



American Society of Biomechanics Newsletter

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From the President

Melissa Gross

The 24th Annual Meeting of ASB is upon us. This year's meeting at the University of Illinois in Chicago promises to deliver both scientifically and collegially. The meeting organizers have done a wonderful job in providing the diverse presentations that make ASB meetings so enjoyable to attend. The keynote topics cover a broad range of disciplines within ASB, from the motile behavior of bacteria to the artificial gravity challenges to human exploration of Mars. Symposia topics include modeling of dinosaurs, cell stress, biomechanics of the proximal femur, and preventing lifting injuries. The format of the Chicago meeting also includes thematic poster sessions, which is something still new to ASB meetings. Raghu Natarajan, Meeting Chairperson, and Trey Crisco, Program Chairperson, have worked hard to produce a high quality meeting, and I am sure that their planning and efforts will yield an excellent experience for all participants. As always, your comments on the meeting evaluation forms are very important in planning future meetings, so please fill them out.

A unique feature of this year's Annual Meeting is that it occurs just before the World Congress on Medical Physics and Biomedical Engineering, also held in Chicago (July 23-28). One of the sponsoring organizations for the World Congress is AIMBE, the American Institute for Medical and Biological Engineering. ASB is one of 14 scientific societies that belong to the AIMBE Council of Societies. The principal activities of AIMBE include participation in the formulation of public policy, and the dissemination of information, both to the public and scientific community, through publications and forums, and education. ASB participates in AIMBE activities by appointing a representative to attend the Council of Society meetings. Our current representative is Joan Bechtold. For more information on the World Congress or AIMBE, click on the link provided on the ASB website for the Chicago meeting.

Just as one annual meeting draws to close, the pressing question is "Where will the next meeting be held?". The 25th Annual Meeting will be held at the University of California, San Diego in La Jolla from August 7-11, 2001. The Meeting Chairperson is Rick Lieber and the Program Chairperson is Walter Herzog (see the ASB website for contact information). They have organized keynote talks with a biological flavor, with topics ranging from microcirculation in tissue injury to biomechanical design of

motor molecules and mechanical considerations in surgical reconstructions. The meeting will again be earlier than usual for ASB meetings, so stay tuned for abstract submission dates.

To gain the benefits of long-range planning, ASB is now selecting meeting sites several years in advance. In 2002, the 26th Annual Meeting of ASB will be held in conjunction with the 4th World Congress of Biomechanics to be held in Calgary from August 4-9. Key features of a typical ASB meeting, including the Borelli and Young Scientist Award presentations and the ASB business meeting, will be incorporated into the program. Free communications sessions will include presentations by ASB members as well as other participants in the Congress. Abstract acceptances will be decided by the World Congress program committee, which will include representatives from ASB.

ASB continues to support smaller, regional meetings. Steve McCaw headed up the organizational effort for the Midwest Graduate Students Biomechanics Symposium that was held March 31-April 1, 2000 at Illinois State University in Normal. Activities included three keynote speakers and 16 student presentations. If you would like to organize a regional meeting in the coming year, contact me or any member of the Executive Board with your ideas.

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The structure of the ASB Executive Board continues to evolve. Historically, the Newsletter Editor participates in all of the Executive Board meetings, but is not recognized as an Executive Board member as defined in the ASB Bylaws. At the last Executive Board meeting, this incongruity was discussed and it was decided to put the issue before the membership. Look soon for a ballot in which you will need to cast your vote regarding this potential change in the role of the Newsletter Editor.

This issue of the ASB Newsletter marks the end of a terrific series of newsletters with Joe Hale as Editor. Joe is stepping down after five years in this role. His years of service are beyond the call of duty - his generosity has been enormous. The consistent quality of the Newsletter has been a significant contribution to the culture of ASB. I hope that Joe will be able to enjoy future issues of the Newsletter despite being deprived of the personal satisfaction that comes from surviving the trials and tribulations of production!

The American Society of Biomechanics continues to grow in membership and in intellectual depth. The number of fellowships and awards that recognize and support high quality research among ASB members is expanding. As we approach the 25th year of the Society, it is a good time to reflect on where we have been as well as where we are headed. I continue to welcome any contributions that you would like to make to the ASB website that documents or comments on the history of this organization. Onward to the future!

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From the Secretary/Treasurer

Rob Shapiro

Membership and Elsevier update: As of April 25, 2000, 581 members have paid their dues for 2000. This is slightly ahead of last year's pace. I am happy to report that we have had very few journal problems this year and those we have had seem to have been resolved quickly. If you have problems with your journal subscription please contact me. Please be advised that as part of our negotiated three year agreement with Elsevier the subscription rate for the Journal of Biomechanics will be \$71 next year.

Credit Cards: After last year's annual meeting I examined the possibility of accepting credit card payments for membership and journal subscriptions. We currently have an agreement with Bank One Payment Services to process via computer our credit card payments. It took a few months to work out all the strange charges we were getting, but overall the process seems to working well. To date we have had 152 members (26%) use a credit card. It appears that the \$3.00 charge is covering our expense in processing these accounts. At this time we can accept MasterCard, Visa and American Express. The only problem we have encountered is making sure that we have the correct billing address and name associated with the credit card. To reduce our costs we provide the name, expiration data, street address and zip code for each card. For those of you using your personal credit card please remember to provide the correct billing address. If you are using a corporate card please include the correct name and billing address for the card. If these items are incorrect we can still process the card but our cost increases.

Elections - New Officers: The early occurrence of this year's annual meeting has caused us to change our voting procedures slightly. You should have already received the ballot and return envelope. Ballots must be received by July 1, 2000. This year the nominating committee for President-Elect and Program Chair-Elect was chaired by Bruce Martin (Past-President) with Phil Martin and Mary Rodgers serving as committee members. The nominees for President-Elect are Andrew A. Biewener and Keith R. Williams. The nominees for Program Chair-Elect are Ted S. Gross and Jill McNitt-Gray. You have received copies of the biographical sketches. They can also be found on the web page at *asb-biomech.org*.

It is essential to the operation of the society that members take an active role. **Please remember to VOTE and mail your ballot.** In an attempt to make this as easy as possible, we have included addressed envelopes for your convenience. Place your ballot in the envelope, apply the necessary postage and please mail your ballot. We will announce the results at the annual meeting in Chicago. If you did not receive a ballot please contact me.

Directory: Included in this mailing will be the 2000-2001 ASB membership directory. Only current members will be receiving the directory.

Special Note: My assistant, Jill Carson will be leaving on June 1. She has completed collecting data for her thesis and has been hired by Novell in Minneapolis. She was instrumental in setting up the society's database and has been most helpful to me in responding to your questions and concerns. As she has a poster presentation at the Chicago meeting, I know she will remain active in the society. On behalf of ASB I want to thank her for all her help and wish her well in her job and upcoming marriage.

Reminder: If you have any questions or concerns about your membership, journal subscriptions or other society related business please contact me at rshap01@pop.uky.edu or (859) 257-9795.

