



# American Society of Biomechanics Newsletter

Vol. 18    December 2005    No. 2

[www.asb-biomech.org](http://www.asb-biomech.org)

## From the President

**Ted Gross**

I recently returned from a regional bioengineering meeting in Alberta, in which all of the presenters were graduate students. The level of preparation, the ability to communicate why they were studying what they were studying, the clarity in describing their approach and interpretation of the data were all quite impressive. However, the most enjoyable aspect of the meeting, from my perspective, was the energy and excitement of the students, many of whom were presenting at a scientific meeting for the first time.

ASB enables the same opportunities, on a somewhat broader scale. It is often the first national meeting attended by students and the first national meeting where they present their data. Providing a rigorous yet relaxed environment is one of ASB's singular contributions to the Biomechanics community. Over the past several years, the Executive Board has discussed a number of opportunities to merge our annual meeting with other Biomechanics meetings. We have done so twice in the last 4 years (2002 in Calgary with the World Congress of Biomechanics and just a few months ago in Cleveland with the International Society of Biomechanics). Participating in joint meetings has a number of benefits for our society, including expanded interaction with the international Biomechanics community and exposure to other related fields (often via increased access to outside speakers). However, we also give up some aspects unique to our society: the meetings are often much larger (as are the venues) and the environment is sometimes less conducive to student presentations. While ASB has almost always held its annual meeting at university facilities, the 2004 Portland meeting clearly demonstrated that it is possible to develop a typical ASB atmosphere at a hotel conference center. Another balancing factor is that ASB sponsorship of regional student centered meetings has expanded in recent years (under the leadership of Education Chair, Steve McCaw) and provides

additional venues for students to gain presentation experience. The Executive Board will soon be considering a future joint meeting (a 2008 North American Congress of Biomechanics meeting in conjunction with the Canadian Society of Biomechanics) and we consider applications for regional meetings on a rolling basis. Any input from ASB members on this topic would help guide our considerations.

Speaking of input, I would like to encourage all members to consider participating on a standing committee (such as the membership and awards committees, both of which require representation across our disciplines), in an appointed Executive Board position, or running for elected office. Our society uniquely functions via the volunteered efforts of its members. This allows us to continue to have extremely low annual dues compared to other national societies that employ full time staff. The Executive Board meets twice a year, during the annual meeting and at a separate 1.5 day mid-year meeting, but we conduct most of our business electronically (to this end, our new website will be launched soon: <http://www.asb-biomech.org/>). The levels of effort vary widely for the different positions (to be honest, the Presidential duties are at the very low end, but one does get the opportunity to drone on twice a year in the newsletter). One real challenge facing ASB is our continued inability to equalize membership from our different disciplines (nearly 50% of our members are drawn from the engineering and applied physics area). Our multi-disciplinary membership is part of the essence of ASB. However, this disparity, like other inequities, is often self-perpetuating. One viable means of altering this trend is for members from the less-represented disciplines (biological sciences, ergonomics, and exercise and sports science) to actively seek various society leadership positions.

I will end here (and stop with the parenthetical comments, as well), remind you to mark your calendar for our next annual meeting on September 6-9, 2006 at Virginia Tech in Blacksburg, VA, and wish you and your families a happy and safe holiday season.



## ASB NEWSLETTER volume 18, number 2

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#### **Editors Note:**

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

**[www.asb-biomech.org/newsletter](http://www.asb-biomech.org/newsletter)**

### 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](mailto: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](mailto: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 data base which is periodically updated and distributed to the Executive Board.



## Student's Corner

### Melissa Scott-Pandorf

Greetings fellow ASB student members! I hope your transition into a new school year has been smooth. After a glitch from a threatening hurricane, things have started to return to normal and I am now back in my office at the University of Houston. Once again, I am writing to inform you of the events that occurred during the recent ASB meeting. This year's meeting was a combined meeting between the ISB and ASB. It was well attended with approximately 1000 scientists from all over the world. The meeting, held in Cleveland, offered students more interaction than ever before. For the second year now, the ASB Mentor Program successfully matched over 30 of our student members with senior scientists. This year students and their mentors were able to download information about participating in the program on the ASB website. This offered some guidelines and suggestions for increasing the student/scientist interaction during the week long meeting.

There was an impressive turnout of approximately 50 students at the ASB student business meeting. The students were introduced to a panel of past and present ASB Presidents who described their career paths and answered questions from the students. There were a number of great questions asked which fostered a wonderful interaction between the past Presidents and the students. The success was evident when I was forced to stop the meeting after running over the allotted lunch time.

A new event for students to attend at the meeting was the Student Night Out. This was designed for students to network in an informal setting. It was held at a popular spot along the water and there was a tremendous turn out of over 60 students (along with some senior scientists).

The final student event of the week was the second annual Women In Science Breakfast, which was attended by over 75 female students and senior scientists. Due to the tight schedule of events at the meeting, we were once again slotted for breakfast. Time ended up passing before we could truly interact. Next year my plans are to reduce the number of featured scientists to around four and hopefully leave more time to spark conversations.

A couple of students approached me during the meeting and offered some great suggestions for improving student opportunities. Based on these suggestions I am currently working with the ASB executive board to create student focused tutorials, a designated Mentor-Mentee lunch, and creating an expanded mentor system. For the tutorials, I am working with the board to find a speaker that can inform students on external funding. The Mentor-Mentee lunch will be a designated area on the first day where those participating in the mentor program can go to meet their match. This idea was developed after some students and mentors had expressed difficulty in meeting their match. Hopefully

this can alleviate some of this problem. Lastly, I have hopes of expanding the mentor program. I would like post-doctoral and doctoral students to have the opportunity to mentor some of the newcomers in the society. Some students may not feel comfortable with meeting a senior scientist at their first national meeting and would prefer a fellow student with a little more experience to show them around. The expansion of the mentor program could only happen if there is real interest among the students for this to occur. I am asking all student members to send me a brief note (mmscottp@gmail.com) on their thoughts for the expansion. In addition, further suggestions are always welcome! Please don't forget to visit the ASB website regularly as updated opportunities and information for graduate students is always available. Also keep in mind that my time as the student representative will soon come to an end and the position will be open. If you are interested in running next September and have any questions please feel free to contact me. I will explain more on this in the next newsletter issue. I wish you all a wonderful year of learning and new discoveries.

## Secretary/Treasurer

### Don Anderson

As of November 1, funds in our cash accounts totaled \$18,860.81. This amount is somewhat below the level in the recent past for this time of year, but we are still awaiting a payment from the organizers of this past summer's meeting. Once that check for \$10,000 (guaranteed) comes in, we will be back to our standard operating levels of cash in our bank account.

A few specific notes to pass along. We paid out \$6000 in awards at our annual meeting this past summer, with \$2500 being underwritten by corporate support (thanks to Elsevier, Microstrain, Inc., and Vicon Peak). The Annual Meeting registration rebate program for student members turned out to be very popular, with \$3550 in \$50 checks being distributed. We presently have \$130,330.08 in our investments portfolio, hopefully appreciating in value at a fast enough pace to accommodate our award and rebate expenditures.

Oh... an update on a statement I made last column regarding sales tax assessment (or lack thereof) upon journal subscriptions passed through ASB. Never mind... It turns out we are not subject to those taxes, and I had been concerned for no legitimate reason. All part of the educational process associated with being Sec/Treas.

I will soon be turning my attention to mailing out (electronically) invoices to one and all for payment of your 2006 membership dues and subscriptions. If your email address has recently changed, save yourself some trouble, and please send along an update to my attention (don-anderson@uiowa.edu). Thanks.

