podium session from a new perspective. If interested in being a moderator please contact me.

To close, I want to thank the students of the society for allowing me to have the opportunity to serve as the student representative and the executive board for their help during the past two years. Have a great summer and I look forward to seeing everyone in Virginia!

Secretary/Treasurer Don Anderson

As of April 25th, funds in our cash accounts totaled \$45,297.96, while investments stood at \$134,405.88. Clearly, we are in a healthy financial state.

I would like to briefly highlight a few of our more substantial recent expenditures (likely more detail elsewhere in the newsletter regarding these), lest you think that we are simply in the business of accumulating wealth... The Grant-in-Aid program recently sent out checks in the amount of \$9819, funding four worthy grantees. In the past year, we partially sponsored four Regional ASB Meetings (Southern California, Southeast, Midwest, Northwest), with funds totaling \$7660. This, together with our commitment to defraying student registration fees at our Annual Meeting, and Awards that we distribute at that meeting, reflects the scope of our activities funded by membership dues.

Speaking of..., we have been busy here in Iowa City processing membership dues renewals this Spring. Roughly 500 of you have renewed your memberships to date. And we will be sending out a final round of reminders within the next week or two to those of you who just haven't gotten around to paying yet (still haven't decided whether or not you will have this newsletter in your hands). It is always nice to put this hectic time of the ASB Sec/ Treas year more-or-less behind us.

Just a final note... on a couple of occasions each year, I agree to distribute e-mail to the entire ASB membership. This usually is either a relevant announcement about a Conference or other Meeting, or a business-related request (dues renewal notice or voting instructions). We have recently overhauled our commercial membership categories, and as a result, I will be sending you another two or three e-mails each year, on behalf of our Sustaining Corporate Members. Please know that the decision to do this was not made lightly, but we on the Executive Board figured that this was a way to offer value to both our Commercial Members and to the rest of you. I promise to make a concerted effort to limit the distribution of e-mail to you to a reasonable amount, and to never share the actual list with anyone. It is up to you to decide what to do with these e-mails once you get them. Believe me, it is more painful for me than it could possibly be for you (I get lots of returned e-mail every time I send one of these).

Ciao for now!

ASB Executive Board 2005–2006

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Education Committee Steve McCaw

It has been an exciting spring in Normal, Illinois, my home town. The controversial downtown coliseum opened, built despite an overwhelming "no vote" on the public referendum ("we don't need no stinking ice rink" seemed to be the prevailing attitude), and the old codger hockey league is organizing as I write. In other news, abstracts have been submitted and are being reviewed for the ASB annual meeting to be held in September at Virginia Tech, Grant-in-Aid awards have been decided and are being distributed, and three successful regional student meetings funded by ASB demonstrate the popularity of this program. Details follow.

ASB Graduate Student Grant-in-Aid Program

The Grant-in-Aid program received eight applications. All applications were reviewed by the GIA review committee. The ASB Executive Board is pleased to announce funding for the following projects:

Becky Avrin Zifchock, University of Delaware: The relationship between asymmetry and injury mechanisms-the effect of kinetics, kinematics, strength and structure.

Hyun Gu Kang, University of Texas at Austin: Kinematic and Neuromuscular Dynamic Stability During the Gait Cycle in Young and Older Adults

Amanda Salacinski, University of Pittsburgh The Effect of Vitamin D on Neuromuscular Function in Patients with Crohn's Disease Elizabeth Chumanov, University of Wisconsin-Madison, Hamstring Musculotendon Mechanics during Sprinting

The next deadline for this increasingly competitive program will be January 15, 2007. Details on the application process will be posted on the ASB website and provided in the fall newsletter.

$Student\,Representative\,to\,the\,ASB\,Executive\,Board$

The two-year term of current student rep Melissa Scott-Pandorf concludes at the Annual Meeting in September. She has done a tremendous job representing students and organizing social and professional events during her term. At the student meeting, a new rep will be elected. If you are interested in serving in this position, or if you have a student who would be a great representative, review the responsibilities (http://www.asbweb.org/student/missions.html) and contact Melissa regarding your interest. See Melissa's column in the newsletter for nomination details.

Media Coverage of ASB Annual Meeting

Too often, topics in science receive only scant coverage in the media. And the coverage is often superficial or misinterpreted. For the 2006 meeting, ASB has invited media to attend. The media will be provided with open access to the sessions, invited specifically to attend keynote lectures, facilitated in arranging interviews with presenting authors, and, in general, encouraged to understand and tell the public about the varied discipline of biomechanics. It is hoped that in future years, ASB will become a source for the media to use when seeking interpretation of complex topics for presentation to the public. Increasing the publics awareness of biomechanics will be important to the mission of the society.

Tutorials at the Annual Meeting

After a one year reprieve, tutorial planning for the annual meeting is back on the list of responsibilities for the Education Committee. We welcome your suggested tutorial topics and (if known) presenters for the 2006 annual meeting. If your tutorial is selected, you will receive the eternal gratitude of the society and, a possibly more valuable reward, a complementary registration for the tutorial and the annual meeting. What an incredible value for a quick suggestion. Send your suggestion by email to <u>smccaw@ilstu.edu</u> with TutorialASB2006 as the subject. Deadline is June 15.

Educational Materials Clearinghouse

ASB encourages you to participate in an educational clearinghouse to be established on the ASB website. Many instructors have created online access to their courses in biomechanics, including access to the electronic lectures. Most are very proud of some of the lecture notes, and a little less proud of others. As a service to the educational community, on a voluntary basis you are encouraged to send the links to your courses or to specific lectures to me (smccaw@ilstu.edu), along with the course/lecture title and your name as you want it to appear on the ASB website. Let me know the level of the course/lecture (introductory, upper level undergraduate, graduate) and the intended audience (ie mechanical engineering, kinesiology, physical therapy, etc). By submitting your materials, you are granting permission for someone accessing your materials to incorporate all or part of the material into their lecture slides. Of course, it is expected that someone using a slide or slides would let you know by email that they will use the materials, and acknowledge the source of the material on the projected slide. Materials will be posted to the web as received.

