



American Society of Biomechanics Newsletter

Vol. 14 December 2001 No. 2

www.asb-biomech.org

From the President

Andrew Biewener

Greetings! First, on behalf of ASB and the Executive Board I want to extend to all ASB members our deepest sympathies and concern for any family members or friends who may have been involved in the terrible and tragic events of September 11th. As we go forward with our daily lives and work, I know that for all of us we share the horror of what happened and continuing concern for what lies ahead. As scientists, we can and should draw on the strength of our profession which brings colleagues together from all nationalities, religions and ethnic backgrounds. Hopefully, our sense of scientific community can lend support and make a difference to the kind of world we inherit and pass on to future generations.

It is an honor and a distinct pleasure to have the privilege to serve ASB during this year as President. It seems a long time ago that I attended my first ASB meeting as a graduate student in Ann Arbor. Throughout my career ASB has played an important role in guiding my research and providing me with the opportunity to interact broadly with valued colleagues who represent a wide range of disciplines within the field of biomechanics. It is great to have the opportunity to contribute to the growth of our society and play a part in its history.

In that regard, I wish to warmly thank and acknowledge Melissa Gross for her efforts as Past-President to put together an historical archive of ASB that will be available on the ASB Society web site. Melissa completed her many (20+) years of service to ASB as an Executive Board member when she stepped down as Past-President following the San Diego meeting. Her energy, vision, and knowledge of ASB history will be sorely missed. She has played an important role in making ASB a vital part of the biomechanics community. Indeed, I believe she holds the ASB record for (11) years of service to the society as an Executive Board member! I also want to thank Rob Shapiro for his tireless, dedicated and professional service as Secretary-Treasurer of the society. Being Secretary-Treasurer for ASB is really the most demanding job of any officer position. Rob was outstanding in his coordination and communication of ASB affairs. His oversight of the ASB budget also ensured that we continue to be in sound financial shape. I very much appreciated his support when I joined the Executive Board. Rick Lieber and Walter Herzog also leave the board having served as Meeting Chair and Program Chair, respectively. Those of us who attended the San Diego

meeting (see below) certainly benefited from their diligent and creative efforts in making the annual meeting stimulating, informative and fun. Thanks also to Jeremy Houser who served as our Student Representative this past year.

I would like to welcome four new members to the 2001-2002 Executive Board: Joan Bechtold as President-elect, Ted Gross as Secretary-Treasurer, Rodger Kram as Program-chair elect, and Ugo Buzzi (U. Michigan) as Student Representative. Jill McNitt-Gray, now Program Chair, is working closely with Walter Herzog (Meeting Chair this time around!) to put in place the program for the joint upcoming meeting with the World Congress in Calgary, Alberta (August 4-9th). The Executive Board is considering establishing a standing Program Committee that would assist the Program Chair and Program Chair-elect in the organization and program planning of upcoming meetings. This would also provide continuity for the Program Chairs and ensure representation across the breadth of our society in organizing paper and poster sessions, and in selecting symposia and keynote lecturers. In addition to these valued new members of the Executive Board, James Ashton-Miller takes over as President-elect, Scott Delp finishes off his term as Membership Chair, Julianne Abendroth-Smith continues as Education Committee Chair, Don Anderson continues as the Newsletter Editor and Gary Heise continues as the Communications Chair and master of our ASB web site. I'd like to take this opportunity

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(From the President continued)

to thank James for his superb guidance of the society during the previous year as President. I think that he and I both realize that the real effort comes as Past-President, with the responsibility of forming the Nominating Committee and identifying Awards candidates for our society's various scientific awards. I can honestly say that one of the best parts of being President and serving on the Executive Board is the opportunity to work with a great group of energetic and dedicated people. It certainly makes my job much easier and fun.