Well, that's all for now.

# ASB Executive Board 2005–2006

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## Past Past-President

### Walter Herzog

As I am stepping aside from the ASB executive, I would like to briefly report on the events associated with the past-president's duties which centre around the awards.

First and foremost, I would like to thank the award's committee for their help in identifying the various winners of this year's ASB conference. The committee consisted of Joan Bechtold, Mark Grabiner, Trey Crisco, Ted Gross, Julianne Abendroth-Smith and James Ashton-Miller. I would also like to thank Ton van den Bogert from the ASB/ISB organizing committee who identified the top 5% of all submitted abstracts in record time, and thus made life really easy for me for all the awards that were based on the regular abstract submissions.

The winners of the 2005 ASB conference include:

#### **Borelli Award**

Kai-Nan An, Mayo Clinic

#### **Jim Hay Memorial Award**

Mont Hubbard, University of California at Davis

#### **Young Scientist Award (pre-doctoral)**

Kate Holzbaur, Stanford University

#### **Young Scientist Award (post-doctoral)**

Stefan Duma, Virginia Polytechnic Institute

#### **The Journal of Biomechanics Award**

Eun-Jeong Lee, University of Calgary

#### **The Clinical Biomechanics Award**

Robert Siston, Stanford University

#### **The Microstrain Award**

Azita Tajaddini, Cleveland Clinic

The past-president also chairs the nominating committee, and this year, two nominations had to be made, one for the president-elect (Kenton Kaufman elected) and one for the program chair elect (Francisco Valero-Cuevas elected). The other members of the nominating committee were Tom Brown and Bob Gregor. Congratulations to the newly elected people and thanks to Tom and Bob for their ideas and help throughout the year.

Finally, I would like to briefly talk about the Jim Hay Memorial Award. During my presidency I pushed hard to get this award implemented and financed and there are several reasons why I

thought this was particularly important. First and foremost it serves to remember an excellent teacher and mentor, an outstanding scientist, and a colleague and friend. Furthermore, I hope that this award gives an incentive to revive efforts in sports and exercise biomechanics, and finally, the award acknowledges the commitment and excellence of an individual in this area of research. This year's winner of the Jim Hay Memorial Award was Mont Hubbard. His lecture at the annual conference was fascinating; it included theoretical concepts, applied research and direct applications for improvement of Sport performance. I hope that this year again, there will be a series of nominations for this award from around the world, so that it may serve as an inspiration to young scientists and trainees, and might produce renewed acceptance and interest in the area of Sports and Exercise Biomechanics.

## Past Borelli Awardees

In the interest of historical perspective, below is a list of all recipients of the Giovanni Borelli Award, which is the society's most prestigious award:

|      |                     |
|------|---------------------|
| 1984 | Tom Brown           |
| 1985 | A.E. Engin          |
| 1986 | M.R. Yeadon         |
| 1987 | Alan Grodzinsky     |
| 1988 | Krishnan Chandran   |
| 1989 | Maury L. Hull       |
| 1990 | Rik Huiskies        |
| 1991 | Van C. Mow          |
| 1992 | Y.C. Fung           |
| 1993 | Savio Woo           |
| 1994 | Peter Cavanagh      |
| 1995 | Wilson C. Hayes     |
| 1996 | Albert Schultz      |
| 1997 | Manohar Panjabi     |
| 1998 | Malcolm Pope        |
| 1999 | Don Chaffin         |
| 2000 | Clinton Rubin       |
| 2001 | Felix Zajac         |
| 2002 | Mimi Koehl          |
| 2003 | R. McNeil Alexander |
| 2004 | Tom Andriacchi      |
| 2005 | Kai-Nan An          |

## What a long (3.5 billion years) strange trip it's been

Rodger Kram

While Biomch-L has been abuzz this fall about calculation of the free moment output of Kistler force platforms, a very different controversy made the headlines of mainstream news outlets. I refer to the teaching of evolutionary biology vs. intelligent design theology in public schools. In my opinion, teaching intelligent design theology in science classes makes as much sense as requiring equal time for fluid mechanics lectures in religious seminary classes about Moses parting the Red Sea or Christ walking on water.

It is possible to pursue biomechanics with a limited understanding of either biology or mechanics, but, it is the synthesis of these two sciences that makes biomechanics special. Every biology student takes a college level physics/mechanics course, but few engineers take an equivalent biology course. Evolution is the central organizing idea in biology, analogous to Newton's laws of motion. A new book by Richard Dawkins' *The Ancestor's Tale* provides a very accessible, entertaining modern introduction or review of how life evolved and how evolution works.

"Intelligent design" is something we look for when purchasing a new piece of equipment for our labs. Someone comparing the prosthetic limbs of the 1950's to today's carbon fiber artificial feet would see that things have "evolved". But, these ideas about how humans purposefully select or design objects often lead to a misunderstanding of biological evolution. The most important point that Dawkins makes in *The Ancestor's Tale* is that biological evolution is not a process striving for "perfection". More specifically, evolution has not been a chain of "improvements" leading towards humans. To avoid cultivating such misconceptions and to make it more engaging for human readers, Dawkins begins with humans and moves backwards in time (hence the subtitle, A Pilgrimage to the Dawn of Evolution).

*The Ancestor's Tale* traces human ancestry back through ~3.5 billion years via our shared DNA. Until recent decades, evolutionary biologists had only the fossil record and inference. Many critics of evolution point to gaps in the fossil record. But Dawkins argues convincingly that even if we had zero fossils, it would be now possible to trace our lineage via DNA. Of course, we do have many fossils and for me it is far easier to visualize the evolutionary transformations of skeletal structures than it is to see repeated DNA nucleotide base pair sequences.

This book is structured into 40 notable rendezvous with our common ancestors. For example, moving backwards in time, we come to the branch point with the ancestors of our closest

relatives, chimpanzees. Subsequently, we meet up with the ancestors of other familiar primates (gorillas, orangutans, gibbons etc.). In each rendezvous-chapter, Dawkins takes the opportunity to explain important evolutionary concepts that are well illustrated at that branch point. Topics include heredity, genetics, size-scaling, sexual selection and biogeography. Further back in time, the names of our common ancestors will be less familiar. E.g., the Xenarthrans are not allies of Darth Vader, but actual animals including armadillos, sloths and anteaters. As the journey continues further back in time, the creatures may seem even more like the bar scene in the original Star Wars movie. But be careful what/who you consider bizarre. These animals are every bit as much your ancestors as Grandma Sadie is.

Rendezvous 34 will be a surprise for most readers. Modern DNA analysis tells us that we are more closely related to fungi than we are to green plants. I would like to think that I have more in common with a mighty redwood tree than a Portobello mushroom but alas. Since most of us were in high school, conventional thinking about the early history of life has undergone radical re-organization. The game in which one asks "animal, vegetable or mineral?" is clearly outdated.

Dawkins has previously written several popular books about evolutionary biology (notably *The Blind Watchmaker* and *The Selfish Gene*). Compared to the popular biology writer, the late Steven J. Gould, Dawkins is more edgy and controversial. Gould's writing was more chatty and comfortable for the casual reader. Dawkins' writing is more intellectually challenging and he has a sharper tongue. My favorite example of his sharp sarcasm from *The Ancestor's Tale* is a fictional conversation between Hodgkin and Huxley, famous for developing our understanding of how nerves conduct electricity. This comes at the end of an indictment of "intelligent design" for being lazy non-science. p. 552: 'I say, Huxley, this is a terribly difficult problem, I can't see how the nerve impulse works, can you?'. 'No, Hodgkin, I can't and these differential equations are fiendishly hard to solve. Why don't we just give up and say that the nerve impulse propagates by nervous energy?'. 'Excellent idea, Huxley, let's write the letter to *Nature* now; it'll only take one line, then we can turn to something easier.'

