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Newsletter

Volume: 23 - Number: 1, June 2010

From the President

Tom Buchanan

It was the best of times ...

It is that time of year when professors send their graduating students out into the world to search for ways to put their newfound knowledge to practical use. This is a time of excitement mixed with trepidation. What new adventures will our graduates face? Will they be successful in their endeavors or will they forever be asking customers if they want fries with that order?

This is a question I get asked a lot, although usually in a somewhat different form. Usually it comes from parents of high school students who are considering investing a hundred thousand dollars (give or take) in a college education. Will my son or daughter be able to find a job if he or she studies with you?

Today's Wall Street Journal had an article by Sue Shellenbarger entitled "What Will Be the Hot Jobs of 2018?" She wrote "In the coming decade, engineering—already known for paying college graduates some of the highest starting salaries—is expected to offer the fastest-growing area: biomedical engineering. Jobs in this field, which centers on developing and testing health-care innovations such as artificial organs or imaging systems, are expected to grow by 72%, the Labor Department says."

I realize biomechanics and biomedical engineering are not the same, but many people in biomechanics (in fact, a majority of the ASB membership) identify themselves as biomedical engineers. Clearly there is substantial overlap in these fields.

Given this, it is not too much of a stretch to infer from the Wall Street Journal that there will be a bull market for biomechanics jobs for many years to come. Biomechanics is indeed a good field to pursue and it is nice to know that the pundits are predicting continued growth.

This is good news for those of us who participated in its growth. At my university, we have seen a many fold increase in the number of biomechanics faculty and students in the last 15 years. This growth has not just been in numbers of people, but also in the quality of our programs. We have seen a large increase in the number of journal articles published as well as the number of NIH grants to biomechanics faculty, and, to top it off, this year the graduate program was ranked the second best in the university. I suspect that other universities have seen similar trends as our field grows and flourishes.

This is an exciting time to be in biomechanics!

Student's Corner

Becky Fellin

The summer is almost here (although in Delaware the summer weather arrived in early May) and that means the annual meeting is rapidly approaching. This year the American Society of Biomechanics Annual Meeting will be held in Providence, RI from August 18-21, 2010. Popular events from past years will be held again as well as new variations old events. This conference should be great experience for students and there are a wide variety of activities planned. Please note that in order to participate in the mentoring activities, you must have a current ASB student membership. If you think some non-ASB member students in your lab may be interested in the activities, then please encourage them to become an [ASB member](#), which is simple and inexpensive (only \$15!).

There will be a student roundtable mentoring session on Thursday evening, August 19, 2010, prior to the Night Out on the town. These sessions have been a success in the past, and this year there will be new topics including networking at ASB and research in industry versus academia. The roundtable is different from the one-on-one mentor program (see next paragraph for more details). There will be four different topics with one or two mentors for each. Other topics include CV building, job searching and contract negotiation. These topics were selected from student input. In particular, the networking portion should help students become more comfortable interacting with the numerous experts in biomechanics present at ASB. Furthermore, students unsure about choosing a career in academia or industry have the opportunity to learn about both avenues, including speaking with an industry researcher. I strongly encourage students to attend this session to take advantage of these researchers' knowledge. In this informal setting, students will have the opportunity to have discussions with experts in biomechanics, including many past ASB Executive Board members. Snacks will be served.

Another program coming back is the mentor program. In this program, students are paired with an experienced biomechanist. The goal is to encourage interaction in a casual setting to discuss career goals, research, or even life after graduate school. If you are interested in participating, please [e-mail me](#) by June 7, 2010, with your request. See the [ASB website](#) for more information about this program.

The Diversity Luncheon, for both students and professionals of all backgrounds, will be held on Thursday, August 19, 2010. The luncheon will focus on discussing important issues related to women and underrepresented minorities in research and academia. Due to room size limitations, reservations are required for this event. Please watch for an email with details and ensure you receive a confirmation email that you are on the list to attend.

The Women in Biomechanics breakfast is scheduled for Friday, August 20, 2010. It will be an ideal time for female students to network with other female members. Each table will have small group discussions about topics of interest to the individual group. As a group we will discuss whether the breakfast format is preferred to a lunch and what formats people feel are best for these gatherings

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Editorial Board

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Advertising in the Newsletter

The Editorial Board invites various businesses 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

If you are interested in learning more about advertising in the ASB newsletter, please e-mail William Ledoux:

wrlledoux@u.washington.edu

ASB Newsletter



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 Michael Madigan (mlm@vt.edu), Secretary/Membership 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.

Back Copies of the Newsletter

All previous ASB newsletters have been converted into pdf documents and are archived on the [ASB website](#).

(speaker, informal table discussion, group discussions on a given topic, etc). Due to room size limitations and the extraordinary number of attendees last year, reservations are required for this event. Please watch for an e-mail from me and ensure you receive a confirmation email that you are on the list to attend.

The annual meeting this year is the end of my term as student representative. I have greatly enjoyed getting to know more ASB students and professionals while serving the Society. I am confident the new student representative will also find this position rewarding. This year the student representative elections are running in exactly the same manner as the rest of the ASB Executive Board elections. The voting for ASB Student Representative is underway. Please check out the candidate statements and cast an educated vote. All student members should have received an e-mail with voting instructions. If you did not, then please [contact me](#) and I will check into your situation. The new student representative will be announced in late June.

As the ASB meeting gets closer, be on the lookout for more e-mails from me about these events. Please contact me if you have any questions or comments. I hope to see everyone this August in Providence!

Attention Junior Faculty!