New (Updated?) Offering: Graduate Program Listing

Years ago, ASB maintained links to graduate programs. The pages have become outdated and not of much use. To help students in their search for the most appropriate graduate program, ASB hopes to redevelop this resource. To have your program included, send to me a) the name of the program as you want it to appear on the website; b) the name of the department/school in which the program is located; c) the location of the institution if it is not apparent in either of the above; d) the web address to serve as the link to the program. Programs will be listed as received. It will become the responsibility of your institution to ensure that the web address provided stays current.

Regional Student Meetings

The ASB Executive Board supported both The Midwest Graduate Students Biomechanics Symposium at the University of Wisconsin-Milwaukee, and the Southeast Regional ASB held at Georgia Tech on March 30-April 1, 2006. Reports from both of these meetings are located elsewhere in the newsletter. The Northwest Biomechanics Symposium (NWBS) was held in Vancouver, Canada on May 12-13, 2006 (look for a report in the December newsletter).

ASB will plans to support at least 3 regional meetings per year for a combined total of \$6000. These funds come from the general operating funds of the society. It is hoped that at least 3 meetings will be supported each year. With the increasing popularity of the meetings, and the addition of new regional meetings on almost an annual basis, the ASB looks forward to the need to develop formal, strict, rigid guidelines outlining a cycle of funding to different regions to keep up with the demand. Until then, funding preference will be given to regions that were not funded the previous year, but this may be superseded by a first applied-first funded process. If you are interested in serving as a host, contact me ASAP and we can get your application process underway.

We are trying to create a page on the ASB website with links to the programs of past regional meetings funded by ASB. If you were the host of a meeting, and your link is still active, send the web address to ASB Website Coordinator Kathy Simpson (<u>ksimpson@UGA.EDU</u>) to be included on this historical page.

Until next time, don't forget to put more water in your soup, milk in your gravy, and syrup on your pancakes*. See you at Virginia Tech.

* Sign off line of the late and lamented Kent McConkey, host of The Oldtimers Jamboree on wwhp, Farmer City.

Southeast Student Symposium Huub Maas and Young-Hui Chang

The 1st South East Biomechanics Conference (SEBC) was held March 30-April 1, 2006 at the Georgia Institute of Technology in Atlanta, Georgia. We had an overwhelming response with 65 students, 4 post-docs and 12 faculty in attendance representing 26 different labs, 18 institutions and 10 states. Attendees listened to 33 oral presentations by undergraduate and graduate students covering biomechanics-related topics in prosthetics & orthotics, posture, sports, neural control, comparative biology, orthopedics and gait. ASB Past-President and Chair of the School of Applied Physiology Dr. Robert Gregor delivered the opening keynote address. His presentation, "Interdisciplinary research in movement science: How much should we do?" included several practical guidelines for young researchers and an overview of his recent experiments on the neural control of animal locomotion. The theme "Comparative Biomechanics: Borelli meets Krogh" was further highlighted with a keynote address by ASB Past-President and Chair of Biology at Harvard University Dr. Andrew Biewener. Dr. Biewener presented on his research on in vivo muscle function in mammalian terrestrial locomotion and avian flight as well as recent developments of a bioinspired quadruped robot from collaborator, Marc Raibert. Autographed copies of Dr. Biewener's latest book "Animal Locomotion" were presented to SEBC student award winners Anne Benjaminse ("Gender Differences in Knee Biomechanics and Neuromuscular Control during Athletic Tasks - Implications for ACL injury") and Heather Brant ("A New Model for Investigating Neural Control of Locomotion at Multiple Hierarchical Levels"). We thank the ASB and the School of Applied Physiology at Georgia Tech for their generous support, the student presenters and attendees for their participation, and our Georgia Tech conference crew for helping make it all possible. After a brief post-conference meeting, we have decided to pass the torch on to our friends at Duke University for the 2nd Annual SEBC! We hope to build this into a strong tradition in the Southeast and look forward to next year's meeting!

Midwest Student Symposium Kristian O'Connor

On March 31st and April 1st, the UW-Milwaukee College of Health Sciences and Department of Human Movement Sciences hosted the Midwest Graduate Student Biomechanics Symposium. The event drew 86 participants from 17 institutions across 9 states. The two-day conference included 37 student presentations and three invited keynote lectures. Dr. Clive Pai from UI-Chicago shared his current research on falls in the elderly, Dr. Joe Hamill from UMass Amherst discussed movement coordination and its relationship to injury, and Dr. Yiorgos Papaioannou from UWM discussed his work in developing new techniques to measure musculoskeletal dynamics. The social highlight of the weekend was a private tour at Lakefront Brewery followed by a fish-fry dinner, which give all a taste (literally) of Milwaukee. All of the student presenters were excellent, with many of the presentations clearly worthy of presentation at national and international meetings. Thank you again to ASB, Innovative Sports Training, Inc., and UWM for their sponsorship of this event. The organizing committee is grateful to everyone who attended for making the conference a success beyond our expectations.

Paid Job Listing

Research Associate, Legacy Health System

The Biomechanics Laboratory of the Legacy Clinical Research & Technology Center in Portland, Oregon has an opening for a full-time Research Associate. Our research program specializes in applied and basic research in the field of orthopaedic trauma. Research is conducted in close collaboration with orthopaedic surgeons of Legacy's Level I trauma center. The position includes the design and execution of scientific investigations and experiments in the field of Biomechanics; the design, development and evaluation of products related to orthopaedics and trauma surgery; the design and manufacture of test equipment relating to orthopaedic implants and bone fracture repair; analysis and interpretation of experimental data and publication of results; coordination of work with external contractors; and contributions to preparation of grant applications. Applicants must have a Master's degree or the foreign equivalent in mechanical engineering, biomechanical engineering, bioengineering or related field; as well as six months experience in machining, including computer numeric control (CNC) machining; and coursework in biomechanical engineering. All education, training and experience may be gained concurrently. Applicants must have legal authority to work in the United States. Interested applicants should contact Michael Bottlang, Ph.D., Director, Biomechanics Laboratory at www.biomechresearch.org.