Most of the style of the writing in this book is similar to articles in *Scientific American*. It would make for poor reading in a waiting room, it requires more concentration. I enjoyed reading it just one chapter-rendezvous at a sitting and then chewed on those ideas for a day or two. At 614 pages of text, divided into 40 rendezvous, it is a good project for one of the cold winter months ahead. We biomechanists strive to better understand the structure and function of organisms. Understanding how and when those structures and functions evolved can only make us better biomechanists.

*The Ancestor's Tale* was published in paperback 2005 by Mariner Books, \$16.



## **Step-by-step guide to online access to *Clinical Biomechanics* for members of the American Society of Biomechanics**

*Clinical Biomechanics* is now available online to Society members who subscribe to the journal only via a new site. For your free access to the journal online please follow these instructions.

### **1 - Activating access to *Clinical Biomechanics***

To activate access and to create your personal account, you will need your Elsevier Customer Reference Number. Your Customer Reference Number can be found on the mailing label of the paper issue of *Clinical Biomechanics*.

### **2 - Type in the following URL:**

**<https://cs.sciencedirect.com/activate/clbi/asbsociety>**

**Note** that “<https://>” MUST be entered for this URL – “<http://>” will not work. This is to ensure that your registration details are secured when you enter them into the registration form.

### **3 - Enter your Customer Reference Number and click on “submit”.**

The next step is completing a user profile. You will be asked to fill out a form and choose your own password. A username will be assigned to you. You will be notified of this. Both username and password will be case sensitive. After registration you can directly login with your new username and password.

**Note** – please do NOT use special characters, such as ö, ä, æ when entering your personal details into the profile form.

### **4 - Now you have registered you can go straight to:**

**<http://www.sciencedirect.com/clbi>** and enter your personal username and password in the login bar on the top of the page

If you encounter any problems registering, please note that older browsers may not support SSL encryption, which is required for secure data transmission. Also, cookies must be enabled in your browser to support the registration process.

Should you require any assistance, including if you cannot find your Customer Reference Number, please do not hesitate to contact the Customer Support department as follows:

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# Education Committee

Steve McCaw

Mortar. Grout. And a whole lot of cursing. That is how I spent my off-time early this fall, engaged in Applied Occupational Biomechanics to finish the renovation of our first floor. My son took a whole lot of new combinations back to school with him for show and tell.

## ASB Graduate Student Grant-in-Aid Program

The Grant-in-Aid program makes available to graduate students money to support research endeavors conducted as part of a degree program. The deadline for the next submission is January 15, 2006. Details on the program are available elsewhere in the newsletter and also off the ASB website.

## 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. Send me (by email) your suggested topics and presenters for tutorials to be held in conjunction with the 2006 annual meeting before January 15; if your tutorial is selected, you will receive a complementary tutorial registration, and the eternal gratitude of the society.

## Successful Student Sessions at the Annual Meeting

Student rep Melissa Scott-Pandorf organized a successful set of student experiences at the joint ISB/ASB meeting, including the mentoring program. A group of international students also got together to talk biomechanics over select beverages, with the locale and driving arrangements arranged by Melissa. A distinguished luncheon panel consisting of ASB past presidents Dr. Kai-Nan An, Dr. Tom Brown, Dr. Bob Gregor and (at the time) president-elect Dr. Ted Gross offered personal insights on the topic "Opportunities for Success in biomechanics" to over 100 students—basically work hard, learn lots, and take advantage of available experiences. An election for a new student representative is set for the 2006 meeting, an important position for the continued success of student programming.

## Annual Meeting Evaluation

As primary organizers of the Cleveland meeting, the ISB collected and analyzed the evaluation forms. The limited number and disappointing quality of the vegetarian meals, and the quality and cleanliness of the overnight accommodations were identified by many as a shortcoming of the meeting. Remediating these situations will be a hot topic among the ASB sub-committee on Culinary and Hostelery Satisfaction. The question of an appropriate acceptance rate for abstracts was also raised, and this point has been considered by many recent meeting organizers. It seems to me that if you encounter a poster or podium presentation that you do not feel meets the scientific standards of the ASB, you should be sure to ask probing yet polite questions of the presenter to ensure that they become aware of the shortcomings of the project. Otherwise, the presenter may not be aware that there is a problem. It should be noted that the conference evaluation was completed prior to the

closing banquet, where the performance of the Iliotibial Band and gyrations of the ASB/ISB dancers shook the Rock and Roll Hall of Fame like it has never been shook.

## Happy Update: Regional Student Meetings

The ASB Executive Board has approved funding for the 2006 edition of the The Midwest Graduate Students Biomechanics Symposium to be hosted by Dr. Kristian O'Connor at the University of Wisconsin-Milwaukee, and a Southeast Regional ASB student conference to be held at Georgia Tech on March 30-April 1, 2006. See promotional columns in this newsletter. Additional funds are available for the support of other regional meetings. Remember, if you are interested, there is no deadline for the submission of an application but the available funds are limited.

## Welcome the return of the NHL

The NHL is back, and it is faster and better. The exact opposite of my return to play for the 2005-06 season of the Pekin Sunday Night Recreational Hockey League. Maybe next year, when the Bloomington-Normal ice castle opens up, my skills will be rejuvenated too. Until next time, keep your stick on the ice.

# Midwest Student Symposium

Kristian O'Connor

The Department of Human Movement Sciences and the College of Health Sciences at the University of Wisconsin-Milwaukee are proud to announce that they will host the 2006 Midwest Graduate Student Biomechanics Symposium (MWGSBS), March 31<sup>st</sup> and April 1<sup>st</sup>, 2006. The MWGSBS functions to promote and enhance student research in biomechanics by providing a collegial environment in which to exchange ideas. As such, only graduate and undergraduate students in biomechanics are eligible to present papers at the conference. These papers may range from idea development to completed projects. It is also the goal of this conference to promote interaction among students and faculty of biomechanics programs in the midwest. Details regarding the abstract submission process and presentation format can be found at: [www.chs.uwm.edu/neuromechanics](http://www.chs.uwm.edu/neuromechanics). The conference will be held on-campus at UW-Milwaukee. Thanks to support from ASB, the MWGSBS is free to all attendees. There will also be three keynote speakers representing a range of biomechanics research perspectives.

## Conference Organizers

- Dr. Kristian O'Connor, UW-Milwaukee
- Dr. George Papaioannou, UW-Milwaukee

## Program Co-Chairpersons

- Dr. Thomas Kernozek, UW-Lacrosse
- Dr. Jennifer Earl, UW-Milwaukee

## Important Dates

Abstract Submission: March 3, 2006

Meeting Dates: March 31<sup>st</sup> and April 1<sup>st</sup>, 2006

Please direct inquiries to [krisocon@uwm.edu](mailto:krisocon@uwm.edu)



## Southeast Student Symposium

### Young-Hui Chang

It is our pleasure to announce the first **South East Biomechanics Conference** to be held **March 30 – April 1, 2006** at the Georgia Institute of Technology in Atlanta, Georgia. The major aims for this regional ASB meeting are to provide a welcoming environment for students to present and receive feedback on their research and, to create an informal scientific environment that encourages interaction between students and faculty. Registration is free and will consist entirely of single session student presentations.