Come to a mentoring session for junior faculty and post-docs at the annual meeting in Providence to get advice from senior faculty on juggling academic responsibilities!

Education Committee

Nick Stergiou

This is my last column as your Education Committee Chair as I conclude my three-year term. I have served the Society to the best of my abilities during that time, but if I have made anyone unhappy, I sincerely apologize. During my term I successfully enhanced the Grand-In-Aid program, increased the regions of the US where we have held regional meetings and helped to organize several excellent tutorials. I also helped to compile and disseminate your evaluations of the annual meetings. Based on the tremendous success of the Michigan and Penn State meetings, I believe that we are really moving forward in improving our annual meeting. I also attempted to organize the submission of a large scale NSF educational proposal from ASB. This was partially accomplished as ASB is participating currently in several related small scale proposals. Reflecting back to all these activities, I am really thankful that I was given the opportunity to work in a position that allowed me to repay the Society for being my scientific home for almost 20 years. I am looking forward in serving again from another position.

Below I have included some exciting recent news about the wonderful things that our society is doing in every aspect of biomechanics. It was an honor to be your Education Committee Chair.

ASB Graduate Student Grand-in-Aid Program

The Grant-in-Aid program received ten applications this year. This is an increase from last year when we received nine. I would really like to encourage all of our student members to be more active in applying since the odds are pretty good! This year our Executive Board decided to fund our top four applications. I would also like to thank the committee members for their thorough review of the very competitive applications and the rankings that they provided. All applications were ranked based on background (15 points), significance (15 points), methods (10 points), budget (3 points), and candidate (7 points). The committee members are: David Vaillancourt (University of Illinois at Chicago), Evangelos Christou (Texas A&M University), Jianhua (Jerry) Wu (Georgia State University), and Doug Powell (University of Texas at Permian Basin and Creighton University). I did not vote or provide any rankings.

The ASB Executive Board is pleased to announce funding for the following projects:

Jason Franz, University of Colorado: *The biomechanics of uphill and downhill walking in young and elderly adults.*

Jennifer Yentes, University of Nebraska: *Systemic inflammation and gait in older adults with Chronic Obstructive Pulmonary Disease.*

Joshua Haworth, University of Nebraska: *The effects of model viewing in the development of infant sitting posture.*

Patricia McAndrew, University of Texas at Austin: *Dynamic stability and recovery from acute perturbations during human walking.*



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34th Annual Meeting of the American Society of Biomechanics

Providence, Rhode Island

August 18 – 21 2010

Hosted by

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Details at: www.asbweb.org

Meeting Chairs: J.J. Trey Crisco and Tom Roberts

Organizing Committee Head: Doug Moore

Program Chair: Darryl Thelen



ASB Executive Board 2010-11

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The next deadline for this increasingly competitive program will be January 15, 2011. Details on the application process will be posted on the ASB website and provided in the fall newsletter.

Regional Student Meetings

The ASB Executive Board supported three regional meetings for this year: a) the South Central American Society of Biomechanics Regional Meeting at the Texas Woman's University in Denton, Texas, b) the Human Movement Science Research Symposium at the University of North Carolina at Chapel Hill, and c) the Northwest Biomechanics Symposium at the University of Washington in Seattle. It is quite encouraging that, even at times of financial hardship and decreased travel and sponsorship funds, these groups are willing to host these meetings and promote biomechanics! Thank you very much for your efforts!

The next deadline for an application to host a regional meeting will be September 30, 2011. Maximum financial support for a meeting is \$2000 and the ASB can support up to four regional meetings each year. A regional meeting can be hosted between December 1st and May 31st, as not to interfere with the ASB annual meeting. For the immediate future, priority will be given to proposals coming from regions that have not previously hosted a meeting. Proposals from previously funded regions will be awarded on a first come, first funded basis. Sponsors of a new regional meeting should specifically include ASB in the title (i.e. Midwest regional ASB meeting). If you are interested in serving as a host, contact me ASAP and we can get your application process underway.

Tutorials/Workshops for our annual meeting in Providence

I am especially excited about the tutorials and workshops that we are going to have in this year's annual meeting. Trey Crisco from Brown University and I worked hard to line up relevant tutorials and workshops that are worth coming early to attend. Our first tutorial will be from Beth Brainerd from Brown University on X-ray Reconstruction of Moving Morphology (XROMM). This tutorial will include an overview of hardware and software development, and demonstrations of software for marker-based XROMM (also called dynamic RSA) and markerless XROMM. Methods for measuring precision and accuracy and for validating markerless XROMM will be discussed. In the second tutorial, ASB President Tom Buchanan and I will present on successful grant writing to NIH, including: (1) the new guidelines that have been adapted by the NIH for writing and reviewing applications, and (2) what has not changed in these applications like writing good hypotheses! As you can see, you have to get to the annual meeting early this year. This is an opportunity not to be missed!

It is not too early to plan a tutorial or a workshop for next year's meeting. I welcome your submission of names and topics of potential tutorials for 2011.

Conclusion

As I am finishing my last piece as the Education Committee Chair, I am thinking about all the biomechanists and all the good friends that will flock to Providence, the academic stories that we will share from the past year and the scientific ideas that we will debate. I can't wait for the meeting. See you there!

Secretary/Membership Chair

Michael Madigan

The ASB Executive Board held a mid-Winter meeting on Friday, February 5th in Baltimore, MD. For any weather buffs out there, February 5th was the same date that the first blizzard of 2010 hit the mid-Atlantic and southern New England states. Most of Maryland was blanketed with over 20 inches of snow, wreaking havoc on the travel plans of just about everyone on the Executive Board. Thankfully, everyone returned home safely (although days later than anticipated for some.) While we did accomplish many of our goals for the meeting, we also learned that none of us need to quit our day jobs as biomechanists because our feeble weather forecasting skills aren't likely to be published in any meteorological journals any time soon.