Education Committee Report

Julianne Abendroth-Smith

With spring comes the planning of the Summer (nee Fall) Annual Meeting of ASB. The Education committee has been working on several facets of the meeting, including the round table discussion during the student luncheon that Kathleen Costa mentions in her Student Corner column. I would like to thank all the senior researchers who have agreed to participate and meet with the students during the luncheon, and I would like to thank Kathleen also, who has worked hard coordinating the luncheon. Students, don't miss this chance to meet with some of the leaders in our field, for some 'up close and personal' conversations.

Two tutorials are in the planning stages for the Chicago meeting. Unless something unforeseeable occurs, the tutorials will focus on filtering and single subject design. The filtering tutorial will focus primarily on methods for establishing cutoff frequencies for the different types of digital filters being used. For those of you who attended Scott Tashman's tutorial on filtering at the 1996 annual meeting in Georgia, this year's tutorial will build on the information presented there. After a brief review of the general characteristics of filters and general filter types, example applications in biomechanics will be discussed. Then, the methods for determining automatic cutoff frequencies for digital filters will be emphasized, including Wells & Winter's residual analysis, Jackson/ Hinrichs knee method, Challis' autocorrelation-based procedure, Yu's empirical method, Hatze's optimally regularized Fourier series, and Woltring's GCVQS. Peter Vint, Ph.D. will lead this tutorial.

The Single Subject tutorial is designed to give researchers an understanding of the rationale behind this research approach and its importance to human movement research. The tutorial will emphasize the person as a legitimate unit of analysis for theory-driven research. Issues to be discussed include variability, aggregation and generalization. The most common criticisms of normality, independence and lack of generalizability will also be addressed. Comparisons between group designs and single subject designs and person-by-treatment interactions will be discussed

using numerous examples for both parametric and non-parametric tests along with limitations. Barry T. Bates, Ph.D. will lead this tutorial, with participation from Janet Dufek, Ph.D., Nick Stergiou, Ph.D. and John Mercer, Ph.D.

Watch for more information concerning the tutorials in the information packets about the Annual Meeting, which should be forth-coming. For those who like to plan ahead, the 2001 Annual Meeting will be in San Diego, and possible tutorials there include muscle physiology and simulation. However, suggestions are always welcome, either by emailing the education chair, or filling out an evaluation form at the Chicago meeting. Speaking of evaluations, we hope to have a new and improved evaluation form in place for Chicago. Please make it a point to fill them out; we appreciate and value your comments. They are especially important to the Executive Board for planning future meetings.

Finally, thank you to those who have contacted the Executive Board about serving as committee members for ASB; we hope to get you involved on a committee soon. If you are interested in serving, feel free to contact the Education Chair.

Graduate Biomechanics Programs: The Graduate Biomechanics Programs can be accessed via the ASB website. The database provides a valuable tool for those considering graduate studies in the multidisciplinary area of biomechanics. In this role, it is important that the information given is updated periodically to provide accurate details on the programs and current points of contact. It is requested that those who have listed their institution in the programs database take a few moments to check the current information and update as necessary. Anyone wishing to list a new program is encouraged to do so.

Mark your calendars ...

ASB 2001

Plans are well underway for the 2001 ASB Annual Meeting to be held in San Diego, CA from August 9-11, 2001 on the UCSD Campus. Activities planned include a San Diego Padre's game, a barbecue/fiesta on Mission Bay as well as biological laboratories designed as primers for engineers.

For additional information, contact the Meeting Chair:

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ASB 2000: The Biomechanics of Bacteria, Brontosauruses, and Beyond

UIC
University of Illinois
at Chicago

The twenty-fourth annual meeting will be held at the University of Illinois at Chicago from July 19-22, 2000. The meeting promises to be an exciting one, in an exciting location. The program consists of sixty podium presentations and seventy-nine posters, selected from one hundred and seventy-one submitted abstracts. The posters will be available for viewing over the entire course of the meeting. In addition, the program includes two tutorials, two keynote speakers, four symposiums, and four thematic poster sessions. An outline is provided below and the full program can be viewed at the web site (www.asb-biomech.org/conference). Registration, accommodations, and travel information can also be found on the web page. *See you in Chicago!*

WEDNESDAY, JULY 19, 2000

Tutorials: *Filtering of data - A Biomechanist's Perspective*. Peter Vint, Ph.D.

Single subject design. Barry T. Bates, Ph.D., Janet Dufek, Ph.D., Nick Stergiou, Ph.D. and John Mercer, Ph.D.

POSTERS (79 total) and COMMERCIAL EXHIBITORS available for the entire meeting

THURSDAY, JULY 20, 2000

Keynote Lecture 1: *2001 Is Almost Here: Challenges to Human Exploration of Mars, and The Reality of Artificial Gravity*. Laurence R. Young, MIT

Podium Sessions: GAIT, TISSUE MECHANICS, ORTHOPEDICS, SPINE, KNEE, MUSCLE

Thematic Poster Sessions: GAIT and AGING

FRIDAY, JULY 21, 2000

Keynote Lecture 2: *Motile Behavior Of Bacteria*
Howard C. Berg, Harvard University

Symposium: CELL STRESS: HOW DO THEY MANAGE IT? Kyriacos Athanasiou, Rice University; Kathryn G. Vogel, The University of New Mexico; Ning Wang, Harvard School of Public Health

Symposium: PREVENTING INJURIES THAT RESULT FROM LIFTING: TAKING THE SCIENCE BEHIND SPINE BIOMECHANICS INTO INDUSTRY. Moderators: Steve Lavender, Ph.D.; Gunnar Andersson, M.D.

Thematic Poster Sessions: POSTURE and ASSISTIVE DEVICES

Borelli Lecture: Clint Rubin, SUNY Stony Brook

Podium Sessions: NEURO-CONTROL, UPPER EXTREMITY,

ASB Banquet at the Shed Aquarium, Chicago

SATURDAY, JULY 22, 2000

Symposium: COMPUTING THE PAST : THE MODELING OF DINOSAURS

Analyzing the Biomechanics of Dinosaurs: The Role of Technology in Overcoming the Problems Encountered in Studying Very Large Extinct Organisms. Ralph E Chapman, Smithsonian Institution; Arthur Andersen, Virtual Surfaces, Inc.; Rebecca A. Snyder, Smithsonian Institution

Robosaurs: Mathematical and Computational Modeling of Locomotion in Extinct Animals.

Donald M. Henderson, Johns Hopkins University

Reconstructing Theropod Dinosaur Limb Function Using 3-D Computer-Animated Track Simulation.