With the approach of our real first year end of the new millenium, it is a good time to reflect on our continuing growth and future as a professional society. A hallmark of ASB has always been the broad interdisciplinary emphasis that it brings to the increasingly diverse field of biomechanics. Our success as a society depends on the efforts and commitment of every member to maintaining a broad interest in biomechanics. As a biologist, one of my goals is to strengthen the participation of those of us who approach biomechanics from the side of biology. I believe that a critical part of ASB's success depends on taking a leading role in fostering such relationship for the future, in addition to the roles that it has been successful in playing in relation to sport and exercise science and ergonomics. Rick Lieber and Walter Herzog deserve special thanks for their organization of the San Diego program that highlighted the exciting synergism that can develop between modern biological and engineering approaches and how this relates to developing new technologies and clinical treatment strategies. Rick and Walter arranged for outstanding keynote lectures by three distinguished speakers. Jan Fridén's

lecture exemplified the exciting ways in which basic science muscle mechanics can be usefully applied to muscle-tendon surgical transfers; James Spudich's lecture on the biomechanics of molecular motors was a scientific tour-de-force, and Geert Schmid-Schoenbein's lecture on fluid shear stress showed how biomechanics may play a pivotal role in relation to gene expression and inflammatory responses linked to circulatory function. In addition, numerous oral and poster presentations of outstanding science were presented representing all five disciplines of ASB. A record number of abstract submissions were received and papers presented at the San Diego meeting. By sticking to our two session format, however, this will necessarily mean increased reliance on poster presentations. The Executive Board continues to discuss how best to handle this growth and yet retain the 'small meeting' feel that comes from having limited competition among parallel sessions that has been such an attractive format of ASB annual meetings. Topping off the San Diego meeting was a delightful dinner at the Scripps La Jolla Aquarium.

Looking ahead to the World Congress, ASB and the Program Committee will work hard to make sure that our presence is strong and well-identified at the general meeting. It promises to be an excellent meeting with the opportunity to interact with the CSB and the much larger international biomechanics community. Many exciting symposia are being organized that will include many ASB members as participants. Finally, the Executive Board will continue to discuss ways to make better use of electronic communication and for providing the meeting abstracts on CD, as well as being available via the ASB web site. While many of us appreciate having paper copies of the abstracts, carrying around the full abstract volume is certainly not a pleasant task. (I'm sure there's an ergonomics research project here!). ASB will also continue to negotiate with Elsevier in regard to the *Journal of Biomechanics* subscription contract that is part of ASB membership, as the matter of electronic journals becomes an increasing part of our professional lives. Finally, you should know that the Executive Board has decided to schedule future ASB annual meetings during the fall, rather than the summer. This serves two purposes. First, it reduces the conflict that many of us face with other competing summer meetings and family vacations, and second, it establishes a consistent time on our calendars so that planning for the Annual Meeting can be more easily fit into our busy schedules.

As always, the Executive Board welcomes feedback from ASB members on how we can best serve you in making the Society and the Annual Meeting a central part of your biomechanics experience. Best wishes for a productive year.

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From the Secretary/Treasurer

Ted Gross



In beginning my first column as Secretary/Treasurer (a captive audience, at last!), I would like to thank Robert Shapiro, Ph.D. for his efforts on behalf of ASB. During Rob's 3 year stewardship as Secretary/Treasurer, ASB implemented a number of strategies that have proven highly beneficial for the membership (e.g., credit card payment of dues, enhanced membership database, reduced problems with journal delivery). We will, of course, continue these initiatives. Additionally, I would personally like to thank Rob for easing my familiarization with the duties of the Secretary/Treasurer, and I am glad to report that he is not yet charging by the e-mailed question.

Dues/Journal Update: As you will note with the soon to be mailed 2002 dues invoice, journal fees have slightly increased this year (Journal of Biomechanics: \$2, additional journals: \$1 to \$5). Membership dues remain the same (Regular member: \$40, Student member: \$15). The credit card payment option will continue to be offered for an additional cost of \$3.

Finances: Per Rob's report at the 2001 Business Meeting in San Diego, the value of our investments as of 7/31/01 was \$89,943. This amount represents a decline of 5% over the previous six months, and it reflects the general downturn of the investment markets.