First I'll put on my Membership Chair hat. (*Believe it or not, but that isn't me in the photo. It's Tom Cruise. But we look so similar that I thought no one would know the difference*). Many



of you out there in the biomechanics world have not yet renewed your memberships. In the last newsletter, we reported 467 regular members and 209 student members in good standing (read: membership dues paid). As of the first week of May, we only have 291 regular members and 94 student members in good standing. So we are down by 291 total members compared to late last year. Before Paul threatens to wear his ECU pirate costume at the Annual Meeting to scare people into renewing their memberships, please take the time to renew online at asbmem.org. Please!

We are very happy to welcome [Northern Digital, Inc.](#) as the newest commercial member of ASB. They joined [Tekscan, Inc.](#) and [PhoeniX Technologies Inc.](#) earlier this year as our third current commercial members of ASB. The ASB is very grateful to these companies for their support and interest in working with our Society.

I would like to take this opportunity to acknowledge the contributions of the ASB Membership Committee. They dedicate their time for the betterment of ASB, and certainly make my job much easier! Moving from east to west across the country:

Angela DiDomenico, PhD
Research Scientist
Liberty Mutual Research Institute for Safety
Hopkinton, MA

John De Witt, PhD, CSCS
Exercise Physiology Laboratory Lead / Biomechanist
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ASB Commercial Members 2010

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 [Gary Heise](#), Treasurer-Elect.

The ASB Executive Board is pleased to recognize the following:

Tekscan, Inc.
Phoenix Technologies, Inc.
Northern Digital, Inc.

Erika Nelson-Wong, PT, DPT, PhD
Assistant Professor
School of Physical Therapy
Regis University
Denver, CO

Switching to my Secretary hat, I don't have much to report from the Secretary's desk. I can say that plans for this year's Annual Meeting are coming together, and I invite you to check out the meeting webpage that is linked on the ASB homepage. Not only are the technical sessions going to be outstanding as usual, but the many planned events surrounding the sessions offer a great opportunity to experience this part of the country.



Please feel free to [contact me](#) if you would like to become more involved in ASB in any way. Have a great summer, and see you in Providence.

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Past President

Irene Davis

It is that time of year where spring, and awards, are in the air. While I have truly enjoyed my time on the executive board, my all-time favorite executive task has been making the phone calls to the ASB award winners. I feel like Ed McMahon – just with a smaller check! This was a banner year for awards with 20 applications being submitted resulting in very competitive fields in every category.

Borelli Award

It is with great pleasure that I announce that **Dr. Farshid Guilak** is the 2010 ASB Borelli Award Winner. This is the Society's highest award and recognizes an ASB member who has conducted exemplary research in any area of biomechanics. The award selection is based on the originality, quality and depth of the candidates' research and the relevance of this work to the field of biomechanics. Dr. Guilak is highly deserving of this honor as underscored by this excerpt from his nomination letter:

"Dr. Guilak's research has focused on cellular mechanics and tissue engineering of articular cartilage in the context of osteoarthritis, a painful and debilitating disease of the synovial joints. He is without question a true pioneer in the investigation of chondrocyte biomechanics and mechanotransduction, having been the first to characterize its mechanical properties in situ and ex situ, in health and disease, using a variety of exquisite testing methods. In addition to his extensive work on chondrocyte biomechanics, Dr. Guilak has played a critical leadership role in the development of the field of "Functional Tissue Engineering". His research in this area has focused on the regeneration of articular cartilage using novel 3D biomaterial structures that are explicitly designed to mimic the biomechanical properties of native articular cartilage. His contributions to biomechanical design and tissue engineering have had a major impact on the field, and his widely disseminated work has been featured on the covers of the journals *Nature Materials* and *Tissue Engineering*. You may be surprised to learn that his work has even appeared as part of an exhibit on *Design and the Elastic Mind* at the New York Museum of Modern Art (MoMA), which explored "...the reciprocal relationship between science and design in the contemporary world..."

Jim Hay Memorial Award

The 2010 ASB Hay Award winner is **Dr. Darren Stefanyshyn**. This award recognizes an ASB member who has conducted exemplary research in the area of sports and exercise science biomechanics. The Hay Award selection is based on the originality, quality and depth of the research and the relevance of this work to the field of Sports and Exercise biomechanics. Dr. Stefanyshyn truly exemplifies the spirit of this award. His impact in this area is highlighted by these passages in his nomination letter:

"Dr. Stefanyshyn's contributions to the biomechanics community have been virtually exclusively in the area of sports biomechanics, specifically work related to improving performance through optimizing shoe design



2010 Award Summary

Borelli Award
Farshid Guilak

Jim Hay Memorial Award
Darren Stefanyshyn

Pre-Doctoral Young Investigator
Craig McGowan,
University of Texas at Austin

Post-Doctoral Young Investigator Award
Ross Miller
University of Massachusetts

Journal of Biomechanics Award Finalists
Bahar Sharafi and Silvia Blemker
University of Virginia

Chris Arellano and Rodger Kram
University of Colorado

Clinical Biomechanics Award Finalists
Christine Draper, *et al.*
Stanford University

Thaddeus Brown, *et al.*
University of Iowa



Congratulations to all the 2010 ASB award winners and finalists!

in track sprinters, golf club design for average and world class golf players, hockey sticks for improving the accuracy and speed of slap shots, and a variety of research related to the aerodynamic design and musculoskeletal support of sportswear in athletes ranging from downhill skiers to speed skaters and runners. Aside from an extensive list of high caliber publications in the area of sports biomechanics and an impressive list of invited and keynote lectures at national and international scientific conferences, Dr. Stefanyshyn has also contributed to national and international governing bodies of biomechanics in general and sport biomechanics specifically. Dr. Stefanyshyn has an outstanding record of scientific work in the area of sports biomechanics, he has served the biomechanics communities nationally and internationally and has been an excellent advocate for sport and exercise science around the world”.