Stephen M. Gatesy, Brown University

Symposium: THE HEART OF THE MATTER IS IN THE NECK: BIOMECHANICS OF THE PROXIMAL FEMUR. Debra E. Hurwitz, Rush-Presbyterian-St. Luke's Medical Center; Z. Maria Oden, University of Texas Health Sciences Center at Houston; Christine M. Snow, Oregon State University

Podium Sessions: FOOT AND ANKLE, BONE, SPORTS, MODELING

Awards Session:

ASB Young Scientist Pre-Doctoral Award
ASB Young Scientist Post-Doctoral Award
ASB Student Travel Awards
Clinical Biomechanics Award
Journal of Biomechanics Award
Microstrain Award



Between the Lakes

Joseph Hale

With the dawn of the new millennium, the urge to look back at the fading 20th century and wax philosophic seems epidemic. Fortunately, the history of the ASB Newsletter and its editor's position is relatively short. The ASB Newsletter was founded in 1988 by Keith Williams, who also served as its first editor. Keith held this position for four years before passing the reigns to Kit Vaughan in 1992. With Kit's return to South Africa in 1995, I became only the third editor of the Newsletter. For better or for worse, the Newsletter has gradually evolved over the past twelve years from an eight page photocopied document into a 20 page professionally printed publication prepared using desktop publishing software. (That having been said, some of you may have already noticed that this issue has reverted to a 16-page format.)

This issue of the ASB Newsletter marks my eighth year on the Newsletter editorial board and my fifth year as Editor. While it has been a very educational experience and I have enjoyed serving the Society in this capacity, I have decided that it is now time for me to pass the reigns to someone else.

I would like to take this opportunity to thank the Executive Board for their confidence and continual support during my tenure as editor. I would also like to recognize and extend my appreciation to the other members of the Newsletter Editorial Board, especially Don Anderson, Stephanie (Goar) Seastrand, Kathy Browder, Gary Heise, and Peter Vint. These individuals have made my job easier by contributing their time and effort with little recognition other than a byline or occasional mention in the Newsletter.

The ASB Newsletter editor is appointed and serves at the discretion of the Executive Board. As my successor, the Executive Board has approved Don Anderson. Don's name should be familiar to everyone since he has compiled the Calendar of Events for the Newsletter for the past eight years. The fact that my office at the Minneapolis Sports Medicine Center is just down the hall from his should further ensure a seamless transition.

As Newsletter Editor, my objective has been to provide society members with content of both utility and general interest. One of the ways I have tried to implement this is through my editorials. Although not always strictly related to Biomechanics, I have endeavored to select topics that would hopefully provoke the reader to think beyond the bounds of his/her specific research interests. Inspired by issues that I have encountered in my professional and personal pursuits, my editorials have covered topics ranging from society members' efforts to obtain a new prosthetic limb for an indigent woman to a primer on computer viruses. Printing articles that are of interest to every member of such a diverse society as ours is indeed a challenge. I hope that I have succeeded in this goal at least some of the time for some of you.

In my quest to find a truly profound topic for my final editorial, a series of articles related to education, with a particular emphasis on science and technology, caught my attention. (The alternative was a compilation of insightful thoughts from our Governor, Jesse 'The Mind' Ventura; e.g., "No matter who you are, I don't think anyone cares to inherit underwear secondhand.")

As our economy continues to become more global and more technologically complex, there is an increasingly urgent need to strengthen scientific, mathematical, engineering and technological concepts and skills in the pre-college educational curriculum. Employers need workers who have critical reasoning skills and an understanding of scientific inquiry and the concepts of mathematics. To achieve this, our schools must provide a solid education in the sciences, mathematics, engineering and technology (SMET). (See eighth grade test from 1895 on page 8.)

To address the need for improved technological literacy, the American Society of Mechanical Engineers (ASME) has developed a number of recommendations for improving precollege educational performance. These recommendations include the following:

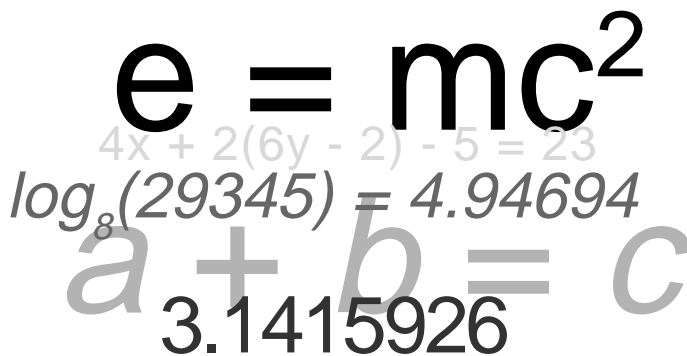
- Increase federally funded research on SMET learning and teaching.
- Recruit, train and retain qualified teachers to meet demand.
- Foster partnerships among educational institutions, industry, and non-profit organizations.
- Adopt curricula that cultivate critical thinking and high student performance.
- Actively recruit women and minorities to pursue science and technology coursework and careers.

These recommendations have been endorsed by fifteen other professional societies including the American Association for the Advancement of Science, the American Institute of Physics, and the Institute of Electrical and Electronics Engineers.

Consistent with ASME's recommendations, legislation to strengthen K-12 SMET education has been introduced in the U.S. Senate by Senator Pat Roberts (R-KS). (I can't help pointing out

the irony of this legislation being introduced by a Senator from the same state whose Board of Education banned the teaching of evolution in the classroom.) The original sponsor of the corresponding legislation in the U.S. House was Representative Vernon Ehlers (R-MI). Interestingly, Rep. Ehlers is the first research physicist in Congress, having received his doctorate in nuclear physics from UC Berkeley, and currently serves as the Vice-Chair of the House Committee on Science.

While most of us are not inclined to seek a government office, we can still influence this process by contacting our elected representatives at all policy-making levels and expressing our support for this cause. Additional information about this legislation can be found on Rep. Ehlers' website (www.house.gov/ehlers/issues/science). The ASME general position paper and the intersociety statement on K-12 SMET education are available on-line at www.asme.org/gric/00-08.html and www.asme.org/gric/00-03.html, respectively.



While the proposed actions are clearly a step in the right direction, our educational system is faced with a projected teacher shortage that will adversely impact all subjects, not only SMET. In the United States alone, 2.2 million new teachers will be needed in the next decade to offset increasing enrollments and the retirement or attrition of current teachers. Statistics indicate that colleges of education will not produce nearly enough graduates to meet the expected demand. Furthermore, low teacher salaries provide relatively little incentive for graduates, particularly those with degrees in science, mathematics or engineering, to pursue teaching careers. According to the American Federation of Teachers, a national teachers' union, the average nationwide salary for a beginning teacher in 1998 was \$25,735; the average beginning salaries of computer science graduates, by contrast, is \$40,920.

With increasing frequency, school districts resort to filling classrooms with teachers who are not licensed or lack the appropriate credentials. In 1998, 28 percent of math teachers and 27 percent of science teachers at the seventh and eighth grade levels were not certified to teach those subjects. This practice potentially compromises the physical as well as intellectual well being of the students.