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

If you are interested in placing an advertisement or have any information concerning potential advertisers, please contact Peter Vint at (peter.vint@researchintegrations.com).

Education Committee Report

Julianne Abendroth-Smith

Greetings from Oregon, though I find myself on the way to Salt Lake City this week, to attend the National Science Teachers Association (NSTA) regional meeting. NSTA is largely composed of science teachers in the secondary school system, and I am a guest speaker on the topic of Sport Science, and its integration into society, including secondary education. For many of our members in ASB with university affiliations, a large percent work and teach in departments that are associated with education, so talking with science teachers about Sport Science is an exciting opportunity to introduce teachers and their students to the many facets of our world.

Being a biomechanist, of course, means the science teachers will get an earful of biomechanics, but with some balance between our areas of interest. While sport and exercise science is the main feature of my talk, I am also introducing the idea that biology, mechanical engineering, ergonomics and human factors are a vital part of who and what we are. I also see this as an opportunity to start interesting students first coming into college to think of the possibilities that our field has to offer, through this chance to speak with their high school science teachers.

Many of the university members in ASB teach in undergraduate programs, some of us exclusively. Students often find out about our program in a round-about fashion, word of mouth, finding an interesting sounding course, or stumbling across us while we are out collecting data somewhere. It would be wonderful to have students considering careers in biomechanics when they first enter the university. So I encourage you all to get out and take the opportunity to speak in places we are less likely to be; go to a high school or a teacher's conference. The pedagogues in Physical Education have been trying to change the ideas of physical education teachers about the use of sport science, and we could be talking to the science teachers as well. We currently have a listing for biomechanics programs at the graduate level; should we think about a listing to encourage undergraduates in joining our field? I would like to get some feedback on this from interested members teaching in undergraduate programs.

Speaking of the ASB graduate program listing, it is in serious need of updating. Many of our colleagues have relocated in the past couple of years (including myself), as well as the growing number of new faces that have joined our ranks in becoming faculty in a university setting. It is vital that this listing remain updated, or it's usefulness is severely limited. Please take the time to go to the ASB web site and look up the graduate programs. Gary Heise, our web master, has included an on-line form to update the program listing. If you have moved, know someone that has moved, or made changes in your program, please take two minutes to update your information. The site is only as good as we make it, and we need to give our potential students the best chance at finding us and the right place to attend graduate school.

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Other teaching items that may be of interest to our members in the teaching world; more web sites are coming out with especially good teaching ideas for the different areas of biomechanics. Two of my favorite sites are from Andy Kurduna (<http://www.pages.drexel.edu/~ak46/biomechanics>), and John Blackwell- Kinesiology and Biomechanics Teacher's Resource Page - (<http://www.usfca.edu/ess/resourcepage.htm>). Both are excellent resources. For those of you who have found yourself in a more traditional Physical Education program, without the education background, two good sources to help you target the Physical Education side of teaching are Moving Into the Future: National Physical Education Standards: A Guide to Content and Assessment, published by NASPE, and Concepts of Physical Education: What Every Student Needs to Know, by Bonnie Mohnsen. Both are available at AAHPERD's website (<http://www.aahperd.org>- go to the online store, go to NASPE, see quality physical education). The first covers the standards and goals of students receiving physical education, and the second discusses using sport science in teaching.

In other news, you have probably seen all the news about the IV World Congress in Biomechanics, which combines several of our associations. While not having direct control over tutorials, I still have some input into the process, and as always, welcome suggestions. If not for Calgary, then I will pass ideas forward for the next ASB meeting, in 2003. If you missed the San Diego meeting last August, you missed some wonderful events, including the tutorial by Scott Delp. We are hoping to post the tutorials on the ASB web site in the future. I would also like to welcome Ugo Buzzi, from the University of Michigan, as our new student representative. He will be hard at work updating the student pages.

See you all in Calgary, I hope. In the meantime, keep learning well, and teaching well.