Young Investigator Awards

The Young Investigator Awards recognize the early achievements of promising young scientists. I am pleased to announce the winners of the 2010 ASB Young Investigators Awards and the title of their presentations.

Post-Doctoral Young Investigator Award

Craig McGowan, University of Texas, Austin: *A phenomenological muscle model to assess history dependent effects in human movement.*

Pre-Doctoral Young Investigator Award

Ross Miller, University of Massachusetts: *Theoretical analysis of limitations to maximum sprinting speed imposed by muscle mechanical properties.*

Journal of Biomechanics and Clinical Biomechanics Awards

The Journal of Biomechanics Award recognizes substantive and conceptually novel mechanics approaches explaining how biological systems function. The Clinical Biomechanics Award recognizes biomechanics research targeting a contemporary clinical problem. Two finalists for each award have been chosen, and will compete for the award with their presentation at the annual ASB meeting in Providence.

Journal of Biomechanics Award Finalists

Bahar Sharafi and Silvia Blemker, University of Virginia: *The mechanical properties of the endomysium affect propensity for muscle fiber injury near the myotendinous junction.*

Chris Arellano and Rodger Kram, University of Colorado: *How do step width and arm swing affect energetic cost and lateral balance during running?*

Clinical Biomechanics Award Finalists

Christine Draper, Thor Besier, Michael Frederickson, Gary Beau, Scott Delp, Andrew Quon, and Gary Gold, Stanford University: *Patients with patellofemoral pain exhibit elevated bone metabolic activity at the patellofemoral joint.*

Thaddeus Thomas, Don Anderson, Andrew Willis, J. Lawrence March and Thomas Brown. University of Iowa: *Virtual pre-operative reconstruction planning for comminuted articular fractures.*

ASB Travel Grant

The Research Travel Grant is offered to foster collaborative research and interaction among scientists by helping to offset the cost of travel to a host institution. This year we are awarding two grants to the following individuals:

Rebecca Zifchock, Motion Analysis Laboratory, Hospital for Special Surgery.

Rebecca will be travelling to the University of New England to collaborate with Erin Hartigan in the Dept. of Physical Therapy. Their project will be focused on ACL injury prevention and treatment.

Fan Gao, Dept. of Health Care Sciences, UT Southwestern Medical Center at Dallas.

Fan will be travelling to the University of Rhode Island to collaborate with Helen Huang of the Neuromuscular Rehabilitation Engineering Laboratory. They will be studying neural control of prosthesis, development of intelligent and adaptive control system for therapeutic robots and prostheses.

Finally, I would like to thank the 35 selfless ASB members who willingly agreed to review these numerous and highly competitive award packages!

ASB Elections

The Nominating Committee has also been busy assembling a slate of candidates for the upcoming elections. This year, the membership will be electing a President-Elect and a Program Chair. In addition to these, the student membership will be electing a Student Representative.

You will soon receive an email with the link to the elections, which will include a bio and position statement for each candidate. Please exercise your right to vote! This is a very talented slate of candidates, of which all would be excellent selections. The nominees follow:

President-Elect

Don Anderson, Dept. of Orthopedics and Rehabilitation, Univ. of Iowa
Mark Redfern, School of Engineering, University of Pittsburgh

Program Chair

Jack Dennerlein, School of Public Health, Harvard University
Elizabeth Hsiao-Wecksler, Dept. of Mechanical Science and Engineering, University of Illinois

Student Representative

Michelle LaBoda, Dept. of Kinesiology, University of Massachusetts
Meghan Vidt, School of Biomedical Engineering and Sciences, Va Tech-Wake Forest

I would like to thank the other nominating committee members, Jonathan Dingwell and Young-Hui Chang for their willing service. In addition, thanks to Rebecca Fellin for her diligence in recruiting two very worthy Student Representative candidates.



ASB Elections-Slate of Candidates

President-Elect

Don Anderson
Mark Redfern

Program Chair

Jack Dennerlein
Elizabeth Hsiao-Wexler

Student Representative

Michelle LaBoda
Meghan Vidt



ASB Elections will be held on- line this month

Watch for an e-mail
with instructions on
how to vote.

Other Past-President Activities

Over the past year, I have worked closely with Steven Stanhope, Ken Kaufman, Lou Quatrano and Nancy Shinowara to develop the first [Biomechanics Priorities Conference](#), as part of my commitment to advocacy. We were able to secure funding from both NCMMR and NIBIB to help support the meeting. The meeting is scheduled for June 9-11, 2010 at the University of Delaware. We have approximately 60 participants from diverse backgrounds as well as career levels. Following keynote presentations from Rick Lieber (UCSD), Scott Tashman (Univ. of Pitt), Rick Neptune (Univ. of Texas) and David Tulskey (Kessler Rehab), participants will spend the next 2.5 days developing recommendations for future biomechanics research. At the end of the meeting, these recommendations will be scored and prioritized by the participants. The recommendations, along with the overall scores will be posted on the website following the meeting. In addition, a summary of the meeting will be published in the Journal of Biomechanics.