Meeting Chair Stefan Duma

30th ASB Conference at Virginia Tech September 6 – 9, 2006

We are pleased to invite you to attend the 30^{th} Annual Meeting of the ASB that will be held from September 6-9, 2006, at Virginia Tech in Blacksburg, Virginia. The 2006 conference and technical sessions will be held at the new Inn at Virginia Tech & Skelton Conference Center. For current information and additional details, you can look to the conference's web page at www.asb2006.org.



Irene Davis has done a marvelous job of developing an exciting program. The most current version is available on the web site. In particular, the program has been expanded to allow for more podium presentations with over 100 slotted for the conference. Also new to ASB this year will be six theme poster sessions that should encourage a lively debate and exchange of ideas on posters with similar topics. In addition to these new ideas, the conference will have traditional style poster sessions, invited lectures, tutorials and lab tours.

At the ASB 2006 reception, you will be invited to experience the wonderful tastes of Virginia. With over 55 wineries in the state, Virginia is the one of the largest wine producing states in the country. We will be sampling a variety of local wines as well as several regional beers.

For those of you looking for extracurricular reasons to attend, Blacksburg offers many outdoor activities for you and your family to enjoy. There are several golf courses in the area including the 9 hole golf course behind the Inn and Virginia Tech's 18 hole golf course located along the New River. Southwest Virginia offers numerous hiking trails, including the Appalachian trail, and the Blue Ridge Parkway. There are also museums, wineries, and historic plantations located nearby.

For flight travel to Blacksburg, the Roanoke Regional Airport, which is only a 40 minute drive to campus, serves all major airlines. We will be hosting free shuttles that will be available for Wednesday arrivals and Sunday departures.

If you have any suggestions or questions, please feel free to contact me at Duma@vt.edu. We look forward to seeing you in September!



Planned Schedule for the 2006 Annual Meeting

	Wednesday	esday	F	Thursday	Y		Friday		0)	Saturday	
7-8:00											
8-8:30			Weld	Welcome/Keynote	note		Keynote			Keynote	
8:30-9											
9 - 9:30		*									
9:30-10			Podium 1	Podium 2	Podium 3	Podium 7	Podium 8	Podium 9	Podium16	Podium17	Podium18
10-10:30											
10:30-11											
11-11:30			Symposium 1		Symposium 2	Podium10	Podium11	Awards 1	Symposium 3		Symposium 4
11:30-12											
12-12:30											
12:30-1		*	Lun	Lunch / Exhibits	oits	Lur	Lunch / Exhibits	bits	Lur	Lunch / Exhibits	lits
1-1:30	Tutorial 1	Tours 1	Sp	Sponsors Lunch	ch	Stu	Student Luncheon	eon	Women	Women in Science Luncheon	Incheon
1:30-2			Bo	Borelli Lecture	Ire	T	Hay Lecture	e	ASB	ASB Business Mtg	Mtg
2-2:30											
2:30-3		*	Themat 1	Themat 2	Themat 3	Themat 4	Themat 5	Themat 6	Podium19	Podium20	Awards 2
3-3:30	Tutorial 2	Tours 2									
4:-4:30			Podium 4	Podium 5	Podium	Podium13	Podium14	Podium15	Closi	Closing Ceremonies	onies
4:30-5			4:15-5:30	4:15-5:30	4:15-5-30	4:15-5:30	4:15-5:30	4:15-5-30	ASB Exec.	Exec. Boar	Board Mtg
5-5:30	ASB Exec. Board Mtg	Board Mtg									
5:30-6		*	Post	Poster 1 / Exhibits	ibits	Post	Poster 2 / Exhibits	ibits			
6-6:30				(Cash bar)			(Cash bar)				
6:30-7										Banquet	
7-8			Open	Opening Reception	otion	Stuc	Student night out	out			
8-9											
9-10											
10-11											

Membership Committee Julianne Abendroth-Smith

Hello from the great Northwest, one more time. As membership Chair, I will have fulfilled my commitment to the Society as of the 2006 Fall Meeting. I have been honored to serve on the Executive Board, and would encourage everyone to do so. I have had the privilege of meeting many wonderful and dynamic people who belong to this group, and the experience has been outstanding. I also want to thank the current membership committee, Chris Hass, Max Kurz, Lena Ting, and Andrew Mahar for all their efforts and hard work. As I look over the past three years, membership has not changed a great deal in our demographics, but we keep bringing in members who are active in research, participate in our annual meetings, and work together to support our students through grants and regional meetings, mentoring and tutoring. We have, in the past year, sped up the process of applying for regular and student membership, so the lag time between applying and acceptance has lessened appreciably for most applicants. We hope to continue to improve this process, moving to an online system in the future. This year we also have restructured our commercial membership, with changes to the different levels of support, the membership benefits and the fees. The three levels of support are now Sustaining, our highest level, which is limited to three companies, followed by Supporting and then Corporate members. We would most heartedly like to welcome our new Sustaining Members: Motion Analysis Corporation, Bose Corporation - EnduraTEC, and ViconPeak. We appreciate their support and commitment to ASB. All the companies that lend us their support are much appreciated, so be sure to let them know. Their fees help support many of our programs.