Unfortunately, simply adding more (or more highly qualified) teachers to the equation will not solve all of the problems facing our educational system. I recently stumbled across a book in our hospital library by David Walsh, Ph.D. entitled **Selling Out America's Children**. Having a three-year-old son, I was both intrigued and troubled by the title of this book. The statistics presented by Dr. Walsh in the first chapter present a compelling reason for concern:

- The national high school dropout rate is approaching twenty-five percent.
- As a national average, SAT scores have dropped twenty points in the past three decades.
- More than five percent of American school children carry a gun.
- Twenty percent of all American children are living below the poverty line.

According to Dr. Walsh, more pervasive forces in our society - namely excess competition and consumerism - are largely responsible for such alarming statistics and directly compete with efforts to improve the educational system. In exploring these forces, the author provides suggestions for things that parents and concerned adults can do to address the education of our children in school and in other activities. I highly recommend this book to anyone interested in value issues confronting children in today's world (Published by Fairview Press, copyright 1994; \$11.95 paperback).

While educational issues are particularly troublesome for those of us with children, their consequences ultimately effect everyone. Obviously, there are no easy answers. However, as researchers and educators (and students) in the areas of science, math, engineering and technology, we should not underestimate the considerable influence each of us has on the career choices of future generations of students and teachers.

In the words of Douglas Adams, author of the **Hitchhiker's Guide to the Galaxy** ...

“So long,
and thanks for
all the fish.”

J Biomech Online

The new Journal of Biomechanics Online website (www.JBiomech.com) is offering free access until October 1, 2000. After that time only subscribers will be allowed access.

Could You Have Passed the 8th Grade in 1895?

Probably Not ... Take a Look

This is the eighth-grade final exam from 1895 from Salina, Kansas. It was taken from the original document on file at the Smoky Valley Genealogical Society and Library in Salina, Kansas and reprinted by the Salina Journal.

Grammar (Time: one hour)

1. Give nine rules for the use of Capital Letters.
2. Name the Parts of Speech and define those that have no modifications.
3. Define Verse, Stanza and Paragraph.
4. What are the Principal Parts of a verb? Give Principal Parts of do, lie, lay and run.
5. Define Case, Illustrate each Case.
6. What is Punctuation? Give rules for principal marks of Punctuation.
- 7-10. Write a composition of about 150 words and show therein that you understand the practical use of the rules of grammar.

Arithmetic (Time: 1.25 hours)

1. Name and define the Fundamental Rules of Arithmetic.
2. A wagon box is 2 ft. deep, 10 feet long, and 3 ft. wide. How many bushels of wheat will it hold?
3. If a load of wheat weighs 3942 lbs., what is it worth at 50 cts. per bu, deducting 1050 lbs. for tare?
4. District No. 33 has a valuation of \$35,000. What is the necessary levy to carry on a school seven months at \$50 per month, and have \$104 for incidentals?
5. Find cost of 6720 lbs. coal at \$6.00 per ton.
6. Find the interest of \$512.60 for 8 months and 18 days at 7 percent.
7. What is the cost of 40 boards 12 inches wide and 16 ft. long at \$.20 per inch?
8. Find bank discount on \$300 for 90 days (no grace) at 10 percent.
9. What is the cost of a square farm at \$15 per acre, the distance around which is 640 rods?
10. Write a Bank Check, a Promissory Note, and a Receipt.

U.S. History (Time: 45 minutes)

1. Give the epochs into which U.S. History is divided.
2. Give an account of the discovery of America by Columbus.
3. Relate the causes and results of the Revolutionary War.

4. Show the territorial growth of the United States.
5. Tell what you can of the history of Kansas.
6. Describe three of the most prominent battles of the Rebellion.
7. Who were the following: Morse, Whitney, Fulton, Bell, Lincoln, Penn, and Howe?
8. Name events connected with the following dates: 1607, 1620, 1800, 1849, and 1865.

Orthography (Time: one hour)

1. What is meant by the following: Alphabet, phonetic orthography, etymology, syllabication?
2. What are elementary sounds? How classified?
3. What are the following, and give examples of each: Trigraph, subvocals, diphthong, cognate letters, linguals?
4. Give four substitutes for caret 'u'.
5. Give two rules for spelling words with final 'e'. Name two exceptions under each rule.
6. Give two uses of silent letters in spelling. Illustrate each.
7. Define the following prefixes and use in connection with a word: Bi, dis, mis, pre, semi, post, non, inter, mono, super.
8. Mark diacritically and divide into syllables the following, and name the sign that indicates the sound: Card, ball, mercy, sir, odd, cell, rise, blood, fare, last.
9. Use the following correctly in sentences: Cite, site, sight, fane, fain, feign, vane, vain, vein, raze, raise, rays.
10. Write 10 words frequently mispronounced and indicate pronunciation by use of diacritical marks and by syllabication.

Geography (Time: one hour)

1. What is climate? Upon what does climate depend?
2. How do you account for the extremes of climate in Kansas?
3. Of what use are rivers? Of what use is the ocean?
4. Describe the mountains of N.A.
5. Name and describe the following: Monrovia, Odessa, Denver, Manitoba, Hecla, Yukon, St. Helena, Juan Fernandez, Aspinwall and Orinoco.
6. Name and locate the principal trade centers of the U.S.
7. Name all the republics of Europe and give the capital of each.
8. Why is the Atlantic Coast colder than the Pacific in the same latitude?
9. Describe the process by which the water of the ocean returns to the sources of rivers.
10. Describe the movements of the earth. Give inclination of the earth.

Students Corner

Kathleen Costa

It seems like forever since last we spoke! By now most of you have mailed out your abstracts for the upcoming meeting in Chicago and are awaiting word of their acceptance. I am really excited for this year's meeting, the members of the executive committee have been hard at work organizing another great meeting. In addition, the Meeting Chair has applied for several sources of external funding so student registration fees are expected to be minimal. YEAH!

Together with the education committee, I have planned a roundtable discussion section with the student luncheon, which is to be held on the first day of the meeting so that the conversations and interaction can continue throughout the remainder of the meeting. During the student luncheon, you will have the opportunity to participate in one of ten roundtable discussions to be moderated by a senior researcher with an esteemed reputation in the topic area. The discussion topics include: 3D Analysis; Neuromuscular Function & EMG; Lower Extremity Joint Mechanics; Upper Extremity Joint Mechanics; Lower Extremity Power: Generation & Transfer; Sport Biomechanics: Performance & Injury Prevention; Computer Modeling & Simulation; Motor Control & Coordination; Clinical Biomechanics & Orthopedics; and Forensic Biomechanics. I highly encourage all of you to attend and participate. The goal of the luncheon discussion section is to introduce you to students working in similar research areas, provide you with an opportunity to discuss your work, get feedback and some "expert" advice.

Also, as part of the Chicago meeting the Executive Board will begin collecting oral histories as part of a video archive of the Founding members of ASB for a presentation to be shown at the 25th Annual Meeting scheduled for San Diego. If you have questions you would like to hear answered by classic biomechanists, please pass them along to me so that they can be included in the interview process.