I am also continuing to work on the National Biomechanics Week with the task force including Clare Milner, Jean McCrory, Andy Karduna and Gerry Smith. This has involved some navigation through the political arena, which, unfortunately, has been slow going.

As this will be my last newsletter piece, I want to express my gratitude for the opportunity to serve the Society and thank the membership for their support.

i-FAB 2010 Seattle

We are pleased to announce i-FAB 2010 Seattle, the 2nd Congress of the International Foot and Ankle Biomechanics Community (i-FAB), which will be held at the University of Washington in Seattle, Washington, USA between September 16-18, 2010. Details found at <http://www.i-FAB2010.org>.

The Congress program will include lab tours, commercial exhibits, workshops, tutorials, keynote and invited addresses, extensive poster presentations, and opportunities to network with other professionals in the field. Activities on Thursday September 16th will be focused on clinical foot and ankle topics including a total ankle replacement workshop, clinically oriented keynotes, and free communications. Topics on Friday and Saturday will include modeling, cadaveric simulation, evolution and non-human primate feet, the diabetic foot, foot and ankle imaging, footwear, and kinematics. Full details of the Congress program can be found at <http://www.i-fab2010.org/Program.aspx>.

A social program for accompanying persons is being planned that will include tours and activities in and around the greater Seattle area. <http://www.visitseattle.org/visitors/>

Post-Congress biking, hiking, and kayaking opportunities will allow attendees to enjoy the mountains, rivers, and ocean of the Pacific Northwest. http://en.wikipedia.org/wiki/Pacific_Northwest

Advance Registration is US\$400 and a student rate of US\$160 is available.

Important Deadlines:

Early Registration Closes: June 30, 2010

Discounted Hotel Reservations Close: August 15, 2010

i-FAB (www.i-fab.org) is an international community of clinicians and researchers who are interested in the biomechanics of the foot and ankle. i-FAB was organized in 2007 to improve the understanding of foot and ankle biomechanics, surgery, and footwear, and to foster greater integration among researchers, clinicians, and industry representatives. The 1st Congress (<http://www.i-fab.org/ifabconference.htm>), held at the Istituto Ortopedico Rizzoli in Bologna, Italy in September 2008, attracted 170 delegates from all over the world.

We hope that you will join us in Seattle in September 2010.

Peter Cavanagh & William Ledoux

President-Elect

Jill McNitt-Gray

The purpose of the American Society of Biomechanics is to encourage and foster the exchange of information and ideas among biomechanists working in different disciplines and fields of application and to facilitate the development of biomechanics as a basic and applied science. The principal and most visible activity of the Society by which this purpose is fulfilled is the annual scientific meeting. Thus, it is imperative that the meeting be run smoothly and efficiently. The Executive Board of the Society invites interested parties to submit a proposal to host the meeting. Proposals should be submitted to the President-elect of ASB. In a maximum of three pages of single-spaced text, excluding any supporting documentation you wish to submit as appendices, please provide information about each of the following:

Local organizing group and sponsors

Please identify professional colleagues in your region who are likely to contribute to the planning, organization, and support of the meeting. This may include other biomechanists or scholars in biomechanics-related fields and/or meeting planning specialists/departments within your institution. Be sure to explicitly identify the Meeting Chair, who serves as the head of the local organizing group and is the primary liaison with ASB as a member of the ASB Executive Board during the planning and conduct of the meeting. Also identify sponsoring organizations (e.g., academic departments, administrative units, research organizations) for the meeting.

Proposed meeting dates

The annual meeting is normally scheduled over a three day period (usually Thursday-Saturday) in late August, September or October, with the morning, afternoon, and evening of the first day devoted to laboratory tours, tutorials, registration, a welcoming reception and the first of two Executive Board meetings. The scientific program occupies the latter two days. Indicate your proposed meeting dates and provide a brief rationale for your choice. Please be careful to avoid conflict with religious holidays (e.g., Rosh Hashana and Yom Kippur occur during this time of the year).

Projected meeting site

Please comment on meeting site features that you feel will result in a successful meeting. You are encouraged to provide information about the following features:

- Transportation - accessibility of your city from other parts of the country, transportation to and from the airport
- Regional and local sights and attractions that might add to a unique setting for the meeting.
- Details of the meeting site including meeting facility descriptions- Note that the minimum needs for the meeting facility include three nearby large lecture halls accommodating 40% of the at-



Proposals Needed for Hosting the 2013 ASB Meeting!


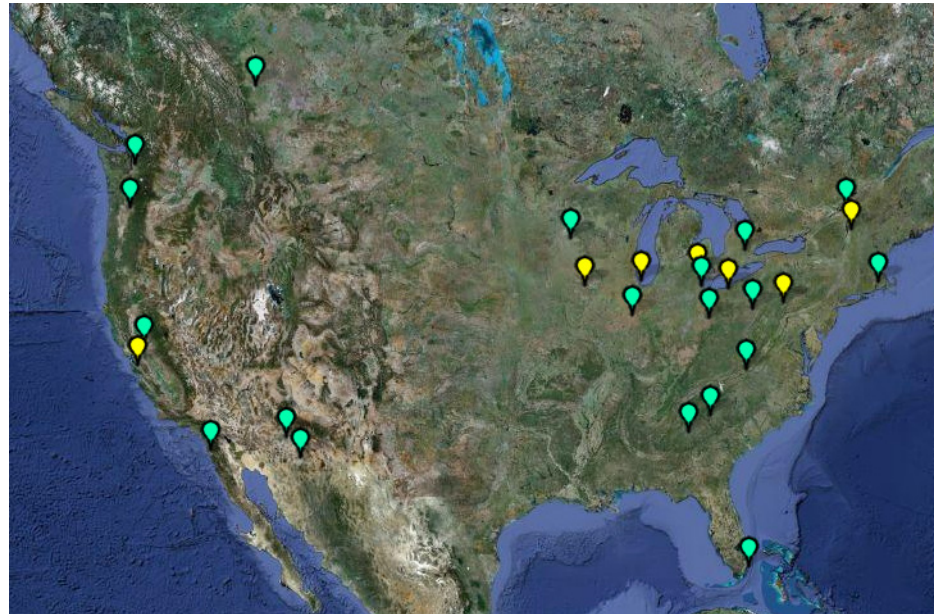
See text for details on site and proposal requirements.