Commercial Members

Commercial membership categories are aimed at encouraging affiliation by commercial organizations that market products which are used by the biomechanics research community, or companies that are otherwise engaged in activities that fall within the Society's general interest areas. Companies wishing to become a Commercial Member are encouraged to contact Julianne Abendroth-Smith, Membership Committee Chairperson. The ASB Executive Board is pleased to recognize:

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Past-President

J. J. Trey Crisco

After the awards committee considered a very impressive list of candidates for this year's ASB awards, it gives me great pleasure to announce the winners for the following awards. I would like to sincerely thank the awards committee, James Ashton-Miller, Julie Abendroth-Smith, Joan Bechtold, Mark Grabiner, Ted Gross, Walter Herzog, and Ken Kaufman, for their extensive time and effort reviewing the applications.

The American Society of Biomechanics Awards:

BORELLI AWARD. The Borelli Award, the most prestigious honor given by the ASB, recognizes outstanding career accomplishment and is awarded annually to an investigator who has conducted exemplary research in any area of biomechanics.

JIM HAY MEMORIAL AWARD FOR RESEARCH IN SPORTS ANDEXERCISE BIOMECHANICS. The Jim Hay Memorial Award recognizes outstanding career accomplishment and is awarded annually to an investigator who has conducted exemplary research in the area of Sports and Exercise Science biomechanics.

YOUNG SCIENTIST AWARDS (Pre-doctoral and post-doctoral). These awards recognize early achievements by promising young scientists. They are awarded annually to one pre-doctoral student and one post-doctoral student.

The 2006 Award winners are:

Borelli Award Walter Herzog, The University of Calgary

Jim Hay Memorial Award Peter Cavanagh, The Cleveland Clinic Foundation

Pre-Doc Young Scientist Award Hannah J. Lundberg, University of Iowa

Post-Doc Young Scientist Award Karen L. Troy, University of Illinois at Chicago

The Microstrain, Journal of Biomechanics, Clinical Biomechanics and President's Awards are based upon abstract submission and will be determined from the top abstracts submitted to the annual meeting and announced at the 2006 Annual Meeting at Virginia Tech.

TravelAward

Deadline for the Travel Award is July 1, 2006. A Travel Award of up to \$1,000 (USD) is offered to foster collaborative research and interaction among scientists by helping to offset the cost of travel to a host institution. All regular ASB members (i.e. not student nor corporate members) are eligible to apply. A cover letter describing the details of the planned project, a copy of the applicant's curriculum vitae, and an indication of the availability of any matching funds from the host's or candidate's institution (desirable but not required) should be submitted. The recipient of the Travel Award is expected to present a poster of the funded project at the 2007 ASB annual meeting.



HERE GOES ARCHIMEDES WITH HIS CONFOUNDED LEVER AGAIN"

NOMINATIONS FOR OFFICE IN THE ASB

Here are the biographical sketches provided by the candidates nominated to run for Program Chair-Elect, President-Elect and Secretary/ Treasurer-Elect. Please consider these sketches carefully as you vote. It is very important that the membership of our society take an active role in determining who will fill these positions. In early June, you should receive voting instructions by e-mail. Please remember to VOTE AT THAT TIME. We will announce the results at the annual meeting at Virginia Tech. If you do not receive an e-mail, please contact Don Anderson (contact information on page 3).

Candidates for Program Chair-Elect

Jonathan B. Dingwell, Ph.D.

Jon Dingwell received his B.S. in Physics from Miami University (in Oxford, Ohio), his MS in Biomedical Engineering from Ohio State University, and his Ph.D. in Kinesiology from Penn State University. His Ph.D. work was supported by a Graduate Student Grant-In-Aid from ASB and recognized by the 1999 ASB Clinical Biomechanics Award. At the Rehabilitation Institute of Chicago, his postdoctoral work was supported by an Individual NRSA Postdoctoral Fellowship from NIH. Dr. Dingwell is currently an Assistant Professor in the Department of Kinesiology & Health Education at the University of Texas at Austin, where he also serves on the Graduate Studies Committee in the Department of Biomedical Engineering. He also held a University of Texas Faculty Dean's Fellowship for 2005-2006. Dr. Dingwell is the director of the Nonlinear Biodynamics Lab, where his research is dedicated to understanding the biomechanics and neuromuscular control processes that underlie complex adaptive human movements. Current projects include elucidating the mechanisms humans use to maintain dynamic stability during walking, discovering how motor coordination changes over time during fatigue and repetitive stress injuries, and determining the role of neuronal noise in movement coordination. These projects are currently funded by research grants from the Whitaker Foundation and NIH. Dr. Dingwell is a member of ASB, ISB, IEEE EMBS, and the Phi Kappa Phi National Honor Society. He served as Associate Editor of IEEE Transactions on Neural Systems & Rehabilitation from 2002 to 2006 and has been an ad hoc reviewer for numerous journals including the Journal of Biomechanics and the Journal of Biomechanical Engineering. He was a grant reviewer for the AAAS Research Competitiveness Service for six grant competitions since 2003. Dr. Dingwell was an abstract reviewer for the 2003 IEEE EMBS meeting, the 2004 ASB meeting, and the 2005 ISB meeting. He was also Track Chair for the "Biomechanics and Clinical Applications" track at the 2003 IEEE EMBS meeting. As program chair for the 2008 ASB meeting, Dr. Dingwell will promote scientific discourse between basic and clinical researchers seeking to apply state-of-the art computational and experimental approaches to understand biomechanical principles across multiple length scales (from sub-cellular to whole organism) and time scales (from milliseconds to decades).

Richard Hughes, Ph.D.