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!**

Students' Corner

Ugo Buzzi

Greetings fellow ASB student members. I am Ugo Buzzi, a graduate student in the Division of Kinesiology at the University of Michigan, and your Student Representative for the upcoming year. Although I have only met a small number of you, it would be great to become acquainted with all of you, if not in person, then through e-mail. As the ASB Student Representative, my primary duty is to function as an intermediary between the ASB executive board and student members. The most effective way for me to do this is to be familiar with you, the student members, and your interests, particularly as they relate to biomechanics. I encourage you to send me an e-mail (ubuzzi@umich.edu), whether it be with a question or concern, or simply to introduce yourselves and let me know a little about you.

I would like to extend my gratitude to our former ASB Student Representative, Jeremy Houser, for his contributions. Jeremy extended the work of the previous student representative, maintaining the student website and preparing it for the addition of several new features which will benefit all student members. Thank you, Jeremy, for all your help.

I would like to congratulate those student members who were able to attend the 25th annual conference in San Diego. The excellent tutorials, presentations, posters, and keynote addresses coupled with the fantastic surroundings made this year's milestone conference truly remarkable. I encourage all student members to begin making plans to attend the World Congress of Biomechanics in Calgary, Alberta, Canada next summer. This will be the epitome of biomechanics conferences as it combines work from several different societies into one large event. This will be a great opportunity to meet biomechanists from around the world, as well as provide a great forum to present your work.

As student members, I would like to pose a challenge to all of you for this coming year. That challenge is to strengthen the student membership of the American Society of Biomechanics. On my end, I will try to improve the numerous benefits that being associated with this society and its strong membership can provide to you as students. On your end, I encourage you to take advantage of the services offered to you by the society. In addition to the student research grants and student travel scholarships (both of which I strongly encourage you to apply for), and the regional student symposiums, the professional and academic relationships that can be fostered in the society are invaluable. I also encourage you to reach out to other students at your institutions who are interested in biomechanics and share with them the benefits of student membership. Please direct any interested fellow students to the student website or have them contact me directly for information. The more student members there are, the stronger we are as a group, and the more we can learn from each other.

I appreciate your time and attention. Once again, I look forward to serving you as your representative and to getting to know as many of you as possible. Good luck with all your endeavors.

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Past Past-President's Report

Melissa Gross

As Chair of the Awards Committee, it was my pleasure to hand out accolades (and virtual plaques) to this year's award winners at the annual meeting in San Diego. For those of you who did not attend the meeting (and those who did but headed to the beach rather than attend the Closing and Awards session), here is the complete list of 2001 ASB award winners.

Borelli Award:

Felix E. Zajac

"Understanding muscle coordination of the human leg with dynamic simulations"

Pre-doctoral Young Scientist Award:

Deanna Schmidt Asakawa

"Relative motion of the rectus femoris and vastus intermedius during knee extension"

Post-doctoral Young Scientist Award:

Constantinos N. Maganaris

Changes in in vivo aponeurotic dimensions upon human muscle contraction

Clinical Biomechanics Award:

Mark E. Nadzadi

"A database of living subject motion to examine both posterior and anterior dislocation of total hip replacements"

Journal of Biomechanics Award:

Sundar Srinivasan

The potent osteogenic potential of rest-inserted loading: role of fluid flow as an underlying modality

ASB-Microstrain Award:

Karen Reed

Design and evaluation of a cryogenic probe to induce osteonecrosis in a precise location

ASB Travel Award

Li-Shan Chou

Dynamic balance control during gait in people with moderate traumatic brain injury

Student Travel Awards

Peter Barrance - University of Delaware

Kai-jung Chi - Duke University

Mike Hahn - University of Oregon

I would like to thank the Awards Committee members (Tom Buchanan, Bob Gregor, Clint Rubin, Bill Marras, Joan Bechtold, Kenton Kaufman, Warren Darling, Maury Nussbaum, James Ashton-Miller, and Andy Biewener) for their efforts in making all the difficult choices.

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. Based on level of financial support required and upon benefits provided, 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 James Ashton-Miller (page 4) for details.