Locations of ASB Annual Meetings to Date (including NACOB and World Congress on Biomechanics). Yellow marker indicates that multiple meetings have been held at the site.

tendees and one lecture hall capable of holding approximately 75% of the registrants. Recent meetings have attracted approximately 500-600 participants. Suitable space is also needed for the opening reception, Executive Board meetings, registration, poster presentations with sufficient space for posters, presenters and movement of attendees, prominent and secured area for exhibitor displays, presentation previewing, and coffee breaks.

- Convenience of reasonable hotel/motel accommodations and restaurant facilities to the meeting site.
- University or laboratory facilities that might be featured in tours.

Past meetings have been held at a number of sites around the country. Please consider hosting an upcoming annual meeting at your location, and submit a proposal!



Don't Forget!!
ASB Annual Meeting 2010
August 18-21, 2010
Providence, Rhode Island
Early Bird Registration Ends June 18, 2010
More info: www.asbweb.org

Program & Meeting Chairs

Darryl Thelen, Trey Crisco, and Tom Roberts

The [34th Annual Meeting of the American Society of Biomechanics](#) will be held from August 18-21 in downtown Providence, RI, a city of 170,000 that combines the charm of a small New England town with the energy of a thriving city. The downtown area is easily accessible by air, rail and car. Attendees are encouraged to come early and stay late to enjoy many of the summer sites and activities in Rhode Island and near-by Massachusetts. Nearly 500 abstracts were submitted for the meeting, providing the basis for a strong and exciting scientific program. Abstracts will be presented in three parallel podium tracks and one continuous poster session with dedicated times. Over 20 commercial exhibitors will be present at the meeting.

Register Now! Deadline for early registration is June 18.

Meeting Highlights

Wednesday

- Tutorials: biplane fluoroscopy, NIH grant writing
- Lab Tours: neurorehabilitation, gait & motion; X-ray reconstruction of moving morphology (XROMM) and comparative biomechanics
- Reception: Museum of Art at the Rhode Island School of Design

Thursday

- Keynote by George Lauder, PhD: fish robotics and biomechanics
- Diversity luncheon
- Symposium: machines inspired by animal locomotion
- Symposium: biomechanical applications of biplane fluoroscopy
- Student and junior faculty mentoring sessions

Friday

- Women in science breakfast
- Keynote by Jim Collins, PhD: from vibrating insoles to synthetic gene networks
- Borelli award lecture
- Symposium: 3D models of muscle-tendon behavior
- Symposium: robotic lower limb orthoses and prostheses
- Banquet: Herreshoff Marine Museum / America's Cup Hall of Fame in Bristol, RI

Saturday

- Presentations by the best paper award finalists
- Young scientist pre-doc and post-doc award presentations
- Hay award lecture

We look forward to seeing you in Providence.



Providence,
Rhode Island



Communications Chair

Zong-Ming Li

Our Communications Committee is working on an ASB initiative to develop a new feature, namely, "Videos of the Month." The primary purpose of this initiative is to share Internet videos related to biomechanics among fellow biomechanists, for informational and educational purposes. ASB members are encouraged to nominate biomechanics-related videos (with Web links). We plan to select four links to biomechanics videos each month and then post them to the ASB Web site. Please email your video links to [Matt Seeley](#).



Golf Swing
Analysis Report



Address

Stance	
Stance Width (inches)	0.36
Stance Width % Shoulders	1.34
Stance Depth	0.32
Ball Position	1.67



Target Line	
Feet	4.79
Pelvis	5.57
Shoulders	2.36



Body Alignment	
Pelvis Side tilt	1.90
Pelvis Forward Tilt	21.39
Shoulder Side Tilt	9.75
Spine Side tilt	6.64
Spine Forward tilt	14.46
Knee Flexion	22.70



Swing Tempo			
	Backswing	Downswing	Follow through
Time in ms	.42	1.08	1.37
Ratio (to downswing)	36%	1	1.26%

- Penn State University – PGA - Golf Management Program
- USC Baseball Group
- USC PT Biomechanics
- FIU – PT Program
- FGCU – Biomechanics
- Rush Orthopedics
- Orthopedic Associates

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Applications for:

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 847-587-7013 Sales@Qualisys.com

Treasurer

Paul DeVita

I began my last newsletter letter with, "The New Age is upon us." Today I report The Old Age is coming to a close. This letter will be my final newsletter entry as ASB Treasurer. I'll pause for the cheering to subside..... Beginning in December we will all be reading the journalistic musings of still Treasurer-Elect but by then Treasurer Gary Heise. It has been a pleasure, an honor and a lotta fun to serve the Society and its members and to work with all the recent, fabulous members of the Executive Board. I recommend all the readers consider serving on the Executive Board at some time in their careers. You may remember I "campaigned," for office on the platform that, "I have never been convicted of 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." My point being that the qualifications are not overly demanding. All you need is a bit of a feeling that you are ready to help the Society in your own way. Hey, if I can do it, anyone can.