The theme will be “Comparative Biomechanics: Borelli meets Krogh” which will be highlighted with keynote addresses by **Dr. Andrew Biewener** (Harvard University, ASB Past-president) and **Dr. Robert Gregor** (Georgia Tech, ASB Past-president). However, abstracts from all areas will be accepted. Besides podium presentations, the meeting will include a student/faculty dinner as well as tours of several biomechanics laboratories on the Georgia Tech campus. Details regarding the abstract submission and presentation format will be available from January 2006 at the conference website: <http://www.ap.gatech.edu/SEBC.shtml>

#### Conference Organizers

- Young-Hui Chang, Ph.D. (yh.chang@ap.gatech.edu)
- Huub Maas, Ph.D. (huub.endemaas@ap.gatech.edu)

#### Important Dates

Abstract Submission: February 15, 2006

Meeting Dates: March 30 – April 1, 2006

#### Sponsor

The conference is sponsored by the American Society of Biomechanics and the School of Applied Physiology at Georgia Tech.

Please direct email inquiries to one of the conference organizers.

## Membership Committee

### Julianne Abendroth-Smith

Hello from the sunny Fall skies of the Northwest. Just a quick note from the Membership Committee. We are working on publishing a hardcopy membership directory early next year, for it has been close to five years since the last one came out. We have many new members and many more who have changed their place of employment. In spite of being part of the internet era, it is still handy to have a listing in your hands, when you need a name, an address, or an email contact. Your task is to be sure Don Anderson, Secretary – Treasurer, has your current address; both work and email, and other appropriate contact information.

Of course, since you are reading this newsletter, chances are good your address is current. Check your label. Please help us by passing the message to others who may have relocated recently and have not yet updated their information. Thank you.

## Grad Student Grant-in-Aid

### Steve McCaw

The purpose of the Graduate Student Grant-In-Aid Program is to aid and encourage student members of ASB to pursue biomechanics research by offering a source of research funding. The grants are distributed on a competitive basis and are intended to offset the costs directly associated with conducting research. Funds may be used for small equipment items, materials and supplies, and animal or subject costs, but cannot be used to support travel costs or salaries. ASB anticipates awarding 3-5 grants, ranging from \$500 to \$2500 for a one-year period.

To be eligible, an applicant must be a student member of ASB or have a membership application received by the Membership Chair no later than December 15, 2005.

Applications must be submitted *in a single file* by electronic mail (Word or ASCII text only, *no* PDF materials are acceptable) by midnight January 15, 2006. The email must have as the subject line **2006 ASB GIA**. The attached file should have the applicant's name as the file name (for example, LastName FirstName.doc). The application must include: 1) the name of the applicant and the title of the project; 2) the significance of and need for the research, 3) specific aims and hypotheses to be examined, 4) a succinct overview of the methods to be employed, 5) an itemized budget, 6) a curriculum vita of the applicant, 7) a letter of recommendation from a faculty advisor/supervisor, 8) a correct mailing address, and 9) the name and address of the fiscal agent at the institution responsible for handling any grant funds provided. Sections 1 to 5 of the application should not exceed *seven* double-spaced pages. Page margins should not be less than 2.5 cm and font size no less than 11 point. Since applications are distributed electronically for review, please minimize the use of graphics (for example, neither letterhead graphics nor electronic signatures are required on the letter of recommendation).

The Education Committee of the American Society of Biomechanics will review applications, with funding distribution expected by June 1. The rule is that recipients must present at the annual ASB meeting in the year following receipt of a GIA; for example, those receiving funding distributed in 2006 will be expected to attend and present at ASB in 2007. However, rules such as this are made to be broken and extensions to the following year will be granted if a good excuse without unjustified whining is presented.

*Applications and inquiries should be submitted to:*

Steven T. McCaw, Ph.D.  
Chair, ASB Education Committee  
School of Kinesiology and Recreation  
Illinois State University  
email: smccaw@ilstu.edu  
Email subject: 2006 ASB GIA

# Meeting Chair

**Stefan Duma**

We are pleased to invite you to attend the 30<sup>th</sup> Annual Meeting of the ASB that will be held from September 7–9, 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. The Inn at Virginia Tech features several state of the art conference rooms as well as luxurious hotel rooms during your visit for added convenience. This facility is located between the engineering side of campus and the golf course, so make sure you bring your clubs!



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. In addition, enjoy fine dining prepared by our university's best chefs at Preston's restaurant, located inside the Inn at Virginia Tech. To complete your Virginia experience, we will also be offering music by some of our finest local musicians while you dine.

We are fortunate to have a number of groups assisting with the organization of the 2006 meeting. The School for Biomedical Engineering and Sciences, which is a partnership between Virginia Tech and Wake Forest University, is the lead organizing group for this event. Additional support is being provided by the Edward Via College of Osteopathic Medicine which is a new medical school located on the Virginia Tech campus. Through these institutions, a range of biomechanics laboratory tours and demonstrations will be offered.

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 Thursday afternoon and Friday morning arrivals as well as Sunday departures. The Roanoke Regional Airport also offers transportation via all major rental car companies. For private planes, there is Virginia Tech's own Hokie airport, located right on campus. Driving to Blacksburg is also a wonderful option for regional visitors as we are only minutes from I-81 which provides a scenic look of southwest Virginia's fine mountains. In fact, 50% of the United States' population is located within an eight hour drive of Blacksburg.

For current information and additional details, you can look to the conference's web page at [www.asb2006.org](http://www.asb2006.org). If you have any suggestions or questions, please feel free to contact me at [Duma@vt.edu](mailto:Duma@vt.edu). We look forward to seeing you next fall!



2005 ASB Meeting Host Committee (left to right): Stefan Duma (Chair), Kevin Granata (Co-chair), Mike Madigan (Co-chair)

*Looking forward to seeing you in Blacksburg!!*



## Program Committee

Irene Davis

The Program Committee (Co-Chaired by Joe Hamill) is very excited about the 30th Annual Meeting of the American Society of Biomechanics to be held Sept 7-9, 2006 at Virginia Tech in Blacksburg, Virginia. Together with the meeting chair, Stefan Duma, we are planning a rich academic and social program that we hope will equal those of the past.

Keynotes and symposia are focused around the future of biomechanics. Symposia on topics related to Imaging in Biomechanics, Tissue Engineering, Smart Fluids/Materials are being planned. We are excited to announce that Susan Margulies, PhD, Professor of Bioengineering at the University of Pennsylvania will be presenting a keynote address on the topic of Brain Mechanics. In addition, Frank Shellock, PhD, Adjunct Clinical Professor of Radiology at the University of Southern California School of Medicine will be delivering a keynote address on Kinematic MRI. Other stimulating keynotes and symposia are currently being planned.

This year, we will be introducing an additional parallel session in order to broaden the scope of the topics in an attempt to be more inclusive of all facets of our membership. By increasing the number of podium presentations, we also hope to provide students more opportunity to present in a podium format. The physical layout of the meeting space will allow for easy movement between the different sessions. In attempt to increase student involvement and provide them with professional experience, sessions will be co-chaired by a student member. We are also planning a number of thematic poster sessions this year. Finally, we are changing the scheduling of the meeting. Tours and tutorials will be held on Thursday morning, Sept 7. The meeting will begin Thursday afternoon with the opening reception being held Thursday evening. The meeting will still have a 2.5 day format. However, it will end with the banquet on Saturday night.