Richard Hughes first attended an American Society of Biomechanics meeting in 1987. "I fell in love with the breadth of biomechanics at the ASB meeting in Davis. I heard talks ranging from humans hopping with loads on the shoulders to elephant movement and bicycling biomechanics," he said. He has been active in the society since then. In explaining why he wants to be program chair, he said, "The ASB seems to have narrowed over the years to the point where it seems to be a health sciences conference. The sports, comparative biology, and ergonomics/ human factors areas have diminished. We all have other meetings that are more closely aligned with our disciplines, so the unique reason to attend the ASB meeting is to hear papers both inside and outside our primary areas of biomechanics. My first priority for the program would be to actively solicit contributions from all areas of biomechanics because much of the program is driven by abstract submissions. This would be done through mailings and personal contacts to departments and established investigators." Dr. Hughes is an Associate Professor of Orthopaedic Surgery and Biomedical Engineering at the University of Michigan. He received his B.S.E. degree from Princeton University and M.S.E. and Ph.D. degrees from the University of Michigan. Prior to joining to the faculty at the University of Michigan, he worked as an ergonomist at the Washington State Department of Labor and Industries and as a safety engineer/team leader at the National Institute for Occupational Safety and Health. He also completed a postdoctoral fellowship at the Mayo Clinic's orthopaedic biomechanics lab. He was the pre-doctoral young scientist award winner in 1990. He has been on the ASB nominating and awards committees, and has served as a reviewer for abstracts for five ASB meetings. He has published forty-nine peer-reviewed papers and is an NIHfunded investigator. He has been a reviewer for twenty-two journals, including Journal of Biomechanics, Clinical Biomechanics, Journal of Orthopaedic Research, and Ergonomics. His primary research area is the application of operations research methods to problems in ergonomics and orthopaedics.

Candidates for President-Elect

Rodger Kram Ph.D.

I am an associate professor in the Integrative Physiology Dept. at the University of Colorado, Boulder. I earned my B.A. in Biology at Northwestern University, M.S. at Penn State, Ph.D. in Biology from Harvard in 1991 and was a post-doc then assistant professor at Berkeley until 2000. My primary research interest is the biomechanical basis for the energetic cost of locomotion. I study basic science aspects of walking and running in healthy, young people, and how obesity, aging and disability affect locomotion energetics and mechanics. I have published over 40 peer-reviewed research articles and have studied more than 40 animal species ranging from ants to antelopes to elephants. Although I mostly study human locomotion now, I still get to study some pretty cool animals (e.g. turtles and crocodiles lately). My human locomotion research has been primarily funded by NIH. I am on the editorial board for the Journal of Applied Biomechanics and regularly review for an assortment of other journals (Nature, Science, J. Biomech., J. Appl. Physiol., J. Exp. Biol.). I have served as an adhoc grant reviewer for NSF, NIH and VA. One of my greatest rides is that all five Ph.D. students whom I have mentored are all gainfully employed in science. I attended my first ASB meeting in 1986 and have attended/presented at 8 of the 10 most recent meetings. I have contributed book reviews to the ASB newsletter, served as an abstract reviewer for several annual meetings and most notably was the scientific program chair for the 2003 meeting in Toledo. I am a member of other scientific societies, but I find ASB to be the most personally rewarding.

If elected President, there are many aspects of ASB that I would NOT change. For example, I want to keep our meeting size intimate and the duration concise. I want to keep it relatively cheap to join ASB and to attend our meetings, especially for students. But, I would like to expand some good things that others have initiated. For example, I would actively seek more corporate sponsors. Many of our current sponsors are biomechanics specific, but much of our research budgets go to much bigger companies (Dell, Microsoft, Apple, Mathworks, National Instruments). Our annual meeting generates several hundred thousand dollars for the travel industry and we should be able to shake some donations out of United Airlines, Travelocity, Avis etc. to sponsor our Graduate Student Travel awards. Our membership and meeting base of engineering and exercise science are strong. But, few of our members come from the Biological Sciences. I would make a strong effort to recruit more participants/members from the Society for the Integrative and Comparative Biology, the Biophysical Society and the American Society of Plant Biomechanics. I would like to revive the NACOB conference, which has been the intermittent combined meeting of ASB and the Canadian Society of Biomechanics. Finally, I would try to recruit a host for the annual meeting somewhere in the Rocky Mountain region.

Robert Shapiro, Ph.D.

I have just completed my twentieth year at the University of Kentucky where I am a Professor of Kinesiology and Health Promotion, and Biomedical Engineering. I am a co-founder and the Director of the multidisciplinary Biodynamics Laboratory. Prior to my appointment at UK, I served on the faculty of Northern Illinois University for 7.5 years, and developed their Biomechanics Laboratory. I received my Ph.D. in Biomechanics from the University of Illinois at Urbana-Champaign in 1979. I earned my M.S. degree in Biomechanics from Penn State and my B.S. degree from Brooklyn College in Health and Physical Education. Over the past thirty years, my research interests have evolved from sport biomechanics to the development of an expertise in threedimensional motion analysis and more recently to the study of mechanics of injury. Current projects in my laboratory include examining the role of proprioception in injury and recovery; the role landing mechanics plays in the incidence of ACL injuries; and ergonomic issues affecting the performance of surgeons using minimally invasive surgical techniques. These projects reflect broad collaborations with faculty and students in Kinesiology, Biomedical Engineering, Robotics, Medicine, Physical Therapy, and Athletic Training. The results from these projects have been reported in a number of peer-reviewed journals including Journal of Biomechanics, Clinical Biomechanics, Gait and Posture, Surgical Endoscopy and Medicine and Science in Sport and *Exercise.* During my tenure at UK and NIU, I have advised numerous masters and doctoral students. While at UK. I have served as Director of Graduate Studies and Chair for the Department of Kinesiology and Health Promotion. I then completed an elevenyear appointment as Associate Dean for Research and Graduate Studies. During that time, I continued to obtain funding support, conduct research, advise graduate students and direct the Biodynamics Laboratory. I recently resigned that administrative position to rejoin the faculty and fully devote my efforts to biomechanics. As a founding member of ASB, I am pleased to have the opportunity to serve the society. In the past, I served as Secretary-Treasurer from 1998-2001, was a member of the Awards Committee, and reviewed abstracts. During my time on the executive board, we established the regional student conferences that reflect the society's strong support for its student members. We also sought ways to attract more members from the diverse fields that make up "biomechanics". I believe that the significant strengths of this society lie in the excellent support provided for student members, the diversity of our membership and the quality of our professional meetings. These attributes make it a unique organization among the professional societies in our fields.