After the mid-year meeting of the Executive Board, I emailed a summary of the meeting accomplishments and discussions to all current members of the student members email list. This list is almost complete, just missing a few members and a few incorrect email addresses. So, if you did not receive an email message from me in February and would like to be included in the ASB student member email list, please email me with your current email address and I will be sure to add you to the list. I also recently received the list of new 2000 student members so I'll need all new member email addresses as well.

At the Chicago meeting, it will also be time for me to pass my position along to another willing and interested student member. I have thoroughly enjoyed serving as ASB student representative this year and highly recommend it to everyone. The primary role of the Student Representative is to further student participation in

the Society and act as a liaison between the student members and the Executive Board. If you think you may be interested in becoming the 2000-2001 ASB student representative please let me know.

Enjoy your summer and I will see you in Chi-town!

ASB Graduate Student Grant-In-Aid Program Year 3:

***** Update *****

The Grant-in-Aid program is proceeding this year. Of the ten pre-proposals submitted, four were accepted. We have invited the four successful applicants to submit a full proposal by May 1. We will then have a review of all proposals and choose those worthy of funding. This year we will probably fund two proposals based on available money from the Society. The winners will be announced at the annual meeting in Chicago.

Questions regarding the GIA Program should be submitted to:

Mark S. Redfern, Ph.D.
Human Movement and Balance Laboratory
110 EEI Building
200 Lothrop St.
Pittsburgh, PA 15213
e-mail: redfernms@msx.upmc.edu
phone: (412) 647-7923

National Academy of Engineering Honors Albert King

The National Academy of Engineering has selected Albert I. King as an academy member. Academy membership honors engineers who have made significant contributions to engineering theory and practice, as well as those who demonstrate unusual accomplishments in pioneering new and developing fields of technology.

Albert King is the Director of the Bioengineering Center and a Distinguished Professor of Mechanical Engineering at Wayne State University in Detroit. He was recognized for his contributions to understanding the mechanism, response and tolerance of the human body to normal and traumatic loading. Dr. King is a member of ASB.

Job Opportunities

Kathy Browder

FACULTY POSITIONS

EXERCISE SCIENCE - Assistant Professor. Tenure-track. Qualifications: Earned doctorate with specialization in physical education/exercise science, evidence of scholarly activities, skills in the application of technology to instruction; affiliation with ACSM and knowledge of ACSM certification programs desirable. Strong commitment to teaching effectiveness and scholarship. Responsibilities: Instruction in exercise physiology, kinesiology, biomechanics, and related areas, e.g., sports medicine. Send a letter of application, CV, transcripts, and three current letters of recommendation to: Office of the Dean, College of Education; Coastal Carolina University; P.O. Box 261954; Conway, South Carolina 29528-6054. Start date: 8/00. Deadline: 6/26/00 or until filled.

ENGINEERING - Dean & Professor. Qualifications: Earned doctorate in engineering or related field; sufficient teaching, scholarship, and service to qualify as a full professor (10 yrs experience); effective interpersonal, leadership, and written/verbal communication skills; ability to obtain external funding; ability to form and maintain liaisons with external groups; commitment to collegiality and shared decision making; experience in budget preparation and management; knowledge of higher education and technology issues; commitment to active faculty/staff development program; and experience with the accreditation process. Responsibilities: Provide leadership in all areas of the College; participate in university goal and policy setting. Send letter of interest, CV and list of 5 professional references to: Dr. Danny Lattin, Chair; Dean of Engineering Search Committee; South Dakota State University; Box 2202C; Brookings, SD 57007-0094; tel: 605-688-6197; e-mail: DANNY_LATTIN@sdstate.edu (inquiries only); www.engineering.sdstate.edu/; Start date: 7/01/01. Deadline: 8/15/00.

HEALTH SCIENCES - Dean. Qualifications: Health care professional with earned doctorate; proven leadership and management skills; thorough knowledge of the philosophy and mission of urban college of health sciences. Responsibilities: Provide academic and administrative leadership and support for faculty of the College; foster a positive environment for quality teaching, scholarly research, and professional service; oversee design, implementation and promotion of innovative academic programs; maintain a strong presence for the College in the community and the region; enhance the image of the College in the health community; develop the College's financial resources. Send letter of interest, CV, and list of 5 references to: Chair, Dean of College of Health Sciences Search Committee; Office of the Dean-College of Science; University of Texas at El Paso; 500 W. University, Bell Hall 100; El Paso, Texas 79968-0509. www.utep.edu Start date: 8/01/00. Deadline: Until filled.

PHYSICAL EDUCATION - Assistant Professor/Assistant Athletic Trainer. Qualifications: NATA Board Certified. Responsibilities: Provide instruction in physical education/athletic training courses, knowledge of NCAA, OVC, and NATA policies, principles, and regulations. Send letter of application, resume, official transcripts, and three letters of reference to: Dr. Lonnie J. Davis, Chair; Department of Exercise and Sport Science; 521 Lancaster Avenue - 231 CCB; Richmond, Kentucky 40475. Start Date: 8/14/00. Deadline: 6/30/00 or until filled.

PHYSICAL EDUCATION - Assistant/Associate Professor. Tenure track position. Qualifications: Doctorate required. Responsibilities: Teaching graduate/undergraduate courses in exercise physiology, kinesiology, motor learning, adaptive physical education, and health; curriculum coordination and development; budgeting; university service; personnel supervision; student recruitment. Submit letter of application, vitae, transcripts 3 professional reference letters, and statement of teaching philosophy to: Dr. Pam Williford, Dean; Irvin School of Education; HSU Box 16225; Abilene, Texas 79698. www.hsutx.edu Start date: 8/25/00. Deadline: Until filled.

PHYSICAL THERAPY - Assistant Professor. Full-time, non-tenure track position. Qualifications: Candidates should be a physical therapist, have a doctoral degree, have expertise in neuroscience and have evidence of research experience. Responsibilities: Teaching graduate courses in neuroscience, neuro-rehabilitation and muscle physiology; advising students in research; and serving on committees. Send letter of application, CV, and list of references to: LaDora V. Thompson, PhD, PT; Program in Physical Therapy; University of Minnesota; 420 Delaware St.; Mayo Box 388; Minneapolis, MN 55455. Start date: 7/1/00 or as soon as possible.

OTHER POSITIONS

MANAGING ENGINEER - Biomechanics with ManPower Technical in Phoenix, AZ. Qualifications: Ph.D. in Biomechanical Engineering. Consulting and marketing experience, cadaver testing experience, and supervisory experience preferred. Ability to present technical topics in a cogent and comprehensible manner. Self-motivated team player and leader. Willing to travel and work overtime. Responsibilities: Play key role in bringing biomechanics business to firm. Work closely with the Biomechanics department to perform research on a wide variety of issues, develop and supervise testing, and conduct field accident investigations. Perform injury analyses using 3D modeling tools; prepare written reports, proposals, and presentations; manage projects/staff; substantial responsibility for generating revenue and developing and maintaining client relations. E-mail resumes to: morris.brewer@na.manpower.com.