We invite and encourage you to submit abstracts in general topic areas such as orthopedics, cell and tissue mechanics, clinical biomechanics, joint mechanics, spine, gait, posture and balance, aging, ergonomics, sport science, motor control, prosthetics and orthotics, motor control, methods/instrumentation, imaging, modeling and muscle mechanics. Abstracts will be due April 1, 2006 and will be submitted online. Notice of acceptance will be given by June 1, 2006. More information regarding the abstract submission process will be provided on the ASB website in the upcoming months.

Your suggestions and questions regarding the conference program are always welcome. Please direct comments to Irene Davis, PhD, ASB Program Chair, email: mcclay@udel.edu. On behalf of the program committee, meeting chair and ASB executive board, I encourage your participation in the upcoming meeting. I look forward to seeing you next September - a beautiful month in Blacksburg, Virginia!

## These Go to Eleven

Andy Karduna

Lucky for you, after meticulously positioning articles around in PageMaker, I am left with a single column with which I've decided to reprint the Keith Williams's article from the second ASB newsletter:

*The American Society of Biomechanics has been shaken to its very roots by the recent flap over the misspelling of its name in the first edition of the revived newsletter. Keith Williams, Editor-Under-Duress of the paper, insisted the word was spelled correctly when it left his office. "Biomechanics is just so obvious a typo too have missed," he stated. "There's a conspiracy here. Something's rotten in Finland." To prove his point, Williams sat down at the computer and, after a short delay, produced a copy of the first newsletter which did indeed have the word spelled correctly. He went on to point out that Bruce Marvin, the Society's Secretary/Treasurer, was responsible for copying and making the newsletter.*

*When reached by phone, Marvin also claimed the word was spelled correctly when it passed through his hands. He blamed the copy shoppe. "Their machine must have missed a beat - a quick brownout or something. Or 400 of them, all in synch. I'll tell you this, it's the last time I do business with someone with a name like Kinkio's."*

*Presidential candidate Dr. George Rob's brows have reportedly knitted so deeply over the incident that he is terrifying his patients in the pediatrics clinic. "I just don't see how such a bush-league think could happen," he was quoted as saying to one puzzled parent. "It just shows what can happen when you entrust something important to a jock from California and a hick from West Virginia."*

*His opponent, Roger Inoka, a jock from out back of the outback, bristled at Rob's impugning of his discipline. He claimed the incident was symptomatic of the American education system, that such a thing had never happened during Peter Cavanaw's administration, and that it would never happen again as long as people who pronounced their words correctly were elected to positions of leadership. "We're just very lucky that Malcolm Polp is taking office in a few weeks," he said. Inoka, current Membership Committee Chairman, also noted that he has received 148 applications for membership from Southern Californians who wanted to join the American Society of Bohemian Mechanics after reading the newsletter. Since this represents the largest single increase in membership in years he is considering a proposal for a change in the Society's name should he be elected.*

*It is perhaps significant ( $p < .05$ ) that President-elect Polp was the only ASB member to report noticing the misspelled word. It has been rumored that this was the only copy with an error, but it certainly shows that the Executive Committee will be under close scrutiny in the coming year. Current President Don Chafffin took full responsibility for the incident, and said he certainly understood how it could happen. He did not elaborate.*



# Past-President

J. J. Trey Crisco

The major focus of my Presidency, the retooling of our web page and the archival material, has spilled over into my term as Past-President (i.e. not done yet). At the time of this writing the web site has been retooled under the direction of the Communications Chair, Kathy Simpson, and should be up shortly. I am now looking for some really cool pictures for the web site that ASB members might have of their research interests. If you can share these with us please send it along to me with a brief description of it.

The best part of being Past-President is that you get to hand out money and awards! I would like to encourage all students and postdoctoral trainees to apply for the Pre- or Postdoctoral Young Scientist Award. This Award session is always one of the highlights of the annual meeting, and many previous winners are now successful scientists. Also, I would encourage all of you to nominate fellow researchers for the Borelli and the Jim Hay Memorial Award. These two awards are given to recognize outstanding career accomplishments for scientists who have conducted exemplary research. Please contact me if you have questions about whether an individual would fit a category, or to discuss any other matters.

The complete application packages for the Borelli, Jim Hay, Young Scientist and Travel Awards should be mailed to:

J.J. Trey Crisco, Ph.D.

Bioengineering Laboratory

Department of Orthopaedics

Brown Medical School / Rhode Island Hospital

CORO West, Suite 404

1 Hoppin Street

Providence, RI 02806.

No specific application package is required in order to be considered for the ASB Microstrain Award, Journal of Biomechanics Award, Clinical Biomechanics Award, and the President's Award. These awards are selected by the Awards committee based on the top 10% of all submitted abstracts. Once you have submitted your abstract, you will be considered for these awards.

The following is a list of all of the ASB awards that are available.

**BORELLI AWARD** Deadline for submission is January 27, 2006. 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. The award is open to all scientists, including non-ASB members; however, ASB officers and members of the Awards Committee are excluded. Candidates may nominate themselves or be nominated by others. Selection is based on originality, quality and depth of the research and its relevance to

the field of biomechanics. A letter of nomination, a comprehensive curriculum vitae, and five publications on a single topic or theme must be submitted. The awardee is expected to attend the 2006 Annual Meeting of the ASB in Blacksburg, VA, in order to receive the award and to deliver the Borelli lecture. The award consists of an engraved plaque and a check for \$1,500. Application instructions: Please submit 7 identical application packages in separate envelopes by the deadline. All envelopes should be labeled with your name and the award for which you are applying to. Six (6) of the envelopes are to be sealed and one unsealed.

## **JIM HAY MEMORIAL AWARD FOR RESEARCH IN SPORTS AND EXERCISE BIOMECHANICS**

Deadline for submission is January 27, 2006. Based on the wishes of the Hay family and the ASB Executive Board, the Jim Hay Memorial Award will recognize outstanding career accomplishment and is awarded annually to an investigator who has conducted exemplary research in the area of Sports and Exercise Science biomechanics. The award is open to all scientists, including non-ASB members, but excluding ASB officers and members of the Awards Committee. Candidates may nominate themselves or be nominated by others. Selection is based on originality, quality and depth of the research and its relevance to the field of Sports and Exercise biomechanics. A letter of nomination, a comprehensive curriculum vitae, and five publications on a single topic or theme must be submitted. The awardee is expected to attend the 2006 Annual Meeting of the ASB in Blacksburg, VA, in order to receive the award and to deliver the Jim Hay Memorial lecture. The award consists of an engraved plaque and a check for \$1,000. Application instructions: Please submit 7 identical application packages in separate envelopes by the deadline. All envelopes should be labeled with your name and the award for which you are applying to. Six (6) of the envelopes are to be sealed and one unsealed.