As President, I would continue to seek ways to support and involve students in all aspects of the society. I would work with the executive board and current members to continue to expand and diversify our membership. Finally, I would seek ways to strengthen our annual conference so that it continues to provide the excellent learning and collaborative scientific experiences, and personal interactions that it has in the past.

Candidates for Secretary/Treasurer-Elect

Paul Devita, Ph.D.

As a candidate for Secretary-Treasurer of the American Society of Biomechanics, let me assure the membership of two important and relevant facts. I can type and I have never been convicted felony fraud, embezzlement, or insider trading. Thus, I present myself for service for the membership and for the Society as a capable candidate who is skilled in avoiding nasty brushes with the law. You have now reached the fourth sentence of my, "life in print," which is about two sentences farther than I usually read in these absorbing dramas. Are you feeling ok? Wouldn't you like to be doing something else at this time? If the answers to these questions are yes and no and if my primary credentials have not yet garnered your vote, I fear I must continue. So, let me continue with a true story of biomechanical import, biomechanical pathos, and biomechanical destiny. I was sitting in my seventh grade German class one afternoon in 1968 gazing out the window as all seventh grade German students do. Slowly I became aware of a figure walking far, far away across the athletic fields and I recognized that figure as Matty Rossoff. I marveled at how I could recognize Matty from such a great distance. It was not by seeing his face that I recognized him but by the way he walked. I understood that his movements were a personal signature that were unique to him, that distinguished him from everyone else. Thus in seventh grade I had performed my first biomechanical gait analysis and apparently was destined to become a biomechanist and a candidate for ASB Secretary-Treasurer. Biomechanical pathos? Of course as I am sure you are thinking, "this biomechanist is pathetic." Let me conclude by providing a few minor details. Like most members of ASB, I have several academic degrees completely unrelated to a secretarial-treasurer position which is probably for the best. These degrees came with diplomas, the prettiest of which and the only one displayed in my office being from Walt Whitman High School in Huntington, NY. I have been an ASB member for 20 years and have presented what I but possibly not others call science at most ASB meetings during this time. I have some number of publications, two of which I am sure have scientific value. Well, maybe one. I once had a good idea that has led to current NIH funding on locomotion and aging. I also serve as a member of the Musculoskeletal and Rehabilitation Sciences NIH study section and as an associate editor for the Journal of Applied Biomechanics. I hope for your sake you have not read this entire tragedy but if you have, I thank you for your time and I suggest you get out in the sun more often.

Deborah L. King, Ph.D.

Deborah King is an Assistant Professor in the Department of Exercise and Sport Sciences at Ithaca College. She received her BS in Mathematics from Bates College in Lewiston, ME, and MS in Exercise Science from the University of Massachusetts, Amherst, MA, and her PhD in Biomechanics from the Department of Exercise Science, The Pennsylvania State University in 1997. Deborah teaches undergraduate and graduate level courses in biomechanics at Ithaca College. Her primary research focus has been in sport biomechanics, specifically working closely with United States Figure Skating and the United States Olympic Committee studying the biomechanics of figure skating. Her work has been funded by the US Figure Skating, the US Olympic Committee, The International Skating Union, and the International Olympic Committee. Previously she has conducted research on posture stability and videographic techniques. In the past few years she has expanded her research interests to include injury related research in landing and stop and go tasks. Her research has been published in Journal of Biomechanics, Medicine Science in Sport and Exercise, Journal of Applied Biomechanics, Gait and Posture, and Sport Biomechanics. Deborah is a member of ACSM, ASB, ISB, and ISBS. She serves on the Sports Medicine and Science Committee of US Figure Skating and is Vice Chair of the Sport Science Council of US Figure Skating. She has served as an ad hoc reviewer for several journals including Medicine and Science in Sports and *Exercise* and *Journal of Applied Biomechanics*. She is strongly committed to fostering undergraduate and graduate students in the research process and is proud to have mentored several students who have presented at ASB as undergraduate and master's level students. If elected secretary/treasure she will facilitate the transition to online membership renewal and application, promote student membership and participation in regional and national meetings, and continue to advance the publicity of the ASB.

Business Meeting Minutes

Minutes of the Annual Business Meeting American Society of Biomechanics August 4, 2005 at the Annual Meeting in Cleveland, OH ASB President Trey Crisco called the meeting to order at 12:40 p.m. Roughly 75 members were in attendance

Roughly 75 members were in attendance.

A motion to approve the minutes of the 2004 Annual Business Meeting was made by Kathy Simpson, and seconded by Richard Hughes. Motion was approved by unanimous vote.

Secretary/Treasurer Report was given by Don Anderson. Don reported that Society finances are sound. Financial figures as of 07/21/2005 were \$34,383.78 in the bank, \$126,993.40 in investments, for a total value of \$161,377.18. Figures for last year at the same time were \$48,328.32, \$109,291.49, and \$157,619.81. The shift from cash to investments is attributed to depositing of Hay Award Endowment \$\$ into a short-term investment vehicle, with a guaranteed annual return. This was done to conservatively invest the funds while continuing to collect for a longer-term endowment to be set up. After accounting for this boost in investments, a 5.1% return was achieved on investments this past year.

Next, Don reported on membership numbers (see table below). Regular membership numbers are comparable to previous years, while student membership numbers have risen significantly over the past three years. Don clarified that these numbers are subject to the time of year at which they are compiled, as members are added throughout the course of the year. Don reported that 222 ASB members pre-registered for the Annual Meeting (131 Regular, 91 student).