OK, on with it: Our investments with Ameriprise Financial Services totaled \$139,592 at the end of the first quarter in 2010. This amount is a healthy 22% increase over the value of one year ago (which was our lowest amount in some years), \$114,249. As a reference, the investments reached their highest value of \$153,000 in November 2007. We also have about \$20,000 in the bank for a total net worth of approximately \$160,000, give or take, more or less, thereabouts.

The Ameriprise investments are partitioned into three funds, one of which is a Stock Market Certificate. This account is the principal for the endowment supporting the Hay Award given annually at our conference. The Hay Award was initiated in 2004 by the Hay family and several ASB members to remember and honor the contributions of Jim Hay to our field and our Society. As you may know, we initiated a fund raising campaign this year to increase the endowment which was ~\$14,500. Through the first four months of 2010 we received \$1,475 for the endowment. Nice, but still we could use more. The fund raising campaign continues throughout 2010 and all members still have the option of donating one of several pre-set gifts or a self-selected gift to the endowment. You can make a contribution through either the online renewal system or through the old-but-still-in-use paper renewal system. The Executive Board respectfully asks you to consider making a donation to the Hay Award endowment. Jim Hay was a giant in our field and is fully deserving of having an ASB award to honor his contributions.

The Society also funded or at least provided partial support for three regional meetings this Spring. The Northwest Biomechanics Symposium 2010 was held in Seattle, WA and organized by William Ledoux and colleagues. The South-Central ASB Symposium was held at Texas Woman's University in Denton, TX and organized by Doug Powell and colleagues. The Human Movement Science Research Symposium was held at UNC-Chapel Hill and organized by Steve Leigh and colleagues. Lotta colleagues, huh? The ASB provided \$2,000 for each



Please Consider Donating to the Hay Award Endowment When You Renew Your ASB Membership

Pre-set and self-selected gift amounts are available on the online membership renewal system



Don't Forget to Renew Your ASB Annual Membership

**Professional Mem-
bership Dues: \$60**

**Student Membership
Dues: \$15**

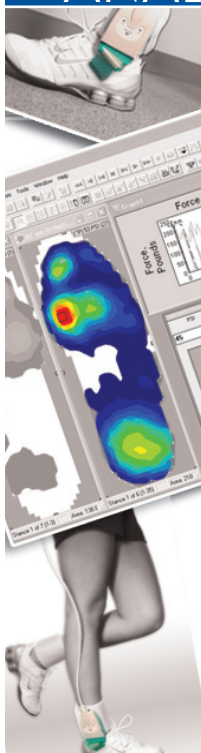
regional meeting. Please consider organizing and hosting a regional meeting in your neck of the woods.

And now...The Never-Ending Treasurer's Membership Renewal Drive: Please [renew your ASB membership](#). Thank you. Regular membership dues remain at \$60 and student memberships remain at \$15 both of which are bargains-galore. You may also remember that we had a contest last December to encourage early renewals. We gave a free subscription to an ASB sponsored journal to three members for renewing in December. The winners were selected randomly on January 1 and were Becky, Kunal, and Anne. Thanks to everyone for renewing early or for renewing late. Thanks to everyone else for renewing...today.

The ASB continues to have commercial sponsorship from corporate members Phoenix Technologies, Inc. and Tekscan, Inc. We now also have a third corporate member, Northern Digital, Inc. which joined the ASB in April. The ASB is grateful to each of these organizations for their support. I encourage all ASB members to visit their booths at the annual meeting and to explore their websites.

Please visit the [ASB website](#) and the [Annual Meeting website](#) for your biomechanical needs. The Annual Meeting will be in Providence, Rhode Island on August 18-22, 2010. Also, please contact me if you have any questions or problems with your membership or your renewal.

GAIT & FOOT FUNCTION ANALYSIS **MADE EASIER!**

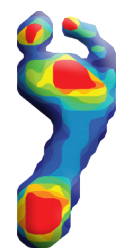


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A View From the Blue

Michelle Sabick

If there's one piece of wisdom that I have picked up in my nearly forty years on the planet it is this: *The only thing that is constant is change*. Especially in our fast-paced culture, people who do not change and adapt to new technologies, new ways to communicate, and new trends can quickly get left in the dust. Although there have been many types of changes that I have had to deal with in my lifetime (computers, cell phones, cable/HD television, and automatic tracking motion capture systems are all good examples), for the most part I have been able to evolve to keep up with little conscious effort. Parenting is where the message about change has really hit home to me. Once I began to learn how to deal with a screaming infant, those situations were quickly replaced by much more challenging two year-old tantrums.

So why am I rambling on and on about my parenting woes? Probably because my daughter is constantly reminding me how much I *need* to change, and often how much I *don't want to*. Even though change is inevitable, anyone who has ever tried to propose a sweeping curriculum or pedagogical change at a university, or a procedure change at a large company, knows that lots of people fear change. In many cases it isn't even a conscious thing—I am sure very few faculty members would actually admit that they don't like change—but they come up with all sorts of ways to combat the ideas, such as arguing about how they should be implemented, or complaining that they will result in higher workloads. If most people won't admit that they are resistant to change, why do they resist it anyway? People resist change primarily because of inertia—it is easier to keep going on the track they are already on than to change directions, or speed up, or stop. In many cases, though, they put more energy into resisting change than it would take to implement it.