## **YOUNG SCIENTIST AWARDS** (Pre-doctoral and post-doctoral)

Deadline for submission is January 27, 2006. These awards recognize early achievements by promising young scientists. They are awarded annually to one pre-doctoral student and one post-doctoral student. Nominees for these awards must be current or pending members of the ASB at the time of submission. Candidates may be self-nominated or nominated by an ASB member. Both awards consist of an engraved plaque, a check for \$200, and a waiver of conference fees for the 2006 meeting. Pre-doctoral Award: submitted materials must include a letter of nomination from the department head or graduate research advisor, a short description of the nominee's current research involvement (2 pages), a curriculum vitae, copies of published papers and/or submitted manuscripts (limit 5), and an abstract of original research submitted for presentation at the 2006 ASB annual meeting having the nominee as first or sole author. A student is considered eligible for the pre-doctoral award if they are someone who, on the deadline for submitting their nomination papers for the ASB Young Scientist Award (January 27, 2006) has not received his/her doctoral degree. Post-doctoral award: submitted materials must include a letter of nomination, the nominee's curriculum vitae, copies of published papers and/or submitted manuscripts (limit 5), and an abstract of original research submitted for



presentation at the 2006 meeting having the nominee as first or sole author. A person is considered eligible for the post-doctoral award if they are someone who, on the deadline for submitting their nomination papers for the ASB Young Scientist Award (January 27, 2006), is within 5 years of their graduation. Application instructions: Please submit 7 identical application packages in separate envelopes by the deadline of January 27, 2006. All envelopes should be labeled with your name and the award for which you are applying to. Six (6) of the envelopes are to be sealed and one unsealed. Note that Young Scientist Award applicants also need to submit their abstract to the 2006 ASB Annual Meeting.

**TRAVEL AWARD** Deadline for submission is July 1, 2006. A Travel Award of up to \$1,000 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.

**ASB MICROSTRAIN AWARD** Microstrain, Inc., of Burlington, Vermont annually funds an award that recognizes superior achievement in the area of instrumentation. The award competition is open to scientists of any age and stage in their career (for example, undergraduate and graduate students, postdoctoral fellows, faculty and researchers) both in and outside the U.S. This award recognizes the individual's innovative application of existing instrumentation or development of new instrumentation for use in the field of biomechanics. Candidates for the award must be the first or sole author on an abstract of original research submitted to the 2006 ASB meeting. Candidates for the award will be selected from the top 10th percentile of abstracts submitted to the ASB meeting, as evaluated by the ASB Program Committee. The ASB Awards Committee will then select two finalists from this pool for the award, and each of these two authors will present their work in a special ASB Awards session at the ASB annual meeting. The ASB Awards Committee will select the winners after this session. The award includes an engraved plaque and a check in the amount of \$1,000.

**JOURNAL OF BIOMECHANICS AWARD** This award, sponsored by Elsevier Science, Ltd., publishers of the Journal of Biomechanics, recognizes substantive and conceptually novel mechanics approaches explaining how biological systems function. In addition to being ASB members, candidates for the award must be the first or sole author on an abstract of original research submitted to the 2006 ASB meeting. Candidates for the award will be selected from the top 10th percentile of abstracts submitted to the ASB meeting as evaluated by the ASB Program Committee. The ASB Awards Committee will then select two finalists from this pool for the award, and each of these two authors will present their work in a special Awards session at the ASB annual meeting. The ASB Awards Committee will select the winners after this session.

The award includes an engraved plaque and a check in the amount of \$500.

**CLINICAL BIOMECHANICS AWARD** This award recognizes outstanding new biomechanics research targeting a contemporary clinical problem, and is sponsored by Elsevier Science, Ltd., publishers of Clinical Biomechanics. In addition to being ASB members, candidates for the award must be the first or sole author on an abstract of original research with special relevance for clinical applications submitted to the 2006 ASB meeting. Candidates for the award will be selected from the top 10th percentile of abstracts submitted to the ASB meeting, as evaluated by the ASB Program Committee. The ASB Awards Committee will then select two finalists for the award from this pool, and each of these two authors will present their work in a special ASB Awards session at the ASB annual meeting. The ASB Awards Committee will select the winners after this session. The award includes an engraved plaque and a check in the amount of \$500.

**PRESIDENT'S AWARD** The goal of the President's Award is to recognize meritorious research that is presented as a poster at the annual ASB meeting involving "highly innovative use of experimental or theoretical methods in any field of biomechanics". The winner of this award will be announced at the meeting along with the other awards. The award includes an engraved plaque and a check in the amount of \$500.



# **5<sup>th</sup> World Congress of Biomechanics**

**July 29<sup>th</sup> – August 4<sup>th</sup> 2006**

*Incorporating the*  
**15<sup>th</sup> Congress of the European Society of Biomechanics**  
**31st Congress of the Société de Biomécanique**

## **Call for Papers**

The World Council of Biomechanics cordially invites you to the 5<sup>th</sup> World Congress of Biomechanics. An outstanding scientific program is planned with both oral and poster sessions, and student competition. Submissions in all areas of biomechanics are invited.

Registration, abstract submission and more information can be obtained at:  
**[www.wcb2006.org](http://www.wcb2006.org)**

Planned thematic tracks and sessions will include:

**Bone Mechanics *Joint ESB Track***  
**Musculoskeletal Mechanics-*Joint ISB Track***  
**Musculoskeletal Systems and Performance-*Joint ISB/ESB Track***  
**Implants for Trauma and Orthopedics**  
**Occupational and Impact Injury**  
**Biomechanics**  
**Sport Biomechanics-*Joint ISB Track***  
**Dental Biomechanics**  
**Computer-assisted Surgery**  
**Tissue Engineering**  
**Cellular and Molecular Mechanics**  
**Artificial Organs**  
**Biomaterials**  
**Respiratory Mechanics**  
**Cardiovascular Mechanics**  
**Microcirculation and Biorheology**  
**Reproductive Biomechanics**  
**Biomechanics in Nature**  
**Brain and Neural Mechanics**  
**Biotransport**  
**Biomechanics of Organs**  
**Computational Methods in Biomechanics**  
**and Mechanobiology**  
**Flow Structure Interactions**  
**Biomechanics at Micro- and Nanoscale**  
**Levels**  
**Imaging**

### **Important dates:**

Abstract submission      January 30, 2006  
Notification of acceptance March 15, 2006  
Early registration date: May 1<sup>st</sup>. 2006

**Congress Dates: July 29<sup>th</sup>–August 4<sup>th</sup> 2006**

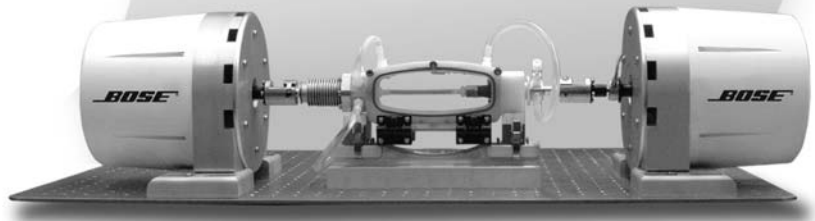
### **For more Information:**

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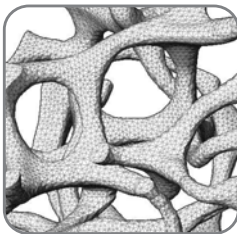
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## Report on the combined ASB and ISB conference held in Cleveland from July 31<sup>st</sup> to August 5<sup>th</sup>, 2005.

### Brian L. Davis, ISB President

By most accounts, the combined ASB and ISB conference was very well received. Ton van den Bogert and I breathed a collective sigh of relief during the final banquet at the Rock 'n Roll Hall of Fame. Not only had most of our fears (e.g., SARS outbreak, airline strikes, chaos at the registration desk) disappeared into thin air, but events that had long been planned (e.g., Yankees versus Indians baseball game) had been extremely popular. Added to this was the fact that Martyn Shorten and his "Iliotibial Band" members were bringing the congress to a dramatic conclusion! Who will ever forget Martyn's rendition of "The Graduate Student" --- a modified version of Simon and Garfunkel's "The Boxer"? After the band had finished, many people remarked to Ton and me that it was impossible to end a congress on a higher note (excuse the pun!).