The ASB Executive Board is pleased to recognize:

CORPORATE MEMBERS

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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.



WCB 2002 Report

Walter Herzog

The American Society of Biomechanics will be holding its annual conference in conjunction with the IV World Congress of Biomechanics, August 4-9, 2002 in Calgary, Canada. The ASB will sponsor the annual Borelli Lecture, and will feature the Pre- and Post-Doctoral Young Investigator Awards.

Plenary/Invited Speakers:

The Plenary Speakers of the World Congress are: Don Giddens (USA-Cardiovascular Research), Jean-Jacques Meister (Switzerland-Cellular/Molecular Biomechanics), Charles Ellington (UK-General Biomechanics), James Spudich (USA-Muscle Mechanics) and Kozaburo Hayashi (Japan-Orthopedic Biomechanics).

Aside from the Plenary Speakers, there are 25 Invited Speakers and approximately 30 symposia on selected biomechanics topics.

Call for Papers:

Scientific papers are invited for oral and poster presentations. Authors should submit abstracts no later than January 31, 2002. Details regarding the abstract submission can be found at the congress website: www.wcb2002.com. All abstracts are subject to peer review.

Important Dates:

Abstract Submission Deadline	January 31, 2002
Notification of Acceptance	April 15, 2002
Early Registration	June 15, 2002
Congress Dates	August 4-9, 2002

Registration:

The full registration fee for the Congress is \$650 Cdn (approx \$430 US) and \$260 Cdn (approx \$170 US) for Students. The fee will include a copy of the proceedings on CD, lunches and coffee breaks throughout, the Welcome Reception on August 4 and the Closing Banquet on August 9.

Congress Venue:

The congress will be held at the new Telus Convention Center in downtown Calgary. Calgary is located approximately 100 km east of the world famous Banff National Park and Canadian Rocky Mountains. For more information on Calgary, please visit the following website: www.discovercalgary.com

For further information on the World Conference/ASB, please visit the Congress Official Website: www.wcb2002.com or contact Karla Denby at: info@wcb2002.com

Sincerely,

Walter Herzog
Scientific Chair, IV World Congress of Biomechanics

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 June 2002. **Deadline for submission of materials is 19 April 2002!**

Plan to attend...

***ASB 2002 to be held in conjunction with the
IV World Congress of Biomechanics***

**IV world
congress
biomechanics**

**IV world
congress
biomechanics**

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**First
Announcement**

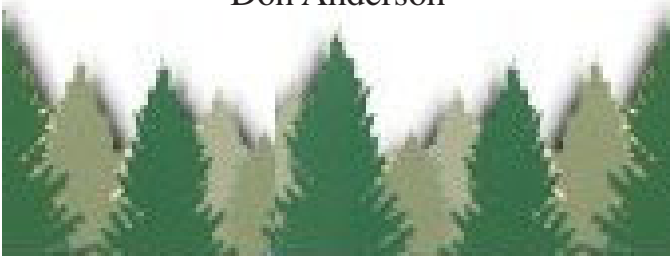
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www.wcb2002.com

Into the Woods

Don Anderson



Okay, let's start with the obvious question. Why is this newsletter coming out soooo late? Well, the answer may well be clear in a simple perusal of the newsletter. Notice the reduced number of ads in this issue? Our advertising coordinator, Peter Vint, has just recently welcomed his second child (a son) into his family. And his son picked just the wrong time to come – ASB Newsletter deadline time. Okay, okay, so it probably isn't totally fair to hang this one on Peter (or on his son, for that matter). I suppose that I have some responsibility here, as well. My apologies to you all for these delays. Now, with culpability duly distributed, let me move straight to my editorial.



Last issue, you bore the brunt of my displeasure with recent Microsoft PowerPoint presentations. Well, this go-round, I'm in a huff about Microsoft Word documents. You see, as the ASB Newsletter editor, I get a lot of Word documents sent my way, and that allows me a unique insight into how our peers are using the application. First, let me just say that I have never been very fond of the software that Microsoft turns out. But the reality is clear, Word and its Office compatriots are the de facto standard for productivity on most desktop computers. So why don't we all learn how to use them to their full potential? Too often I see documents that were clearly created with the "typewriter" subset of Microsoft Word capabilities.