BIOMECHANICAL ENGINEER with Giant Studios in Los Angeles, CA. Motion capture experience and/or computer graphics experience is a plus. Send resumes to: brian@giantstudios.com.

PRODUCTION ENGINEER & MANAGER with ManPower Technical in San Diego, CA. Qualifications: BSEE or other engineering degree; 10 years experience manufacturing medical instrumentation, including 3-5 years in a management capacity. Must be technically competent in instrument design and fabrication, possess strong problem solving, organization, and communication skills, be attentive to details & committed to working under GMP guidelines. Responsibilities: Management of instrument production for in vitro diagnostic tests. E-mail resumes to: monique@manpower-sd.com.

ELECTRONICS FIELD ENGINEER with ManPower Technical in Ann Arbor, MI. Qualifications: 4-yr degree and one year min. experience required. Responsibilities: Travel to customer site and provide emergency repair, preventative maintenance, and installation of company products. Must promote and grow service revenue for assigned multi-state territory. Travel up to 80+% of the time. Troubleshoot and repair electro-mechanical equipment. Sell service products effectively. Submit resumes to: jobs@tecnical.manpower.com in text format with P48103/HH/1520 in the subject line. Do not send attachments.

BIOMECHANICAL ENGINEER to work in state of the art seat comfort research laboratory in Detroit, MI. Qualifications: A strong background or educational knowledge of ergonomic and/or biomechanical engineering related to the back. For more information, contact: Bob Millman; AutoPro Technical Recruiting; 25900 Greenfield Road Suite 232; Oak Park MI 48237. tel: (248) 967-0700; fax: (248) 978-0788; e-mail: autopro@rust.net.

STAFF SCIENTIST with Genetics Institute MSS group in Cambridge, MA. Qualifications: PhD or equivalent degree and 2+ years of postdoctoral experience with concentration in cell, molecular, or developmental biology. Familiarity with small animal models of tissue repair, biomechanics, or BMPs required. Strong oral and written communication skills a plus. Initiative and collaboration skills valued. Responsibilities: Enhance current program in Connective Tissue Biology. Forward resume with salary requirements and job reference code (OIMB-009872) to: jobs@RAMAIL1.wyeth.com (text only) or Genetics Institute; PO Box 7886; Philadelphia PA 19101-7886. fax: 610-989-4854; www.genetics.com.

FITNESS SPECIALIST with Reebok in South Boston, MA. Qualifications: Bachelor's Degree in exercise science or health related field. ACSM, CPR, and First Aid certifications are required. Responsibilities: Develop and administer health and fitness programs; be an expert source of current health information for Reebok; monitor Fitness Area and Athletic Grounds; perform fitness assessments; design and conduct exercise prescriptions; assist in maintaining fitness facility and equipment. Send resume and salary requirements to: Reebok International Ltd.; Job Code: FC-362; 1895 J.W. Foster Boulevard; Canton, MA 02021. fax: (781)401-7402; e-mail: Careers.Unlimited@Reebok.com.

SENIOR SOFTWARE ENGINEER with Engineering Animation, Inc., in Philadelphia, PA. Responsibilities: Design and develop cutting edge 3D visualization software for human simulation and ergonomic analysis. Qualifications: Degree in Computer Science or related field; experience with 3D graphics, OO design principles, C/C++, and MS DevStudio. Robotics, biomechanics, kinematics, OpenGL, Tcl/Tk, and Python a plus. Submit resume to: opportunity@eai.com or www.eai.com (Refer to Job# SSWE6700Occ.) Contact Information: Strategic Staffing; Engineering Animation; 2321 N. Loop Dr.; Ames IA 50010. fax: 515-296-6833.

BIOMEDICAL ENGINEER with Kforce in Boston, MA. Qualifications: 4-6 yrs in Industrial/Academic Labs or technology product environment, applied robotics, Excel, SAS or Matlab. Responsibilities: Work with engineers/scientists to develop improved high throughput molecular profiling methods. Includes developing robot applications, developing LIMS software, and analyzing R&D experiments. Contact information: knishimura@romac.com. Job Ref Code: 110~5~137363P3. Kforce.com.

BIOMEDICAL ENGINEER with Kforce in Boston, MA. Qualifications: 7+ yrs engineering industry experience; extensive knowledge of optics, robotics, hardware and software systems. Responsibilities: Selection, installation, and modification of sample handling and detection systems. Will negotiate custom systems or site agreements with vendors, specify test designs, and collaborate with Process Technology Group. Contact information: knishimura@romac.com. Job Ref Code: 110~5~137371P3. Kforce.com.

INSTRUMENTS ENGINEER with ENTEGEE Engineering Technical Group in Jacksonville or Gainesville, FL. Qualifications: B.S. in Mechanical or Biomedical Engineering. Min. 3 years experience in developing new products and project management (medical industry preferred). Prefer design experience in surgical hand instruments and electro-mechanical capital equipment for ENT and image-guided surgery. Must be able to work and communicate well with other engineers, designers, surgeons, marketers, and suppliers to develop products from concept to manufacturing in a project team environment. Occasional travel. Contact information: entegee30@entegee.com. ENTEGEE Engineering Technical Group; 1 Independent Dr., Ste 215; Jacksonville, FL 32202. tel: (904) 360-2311; fax: (904) 360-2322; Job Ref Code: MB030209.

NOTE: Applicants are strongly encouraged to contact the listing individual/institution directly to determine the current status of a position and to obtain additional information.

Additional opportunities can be found on the ISB home page (<http://isb.ri.ccf.org/jobs/index.html>) and on the Biomechanics World Wide home page (<http://www.per.ualberta.ca/biomechanics>) under the Career Opportunities category.

Fifth IOC World Congress On Sport Sciences Conference Report

Professor Harcharan Singh Ranu

Leading health and medical experts in movement, exercise and sport met 31 October - 5 November, 1999 in Darling Harbour, Sydney, Australia for the Fifth International Olympic Committee World Congress on Sport Sciences. The theme of the Congress was "The Science and Medicine of Skilled Performance: Optimization, Injury, Prevention and Rehabilitation". This multidisciplinary Congress featured renowned experts from around the world who shared breakthrough research and scientific knowledge to help people live active lives - from Olympic caliber athletes to sports and exercise enthusiasts of all ages and abilities.

In the Opening Ceremonies the delegates were welcomed by His Excellency, The Honorable Gordon Samules AC, Governor of New South Wales. Samules applauded the IOC Medical Commission "for its initiative in establishing and maintaining this significant biennial Congress." The delegates were also addressed by the Honorary Chairs of the conference, His Excellency Mr. Juan Antonio Samaranch, President of the International Olympic Committee and The Honorable Michael Knight MP, President of the Sydney Organizing Committee for the Olympic Games, and by the President of the Congress and Chair of the IOC Medical Commission, Prince Alexandre de Merode.