	2002	2003	2004	2005
Regular	513	454	479	474
Student	73	79	131	143
Emeritus	5	5	6	8

222 ASB Members pre-registered for meeting

> 131 Regular, 91 student

Membership Committee Report was given by Julianne Abendroth-Smith, Chair. Julianne began by sharing that she is currently working on streamlining the application process for joining ASB, including online application process. Membership numbers have held steady for the year, with an increase in the number of student members joining.

Student Representative Report was given by Melissa Scott-Pandorf. Melissa reported that the mentor program being carried out on-site at the meeting has brought together 60 participants. A student luncheon was held Tuesday at noon, and 50-60 students attended. Several former ASB presidents were in attendance for a Q & A period. A "student night out" was organized and held on Wednesday night, and 50 or so students participated. Finally, Melissa shared that a "Women in Science" breakfast was held Thursday morning, and approximately 75 people attended it. The program involved presentations by several female midcareer scientists from within ASB, who shared their stories of how they have successfully managed their professional careers as women.

Education Committee Report was given by Steve McCaw, Chair. Steve announced the members of his committee for acknowledgment. He reported that the Grant-in-Aid program received 13 applicants this year. The committee reviewed the applications and awarded 5 grants totaling \$8995. The deadline for applications to the 2006 GIA program is January 16, 2006. Steve shared that ASB funded three regional student meetings in the past year (Minneapolis, MN - \$1,153.68; Fullerton, CA - \$1690.59; and Seattle, WA - \$1830), and all three reported on the success of their meetings in the Spring 2005 Newsletter. Steve has already received an application for a 2006 regional meeting in Milwaukee, and he will be presenting it to the Executive Board at their meeting tomorrow to approve funding. Based on the growing success of this program, which has been operated on pretty much an ad hoc basis, the Executive Board has decided to establish some guidelines to assist in selection of which of multiple future applications to fund in any given year. Steve acknowledged Melissa Scott-Pandorf's able contributions as student representative, crediting her and her predecessor (Max Kurz) for growing enthusiasm among student membership.

Communications Committee Report was given by Kathy Simpson, Chair. She began by telling members of her current efforts toward updating our website. She has been in close communication with key individuals involved in the recent expansion of the website of the International Society of Biomechanics. They plan to further expand the scope of that website, and they will be inviting ASB to participate in this process. Details of what this might entail will be forthcoming, but in the meanwhile, Kathy and her committee will be considering how further integration with the ISB website might be beneficial to the ASB membership. Kathy shared plans to overhaul the section of the ASB website dedicated to disseminating information about graduate programs in Biomechanics.

2006 Annual Meeting: Stefan Duma, local meeting arrangements chair from Virginia Tech, reported on early plans for the 2006 Annual Meeting, scheduled to be held during early September in Blacksburg, VA. People traveling by air to the meeting are likely to fly into Roanoke, VA. Shuttles will be arranged to get people to Blacksburg from Roanoke. Stefan encouraged people to plan to attend, stating that there are plenty of things to do in the Blacksburg area. Website is already setup at ASB2006.org. More information will be placed on the website soon. Irene Davis, Program Committee Chair, shared that she has formed a committee with Joe Hamill, and that symposia topics are currently being entertained, and current plans envision new thematic poster sessions.

President's Report was given by Trey Crisco. During the year, he has been working with Kathy Simpson to reinvigorate the ASB website. A specific focus has been placed on archiving of documents and operational procedures on the website. As the time allotted for the Business Meeting was short, Trey kept his report brief.

Trey formally passed the ASB Presidency to Ted Gross. Ted congratulated Trey on his successful term as President, and thanked him and Walter Herzog (outgoing Past-President) for their service to the Society. Next, Ted asked Trey to present nominees for the Nominations Committee, to be formed to select candidates for election to office in 2006 (President-elect, Secretary/Treasurer-elect, and Program Chair-elect). In addition to himself (Trey is officially Chair of the Committee as Past-President), Trey offered Scott Delp and Jill McNitt-Gray as nominees for the committee. The floor was opened for nominations, and Rodger Kram nominated Dan Ferris. Nominations were closed. Owing to shortness of time, and desire to get everyone to the Borelli Award lecture on time, vote was tabled to be carried out later electronically. [NOTE that it has since come to the attention of the Executive Board that as Scott Delp and Trey Crisco both claim Engineering & Applied Physics as their Discipline, and the Bylaws specifically stipulate that members of the Nominating Committee must be from different Primary Disciplines, Scott Delp's candidacy was annulled, and the vote was made unnecessary. Dan Ferris (Biological Sciences) and Jill McNitt-Gray (Exercise & Sport Science) will join Trey on the Nominations Committee.]

Ted Gross briefly shared with those present that he intends to focus his efforts in the coming year on continuing to expand student services and opportunities within the Society.

Program Chair Art Kuo quickly shared that 996 abstracts were accepted for the Cleveland meeting, 348 as podium presentations and 648 as posters. He wanted people to know that his job was made easier this year by the fact that the ISB did most of the work in putting together the program, as ASB Programming was really only a distinct part of the dedicated Thursday segment of the Meeting.

Fred Werner moved to close the meeting (Kathy Simpson seconded) at 1:07 p.m., just in time for all present to hurry along to the Borelli Award lecture.

Respectfully submitted,

Don Anderson ASB Secretary / Treasurer

NOTICE TO STUDENTS: In order for you to register as a student ASB member for the annual meeting, you must be a paid member by August 1.