Overall, there were 1,150 attendees at the combined meeting, and 262 of these completed evaluation forms. The results from the survey we distributed are shown below. For space reasons, only a few topics are included, but these cover most of the important issues for congress delegates: Venue facilities, Quality of keynotes, Value of meeting in terms of improving biomechanics knowledge and some ASB-specific events.

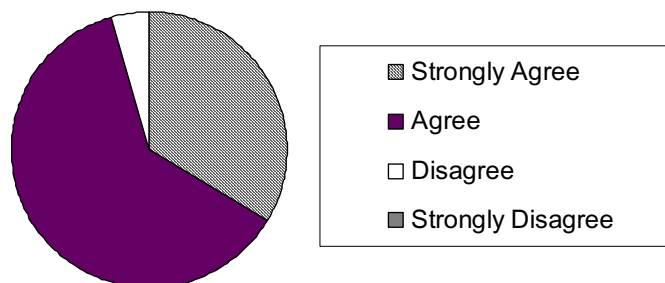
About two-thirds thought the venue was either excellent or good (Figure 1a). Those who thought otherwise either commented on (i) the fact that Waetjen auditorium was about a 5-minute walk from the lecture rooms in the Main Classroom building and/or (ii) the fact that the student dormitory rooms were poorly prepared prior to the conference. Hopefully other aspects of the meeting compensated for this! Certainly, the keynote speakers were highly regarded (Figure 1b) with 94% either indicating "excellent" or "good" for these talks.



**Figure 1. Breakdown of responses for (a) Venue Facilities and (b) Keynote Quality.**

While keynote lectures are important, the rest of the meeting is where many new findings in biomechanics are shared. What was encouraging was the number of people (>95%) who indicated the congress added to their knowledge of biomechanics (Figure 2).

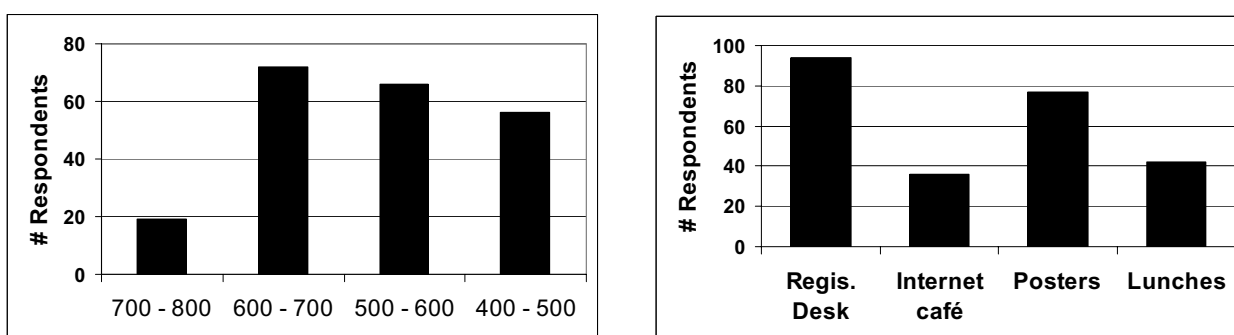
#### Congress added to my understanding of biomechanics



**Figure 2. Over 95% of the ASB/ISB2005 respondents increased their knowledge of biomechanics.**



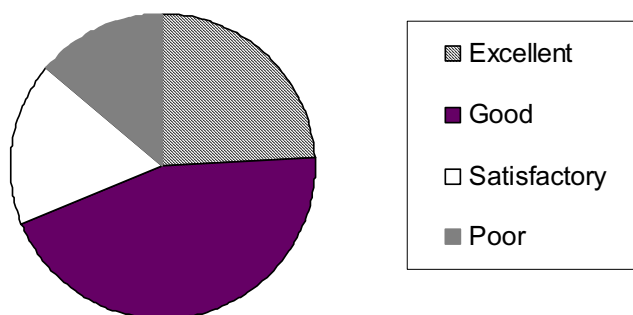
One of the issues that Ton van den Bogert paid special attention to, concerned the scientific program. He had a number of decisions to make concerning the number of parallel sessions, number of posters and ASB vs ISB-specific sessions. In the end, about 600 posters were included in the program---a number that happens to coincide with the overall opinion of those people who completed the survey (Figure 3a). Another issue that required some pre-congress planning, related to maximizing traffic flow through the exhibit area. For anyone planning a future conference, respondents seemed to think that the registration desk and poster areas should be close to exhibitors (Figure 3b), whereas the internet café and lunch areas were considered less important. (It should be noted that a number of people thought that all of these choices should be close to the exhibitors!)



**Figure 3. Respondents had varying opinions as to (a) “For a conference with 1000 presentations, how many should be posters?”, and (b) Which should be located closest to the exhibit hall, (i) Registration Desk, (ii) Internet Café, (iii) Posters, or (iv) Lunch area?”**

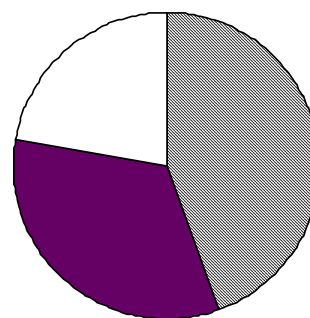
Finally, in terms of ASB-specific events at the congress, respondents were asked to comment on both the ASB student lunch and the “Women-in-Science” breakfast. Results for these questions are shown below (Figure 4). Note that the numbers of people responding to these portions of the survey were relatively few; 29 and 27 responses respectively. However, in both cases, most of those attending the meetings rated them

#### ASB Student Lunch



as either good or excellent.

#### Women-in Science Breakfast



**Figure 4. Responses for ASB-specific lunch and breakfast gatherings.**

In conclusion---on behalf of the ISB, I would like to thank the ASB for combining with the ISB for the 2005 meeting. Your participation was vital to the success of this meeting, and I look forward to further joint efforts over the course of the next 2 years.

## 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:

### CORPORATE MEMBERS

*Aircast*

*Bose Corporation - EnduraTEC*

*DePuy*

*Orthofix, S.R.L.*

*Vicon Peak*

*Tekscan, Inc.*

#### Paid Job Listing

##### **Department of Mechanical Engineering Look College of Engineering TEXAS A&M UNIVERSITY**

The Department of Mechanical Engineering at Texas A&M University invites applications for a tenure-track faculty position in the Mechanics Division. Applicants are sought primarily at the Associate/Full Professor level, but Assistant Professor will also be considered. Expertise is desired in experimental mechanics and biomechanics, especially with interests in emerging areas such as biomaterials, tissue engineering, hemodynamics, cell mechanobiology, and nanobiomechanics. Candidates applying for this position are expected to have a strong commitment to teaching excellence at the undergraduate and graduate levels, a demonstrable research capability that will enable the candidate to develop an externally funded independent research program, and publish in leading scholarly journals. The successful candidate should be prepared to collaborate with colleagues, develop new research initiatives, and participate in on-going research projects. Relevant work experience is desirable.

Applicants must have an earned doctorate in Mechanical Engineering or a closely related field. Information on the Department of Mechanical Engineering can be found at <http://www.mengr.tamu.edu/>. Applicants should submit a detailed resume, a brief summary of research and teaching interests and plans, and the names and addresses of three references to the address given below.

Mechanics Faculty Search Committee  
c/o Dr. K. Rajagopal  
Department of Mechanical Engineering- 3123  
Texas A&M University  
College Station, TX 77843-3123

Applications will be accepted until the position is filled. Women and other under-represented minorities are especially encouraged to apply. Texas A&M University is an Equal Opportunity and Affirmative Action Employer.