Program Highlights: The Congress emphasized the science and medicine that underpins skilled movement from optimization, injury prevention, and rehabilitation perspectives. The interdisciplinary program contained a mixture of keynote and invited lectures, symposia, workshops, free communications, posters and video display.

Some of the key elements of the Congress included:

Opening presentation

Professor Savio Woo

Muscle Research Center, University of Pittsburgh, USA.

1999 Winner of the IOC Olympic Prize for Sport Science.

"Use of Robotic Technology for Diarthrodial Joint Research"

Keynote And Invited Speakers

Biological

Professor Ed Coyle

Department of Kinesiology, University of Texas, Austin, USA

"Determinants of endurance, exercise performance"

Professor Bente Pedersen

Copenhagen Muscle Research Centre, Denmark

"Exercise and the immune system"

Medical

Professor Cy Frank

McCaig Center for Joint Injury and Arthritis Research,
University of Calgary, Canada

"Optimization of the biology of soft tissue repair"

Professor Richard Lieber

Department of Orthopedics & Bioengineering, University of California San Diego and V.A. Medical Center, USA

"Mechanisms of muscle injury after eccentric contraction"

Physical

Professor Joachim Mester

Rector, German Sports University, Cologne, Germany

"The vibration of biological systems"

J J de Koning

Faculty of Human Movement Sciences,

Free University, Amsterdam, The Netherlands

"Determination of optimal pacing strategy in track cycling with an energy flow model"

Behavioural

Professor Simon Gandevia

Prince of Wales Medical Research Institute and School of

Medicine, University of New South Wales, Australia

"The neural basis of fatigue"

Professor Lew Hardy

Division of Health and Human Performance,

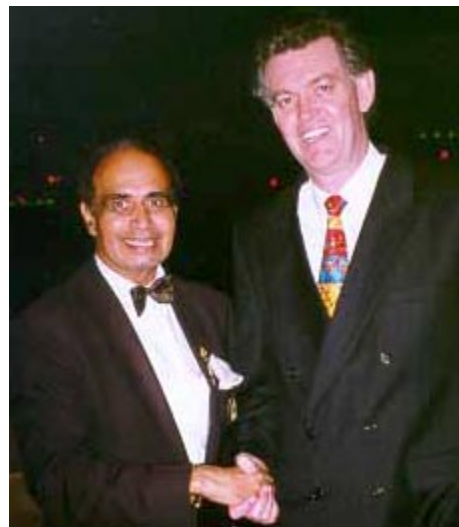
University of Wales, Bangor, UK

"Stress, anxiety and performance"

An additional 140 podium and 162 poster presentations related to various biological, physical & medical aspects of sports science were also presented.

Over 1300 delegates attended the congress and it was a great success.

The next IOC World Congress will be held in Salt Lake City, Utah, USA, 16th-21st September, 2001. Theme of the Congress will be "Science & Medicine of Human Movement".



Professor Harcharan Singh Ranu with the Hon. Michael Knight MP President, Sydney Organizing Committee for the 2000 Olympic Games at the 5th IOC World Congress on Sport Sciences.

EDITOR'S NOTE: A more detailed report including brief descriptions of the keynote and invited presentations can be found on the ASB website.

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. The benefits and fees for Commercial Members of the Society have been reorganized. Based on level of support, commercial membership categories in decreasing order are Sustaining Member, Supporting Member, Contributing Member, and Corporate Member. Companies wishing to become a Commercial Member are encouraged to contact either Scott Delp or Melissa Gross (page 4) for details.

The ASB Executive Board is pleased to recognize:

SUSTAINING MEMBERS

Peak Performance Technologies, Inc.

CONTRIBUTING MEMBERS

Motion Analysis Corporation

CORPORATE MEMBERS

Aircast

DePuy

Orthofix, S.R.L.

Tekscan

All members of the Society are invited to suggest names of potential commercial members. Please send your suggestions to Scott Delp, Membership Committee Chairperson, at the address indicated on page 4 of this newsletter. If you have a particular contact person at the company, please make sure to include his/her name.

Advertising in the ASB Newsletter

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	\$75
1/2 page	\$150
full page	\$250
back page	\$500
separate insert	\$500 per insertion

If you are interested in placing an advertisement or have any information concerning potential advertisers, please contact Gary Heise (gdheise@bentley.univnorthco.edu).

We Need Your Contribution

Members are encouraged to contribute to the newsletter. A note, a letter to the editor, a lead on an interesting story, information about a scientific meeting, in fact anything of interest to the ASB membership would be most welcome. Send information scrawled in longhand, via e-mail, or on computer diskette for PC or Macintosh. If you have any other ideas, please get in touch. The next newsletter will be published in December 2000. **Deadline for submission of materials is 15 October 2000!**



Don't Forget to Vote!

ASB Regional Student Meetings

Southern California Conference on Biomechanics

The Second Annual Southern California Conference on Biomechanics (SCCB) was held April 7-8 at the University of Southern California's Department of Biokinesiology and Physical Therapy. The conference attracted over 100 attendees and featured sessions on Exercise and Sport Performance, Clinical Evaluation and Intervention, and Biomechanical Modeling. The presentations, which illustrated the diversity of biomechanical investigation in the Southern California area, included studies using animal models, fresh-frozen cadaver specimens, DEXA and MRI tools, older adults, and elite athletes. Keynote addresses were provided by Dr. Jacquelin Perry, Director of the Pathokinesiology Laboratory at Rancho Los Amigos National Rehabilitation Center and Mark Grabiner, Director of the Clinical Biomechanics and Rehabilitation Laboratory, Cleveland Clinic Foundation. Outstanding Presentation Awards were presented to students Robert Allaire and Kathleen Ganley for their presentations "Effects of Triangular Fibrocartilage Complex Transection on the Kinematics of the Distal Radioulnar Joint" and "The Use of Dual-Energy X-Ray Absorptiometry in Determining Subject-Specific Anthropometric Measures for Kinetic Analyses", respectively. Attendee evaluations of the program were excellent and most all respondents appreciated the "speaker-friendly" atmosphere the regional conference provided. SCCB was designed to provide graduate and undergraduate students an opportunity to present their research findings to the local scientific community. The hosts of the conference, Drs. Christopher Powers and George Salem wish to thank ASB, USC, the keynote speakers, and the local biomechanics' community for their support and encouragement. Conference abstracts can be viewed at the conference web site: www.usc.edu/go/mbrl.

Submitted by George Salem, Ph.D., University of Southern California, Department of Biokinesiology and Physical Therapy, email: gsalem@hsc.usc.edu.

Midwest Graduate Student Biomechanics Symposium

The Midwest Graduate Students' Biomechanics Symposium (MWGSBS) was held at Illinois State University on March 31 and April 1, 2000. The symposium has been meeting on an annual basis for so long that no one in attendance was able to remember when it was first held. However, in spite of its long history, Y2K was the first symposium with outside financial support. For this, we are grateful to the American Society of Biomechanics. ASB support allowed expansion of the Symposium to two days and the inclusion of keynote speakers, while maintaining the focus on student presentations.