These Go to Eleven Andy Karduna

From all accounts, the Banquet at the Rock and Roll Hall of Fame was one of the highlights of last year's combined ISB/ASB meeting in Cleveland. Throngs of biomechanists singing and dancing along with the Iliotibial Band - what a sight. I wouldn't know. Rather than spend the extra night in Cleveland, I decided to take the red-eye back home before the event began. However, due to mechanical issues with the plane, I spent half of the evening sitting at gate 21 in the Cleveland airport and the other half sleeping at gate 23 in Vegas (unfortunately, no Elvis sightings). When I awoke, I met a refreshed colleague who had taken in the show, spent a comfortable night in a hotel and caught an early flight. He even got home before I did - I know, since I gave him aride home from the airport. Some time later, Bil Ledoux was kind enough to point out what a great time I had missed and emailed me the lyrics to "The Graduate Student" that Martyn Shorten had sent him. It's almost like I was there.. Li-la-li ...

"The Graduate Student"

In the style of "The Boxer" (Simon and Garfunkel) with acoustic guitar accompaniment.

I'm just a graduate student and my story's seldom told. I have squandered my parents' money on a poster presentation at the ISB. I tried my best, but reviewers see what they want to see and disregard the rest.

When first I went to grad school, I was no more than a boy, in the company of strangers, in the quiet of the campus library, running scared, laying low, seeking out the rarer journals where the graduate students go, looking for the papers only they would know.

Chorus. Li-la-li, Li-la-li,li,li,li,li Li-la-li, Li-la-li,li,li,li,li Li-la-li, li, li

Asking only student wages, I went looking for a job, but I got no offers. Just a come-on from the Profs in Kinesiology. I do declare, there were times when I was so lonesome I took some classes there.

Chorus

I tried collecting data, with equipment off the shelf and a wonderful new method I invented by myself. It didn't work; and I lost one of my subjects when the treadmill went berserk.

Chorus

When I analyzed my data It was getting rather late. Prof said they were homeoscedatic, but I told him I was straight. Three-way Analysis of Variance with repeated measures on two factors; missing data in the third, .. lots of missing data,

.. so I did a t-test.

Chorus

At last I wrote my thesis, 'though I couldn't have cared much less; but the night before my defense, suddenly I realized I was in a mess. My stats were screwed. ... Yes, I said screwed; ... really screwed. With my defense in the morning, there was only one thing I could do.

Modified Chorus

Lie, Lie, Lie. Lie! Lie, Lie, Lie!

In the clearing stands a graduate, Biomechanist by trade; and he carries the reminders of every Prof that questioned him or knocked him till he cried out, in his anger and his shame, "I don't deserve a Ph.D," "but I'll take it just the same."

Chorus

Chorus

Calendar of Events

William Ledoux

Meeting of the American College of Sports Medicine

May 31 - June 3, 2006, Denver, Colorado Abstract deadline - past www.acsm.org/AM/Template.cfm?Section=Annual_Meeting2

Society for Experimental Mechanics Conference and Exposition June 4 - 7, 2006, St, Louis, Missouri

Abstract deadline - past www.sem.org/CONF-AC-TOP.asp

Summer Bioengineering Conference

June 21 - 25, 2006, Amelia Island, Florida Abstract deadline - past divisions.asme.org/bed/events/summer06.html

International Symposium on the 3-D Analysis of Human Movement

June 28 - 30, 2006, Valenciennes, France Abstract deadline - past www.univ-valenciennes.fr/congres/3D2006/index.htm

$International\,Conference\,on\,Engineering\,of\,Sport$

July 11 - 14, 2006 Munich, Bavaria, Germany Abstract deadline - past www.sportkreativwerkstatt.de/isea2006

International Symposium on Biomechanics in Sports

July 14 - 18, 2006, Salzburg, Austria Abstract deadline - past www.isbs2006.at

International Muscle Energetics Conference (IMEC)

July 22 - 27, 2006, Banff, Alberta, Canada Abstract deadline - May 22, 2006 www.imec2006.com

World Congress of Biomechanics

July 29 - August 4, 2006, Munich, Germany Abstract deadline - past www.wcb2006.org

Conference for the Canadian Society of Biomechanics August 16 - 19, 2006, Waterloo, Ontario Abstract deadline - past *www.csb2006.uwaterloo.ca*

IASTED International Conference on Biomechanics August 28 - 30, 2006, Palm de Mallorca, Spain Abstract deadline - May 22, 2006 www.iasted.org/conferences/2006/Spain/biomech.htm

IEEE Engineering in Medicine and Biology Society

August 30 - September 3, 2006, New York, NY Abstract deadline - past *embc2006.njit.edu*

Annual meeting of the American Society of Biomechanics

September 6 - 9, 2006, Blacksburg, VA Abstract deadline - past *asb2006.org*

Annual Meeting of the International Functional Electrical Stimulation Society September 12 - 15, 2006, Miyagi-Zao, Japan Abstract deadline - May 31, 2006

www.ifess2006.jp **IFACSymposium on Modelling and Control in Biomedical Systems**

September 20 - 22, 2006, Reims, France Abstract deadline - past www.univ-reims.fr/Labos/LAM/mcbms06

$Joint\,ESMAC\,\hbox{-}\,GCMAS\,Meeting\,(JEGM06)$

September, 28 - 30, 2006, Amsterdam, the Netherlands Abstract deadline - past www.jegm06.org

Annual Meeting of the Human Factors and Ergonomics Society

October 16 - 20, 2006, San Francisco, California Abstract deadline - past www.hfes.org/web/HFESMeetings/06annualmeeting.html

Annual Meeting of the Orthopaedic Research Society

February 11 - 14, 2007, San Diego, CA Abstract deadline - July 31, 2006 www.ors.org

Australasian Biomechanics Conference

February 15 - 17, 2007, Auckland, Australia Abstract Deadline - October 1, 2006 www.cce.auckland.ac.nz/conferences/index.cfm?P=9173

International Conference on Rehabilitation Robotics (ICORR) June 13 - 15, 2007, Noordwijk, the Netherlands Abstract deadline - tba *www.icorr2007.org*

NOTE: For a more comprehensive international listing, please visit ISB's website at: www.isbweb.org/conferences

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