My life is changing in several ways this year, and I hope that I am embracing the new opportunities that are coming my way. As I start to think about my priorities for next year as I come off my sabbatical, I realize that I want to change my research trajectory in a fairly substantial way. Thinking about doing that has been a little bit scary, but also exciting and energizing. After all, I don't really know if I'll be good at my "new job", and it would certainly be a lot easier to keep doing what I have been doing. But if I don't try now, I know that I will always look back upon this year with some regret, not knowing if I could have been a fabulous success in some way I never imagined. If I try my new path, then even if the endeavor is a spectacular failure, at least I won't ever have that one particular regret. Now, I just have to convince a few of my superiors that change is a good thing (at least for me). Wish me luck!

You must be the change you wish to see in the world.
Mohandas K. Gandhi



More Great Quotes on Change

It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.

Charles Darwin, British Naturalist

Change is the law of life. And those who look only to the past or present are certain to miss the future.

John F. Kennedy, Thirty-fifth President of the USA

Not everything that is faced can be changed, but nothing can be changed until it is faced.

James Baldwin, African-American writer.

To improve is to change; to be perfect is to change often.

Winston Churchill, British politician.

When you're finished changing, you're finished.
Benjamin Franklin, American statesman, scientist and philosopher.

(from en.Proverbial.net)



Events Calendar

William Ledoux

NOTE:

For a more comprehensive international listing, please visit ISB's website at: isbweb.org/o/content/view/40/57/

International Society of Electrophysiology and Kinesiology

June 16 - 19, 2010, Aalborg, Denmark
Abstract deadline - January 15, 2010
www.isek2010.org/

American College of Sports Medicine

June 2 - 5, 2010, Baltimore, Maryland
Abstract deadline - past
www.acsm.org/ or tinyurl.com/lld9jp

Canadian Society of Biomechanics

June 9 - 12, 2010 Kingston, Ontario, Canada
Abstract deadline - past
csb-scb-2010.ca/

American Society of Mechanical Engineers Summer Bioengineering Conference

June 16 - 19, 2010, Naples, Florida
Abstract deadline - past
www.asmeconferences.org/sbc2010

European Society of Biomechanics

July 5 - 8, 2010, Edinburgh, Scotland
Abstract deadline - past
www.lifelong.ed.ac.uk/esb2010/index.htm

International Society of Biomechanics in Sports

July 19 - 23, 2010 Marquette, Michigan
Abstract deadline - past
www.nmu.edu/isbs

World Congress on Biomechanics

August 1 - August 6, 2010, Singapore
Abstract deadline - past
www.wcb2010.net/

American Society of Biomechanics

August 18 - 21, 2010, Providence, Rhode Island
Abstract deadline - past
www.asbweb.org/conferences/2010/home_ASB_2010.html

IEEE Engineering in Medicine and Biology Society

August 31 - September 4, 2010, Buenos Aires, Argentina
Abstract deadline - past
www.embc2010.embs.org

International Research Council on Biomechanics of Injury

September 15 - 16, 2010, Hanover, Germany
Abstract deadline - past
www.ircobi.org/conference.htm

International Foot and Ankle Biomechanics Community

September 16 - 18, 2010, Seattle, Washington
Abstract deadline - past
www.i-fab2010.org

Human Factors and Ergonomics Society

September 27 - October 1, 2010, San Francisco, California
Abstract deadline - past
www.hfes.org/web/HFESMeetings/2010annualmeeting.html

Orthopaedic Research Society

January 13 - 16, 2011, Long Beach, California
Abstract deadline - August 2, 2010
www.ors.org

American Academy of Orthotists and Prosthetists

March 16 - 19, 2011, Orlando, Florida
Abstract deadline - July 30, 2010
www.oandp.org/meeting2011

Gait and Clinical Movement Analysis Society

April 26 - 29, 2011 Bethesda, Maryland
Abstract deadline - tba
www.gcmas.org

International Society for Posture and Gait Research

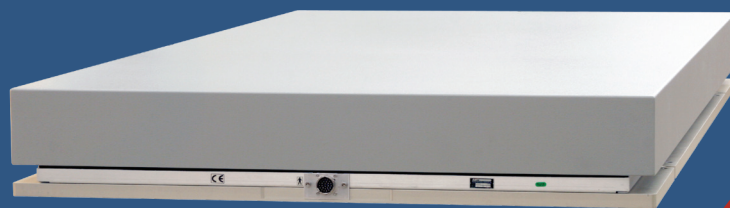
June 18 - 22, 2011, Akita, Japan
Abstract deadline - tba
www.ispg.org/conferences/japan-2011/conference-overview/index.html

International Society of Biomechanics

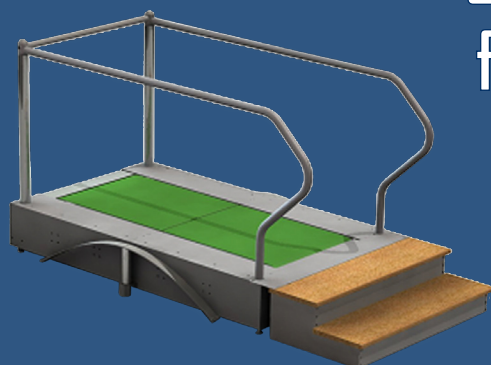
July 3 - 7, 2011, Brussels, Belgium
Abstract deadline - February 15, 2011
www.isb2011.org

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