The opening keynote lecture on Friday night was provided by Dr. Paul DeVita of East Carolina University. An audience of approximately 50 listened attentively as Dr. DeVita spoke on the topic of "Friends, Romans, Countrymen, Lend me your Biomechanist: Theatrical discoveries of biomechanics". Although the title called out to Romans for biomechanics assistance, the talk focused on the Russian Vsevolod Meyerhold's Biomechanical Theater of the 1920's, with forays into the avant garde movement, Malevich's Suprematism, and El Lissitzky's graphic designs. In addition to its high entertainment value, the presentation reinforced the universality of biomechanics as the basis of human movement and served as a thought provoking introduction for the symposium. Following the keynote, we retired to a local beverage house for continued socializing.

For the Saturday sessions, presenting students came from Illinois, Indiana, Iowa, Kentucky, Nebraska and Wisconsin. The 65 attendees were exposed to the usual eclectic mix of topics which is a strength of the MWGSBS. Of the 15 student presentations, topics included equipment design and testing, sport biomechanics, orthopedic biomechanics, gait analysis and rehabilitation biomechanics. At larger conferences, separate sessions may be held on each of these topics, so the MWGSBS provides an opportunity for interaction among students who might not typically get together because of their working in diverse areas. Student presenters are to be commended for the quality of the presentations and their ability to respond to questions.

Two keynote lectures were intermingled with the student presentations on Saturday. Dr. Tim Derrick of Iowa State University gave the morning keynote titled "Attenuation of shock in the human body". He synthesized the current literature, including his own work, in addressing points such as the factors affecting shock and shock attenuation, the response of the body to increased levels of shock, the effect of lower extremity stiffness on shock attenuation, and the effect of exhaustion on shock attenuation. This comprehensive review of the topic was both entertaining and educating. The afternoon keynote, presented by Dr. DeVita, was titled "Biomechanical gait responses to ACL injury, reconstruction surgery and rehabilitation". His presentation integrated biomechanics and motor control to provide a unique insight to gait rehabilitation.

In the brief closing section of the symposium, students were encouraged by ASB Treasurer, Dr. Rob Shapiro, to take advantage of the special student discount and join the ASB, and all attendees were reminded of the 2000 ASB conference to be held at the University of Illinois-Chicago in August. It was also decided that the 2001 MWGSBS will be hosted by Dr. Phil Schot of the University of Wisconsin-Milwaukee. More information on MWGSBS 2001 will be distributed over biomech-1. Students from all Midwest states should present and participate next year to ensure that this oldest of all student biomechanics symposiums only gets better. Thanks again to ASB for its generous support.

Submitted by Steven T. McCaw, Ph.D., Illinois State University, Biomechanics Dept of HPER, email: smccaw@ilstu.edu

Calendar of Events

Don Anderson

19-22 July 2000 24th Annual Meeting of the American Society of Biomechanics, University of Illinois at Chicago, Chicago, IL. Program Chair, J.J. Crisco, Ph.D., e-mail: joseph_crisco@brown.edu.

23-28 July 2000 World Congress on Medical Physics and Biomedical Engineering, Chicago, Illinois. Chicago 2000 World Congress Headquarters: phone: (301) 209-3350; fax: (301) 209-0862; e-mail: wc2000@wc2000.org; www.wc2000.org.

2-7 August 2000 Emed Scientific Millennium Meeting, Munich, Germany. Abstracts due March 15 2000. www.novel.de.

23-26 August 2000 XIth Congress of the Canadian Society of Biomechanics, Montreal Canada. Congress Secretariat: phone: (514) 340-3215; fax: (514) 340 4440; e-mail: bureau@congresbcu.com; www.congresbcu.com/sb-scb200.htm.

27-30 August 2000 12th Conference of the European Society of Biomechanics, Dublin, Ireland. Patrick J. Prendergast, PhD, Chair: ESB 2000, Incentive Conference Ireland, 1 Pembroke Place, Ballsbridge, Dublin 2, Ireland. e-mail: esb2000@tcd.ie; www.mme.tcd.ie/esb2000.

12-14 October, 2000 Annual Meeting of the Biomedical Engineering Society, Seattle, Washington USA. BMES Secretariat, University of Washington, Engineering Professional Programs, 10303 Meridian Ave N. #301, Seattle WA 98133-9483. phone: 206-543-5539; fax: 206-543-2352; e-mail: bmes@engr.washington.edu; www.engr.washington.edu/~uw-epp/bmes/.

13-14 October, 2000 12th Annual EMG: Fine-Wire Technique Course, Children's Hospital, San Diego. Call the Motion Analysis Laboratory at Children's Hospital, San Diego at (858) 576-5807 or e-mail Janet Buttermore, PT at jbuttermore@chsd.org.

16-19 October, 2000 17th Annual Gait Analysis Interpretation Course, Children's Hospital-San Diego. Call the Motion Analysis Laboratory at Children's Hospital, San Diego at (858) 576-5807, or e-mail Marilyn P. Wyatt, MA, PT at mwyatt@chsd.org.

19-22 October, 2000 77th Annual Meeting of the American Congress of Rehabilitation Medicine, Hilton Head, SC. American Congress of Rehabilitation Medicine, 5987 East 71st Street, Suite 111, Indianapolis Indiana 46220-4049. phone: 317-915-2250; fax: 317-915-2245; e-mail: acrm@acrm.org.

30 May - 2 June, 2001 Annual Meeting of the American College of Sports Medicine, Baltimore, Maryland. Michael Feltner, Ph.D., Liaison, Biomechanics Interest Group, ACSM, Dept. of Sports Medicine Pepperdine University Malibu, CA 90263. phone: (310) 456-4312; fax: (310) 317-7270; e-mail: michael.feltner@pepperdine.edu; www.acsm.org.

8-13 July 2001 XVIIIth Congress of the International Society of Biomechanics, Zurich, Switzerland. ISB 2001, Lisa Rohrer: phone: (+41) 01 633 6117; fax: (+41) 01 633 1124; e-mail: rohrer@biomech.mat.ethz.ch; www.isb2001.ethz.ch/.

9-11 August 2001 25th Annual Meeting of the American Society of Biomechanics, University of California-San Diego, San Diego, CA. Meeting Chair: Richard L. Lieber, Ph.D., e-mail: rlieber@ucsd.edu.

16-21 September 2001 6th International Olympic Committee (IOC) World Congress, Salt Lake City, UT.

3-8 August 2002 4th World Congress on Biomechanics, University of Calgary. Dr. Benno Nigg and Dr. Ronald Zernicke.

* * * * *

NOTE: For a more exhaustive international listing, visit ISB's website at: isb.ri.ccf.org/conferences.



Attention ASB Members

If you are interested in becoming more active in the Society (e.g., serving on a committee or chairing a conference session), contact Julianne Abendroth-Smith, Education Committee Chair (page 4) 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. **Thanks!**

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