## Jobs Postings

The Division of Kinesiology, University of Michigan, invites applications for a tenure-track faculty position at the **Assistant or Associate Professor** level. Individuals with training and experience in any area of **biomechanics** relevant to human movement and health are encouraged to apply. Priority will be given to applicants studying innovative research questions and using novel techniques in either humans or animal models. Applicants must have completed a doctorate and postdoctoral training is expected. Demonstrated ability to attract external funding at the Associate Professor level or high potential to attract external funding at the Assistant Professor level is required. Teaching experience is highly desirable. Responsibilities of the position include developing a strong research program and teaching undergraduate courses in human movement biomechanics and graduate courses in the area of research specialty. The individual will be expected to acquire federal funding for research and to contribute to interdisciplinary research activities in Kinesiology. Review of applications begins 15 November 2005 and will continue until the position is filled. Minorities and women are especially encouraged to apply. To apply, send electronic copies of your letter of application, CV, two-page research statement, and names and contact information for three references to: Marsha Lewis, Division of Kinesiology, The University of Michigan, [mhlewis@umich.edu](mailto:mhlewis@umich.edu). For more information, contact Melissa Gross ([mgross@umich.edu](mailto:mgross@umich.edu)) or Dan Ferris ([ferrisd@umich.edu](mailto:ferrisd@umich.edu)).

The Department of Anatomical Sciences, Stony Brook University, invites applications for a postdoctoral position, with primary teaching responsibilities in human gross anatomy to healthcare professional students. Applicants must possess a Ph.D. in a science discipline that trains one to conduct research in functional morphology, evolutionary morphology, vertebrate paleontology, or physical anthropology. Applicant must have taken and preferably taught a dissection-based human gross anatomy course. Demonstrated ability to conduct publishable research by having published papers in recognized scientific journals or books is preferred. In addition to teaching, the occupant of this position will be expected to conduct research that complements the department's existing strengths. Current departmental faculty include Brigitte Demes, John Fleagle, Catherine Forster, Bill Jungers, Nate Kley, David Krause, Susan Larson, Maureen O'Leary, Jack Stern and Randy Susman. Evaluation of candidates will begin December 1, 2005 and will continue until the position is filled. Please send a letter of application, a curriculum vitae, statement of research interests, statement of teaching experience, and the names, addresses, and e-mail addresses of at least three references to Susan Larson, Search Committee Chair, Department of Anatomical Sciences, Stony Brook University, Stony Brook, New York 11794-8081. ([Susan.Larson@sunysb.edu](mailto:Susan.Larson@sunysb.edu))

# Calendar of Events

William Ledoux

## **Conference of the Society for Physical Regulation in Biology and Medicine**

January 11 - 13, 2006, Cancun, Mexico  
Abstract deadline - December 1, 2005  
[www.stanford.edu/group/sprbm/conference.html](http://www.stanford.edu/group/sprbm/conference.html)

## **IEEE EMBS Conference on Bio, Micro and Nanosystems**

January 15 - 18, 2006, San Francisco, California  
Abstract deadline - past  
[www.asm.org/Meetings/index.asp?bid=36221](http://www.asm.org/Meetings/index.asp?bid=36221)

## **IASTED International Conference on Biomedical Engineering**

February 15 - 17, 2006, Innsbruck, Austria  
Abstract deadline - past  
[www.iasted.org/conferences/2006/Innsbruck/biomed.htm](http://www.iasted.org/conferences/2006/Innsbruck/biomed.htm)

## **Annual Meeting of the Institute of Biological Engineering**

March 10 - 12, 2006, Tuscon, Arizona  
Abstract deadline - December 1, 2005  
[www.ibeweb.org/meetings/2006/index.cgi](http://www.ibeweb.org/meetings/2006/index.cgi)

## **Annual Meeting of the Orthopaedic Research Society**

March 19 - 22, 2006, Chicago, Illinois  
Abstract deadline - past  
[www.ors.org/Meetings/52ndAnnualMeeting/AnnualMeeting.asp](http://www.ors.org/Meetings/52ndAnnualMeeting/AnnualMeeting.asp)

## **International Symposium on Computer Methods and Biomechanics and Biomedical Engineering**

March 22 - 25, 2006, Antibes, Cote d'Azur, France  
Abstract deadline - December 20, 2005  
[www.cmbbe2006.cf.ac.uk](http://www.cmbbe2006.cf.ac.uk)

## **Meeting of the American College of Sports Medicine**

May 31 - June 3, 2006, Denver, Colorado  
Abstract deadline - past  
[www.acsm.org/meetings/annualmeeting.htm](http://www.acsm.org/meetings/annualmeeting.htm)

## **Society for Experimental Mechanics Conference and Exposition**

June 4 - 7, 2006, St. Louis, Missouri  
Abstract deadline - past  
[www.sem.org/CONF-AC-TOP.asp](http://www.sem.org/CONF-AC-TOP.asp)

## **Summer Bioengineering Conference**

June 21 - 25, 2006, Amelia Island, Florida  
Abstract deadline - January 20, 2006  
[divisions.asme.org/bed/events/summer06.html](http://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 - January 30, 2006  
[www.univ-valenciennes.fr/congres/3D2006/index.htm](http://www.univ-valenciennes.fr/congres/3D2006/index.htm)

## **6th Conference on Engineering of Sport**

July 11 - 14, 2006 Munich, Bavaria, Germany  
Abstract deadline - past  
[www.sportkreativwerkstatt.de/isea2006](http://www.sportkreativwerkstatt.de/isea2006)

## **International Symposium on Biomechanics in Sports**

July 14 - 18, 2006, Salzburg, Austria  
Abstract deadline - February 1, 2006  
[www.isbs2006.at](http://www.isbs2006.at)

## **World Congress of Biomechanics**

July 29 - August 4, 2006, Munich, Germany  
Abstract deadline - January 30, 2006  
[www.wcb2006.org](http://www.wcb2006.org)

## **Conference for the Canadian Society of Biomechanics**

August 16 - 19, 2006, Waterloo, Ontario  
Abstract deadline - tba  
[www.csb2006.uwaterloo.ca](http://www.csb2006.uwaterloo.ca)

## **Annual meeting of the American Society of Biomechanics**

**September 6-9, 2006, Blacksburg, VA**  
**Abstract deadline - tba**  
**[asb2006.org](http://asb2006.org)**

## **IFAC Symposium on Modelling and Control in Biomedical Systems**

September 20 - 22, 2006, Reims, France  
Abstract deadline - December 10, 2005  
[www.univ-reims.fr/Labos/LAM/mcbms06](http://www.univ-reims.fr/Labos/LAM/mcbms06)

## **Joint ESMAC - GCMAS Meeting (JEGM06)**

September, 25 - 30, 2006, Amsterdam, the Netherlands  
Abstract deadline - March 15, 2006  
[www.jegm06.org](http://www.jegm06.org)

## **Annual Meeting of the Human Factors and Ergonomics Society**

October 16 - 20, 2006, San Francisco, California  
Abstract deadline - March 1, 2006  
[www.hfes.org/web/HFESMeetings/06annualmeeting.html](http://www.hfes.org/web/HFESMeetings/06annualmeeting.html)

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



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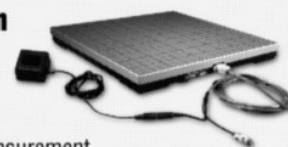
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