Are phrases like "style sheets," "hanging indents," and "embedded graphics" foreign-sounding to you? Do you still rely on double-sided tape to place figures within your abstract? Do yourself a favor, and spend some time getting familiar with all that modern applications (like Word) can do. Many of the built-in features can save you time and effort later, with minimal additional effort earlier. Let me state a few simple reasons I think you should spend the time to get familiar with Microsoft Word.

And along the way, I will ask you to reflect on a few indicators of your own level of familiarity with the program.

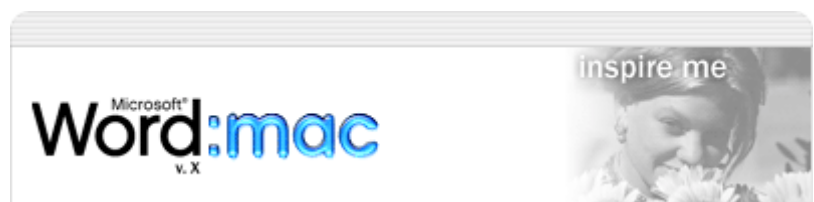
Do you use a tab to indent at the beginning of each paragraph? Two carriage returns to space between paragraphs, or between headings and your body text? As many carriage returns as it takes to make the next paragraph begin at the top of the next page? Do you number your references by hand, often having to shuffle numbers at the last minute? If you answered yes to these questions, you may be Microsoft Word-challenged. Word will do almost all of these tasks for you, and in so doing, provide you with greater flexibility in formatting of your documents.

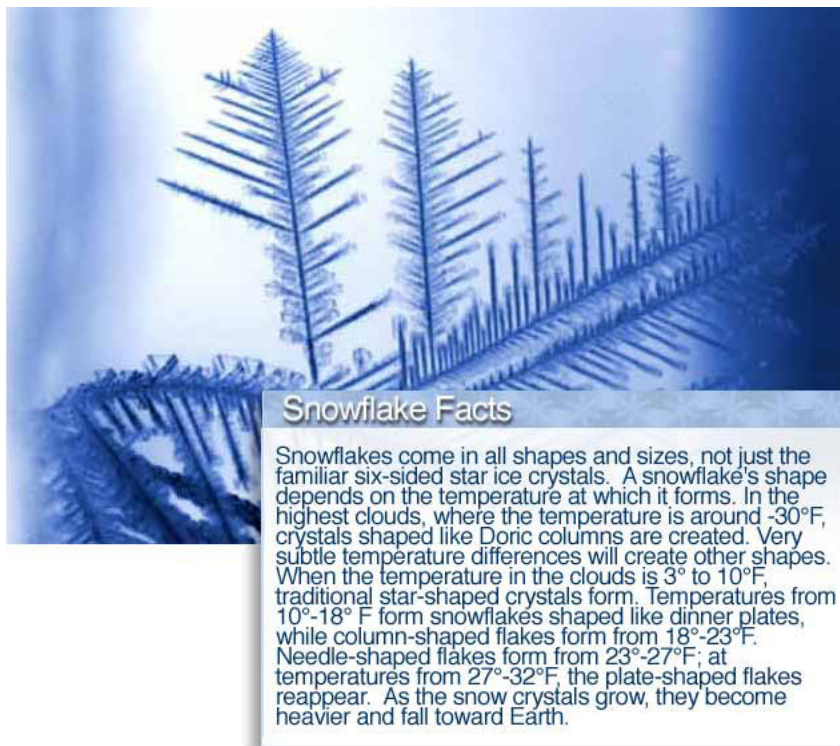
Let's start with the concept of style sheets. A "style" is a combination of common traits assigned to a given paragraph in a Word document. Among these traits is the default font, font size, line spacing, indents, alignment (align left, right, center, or justify both left and right), tabs, hyphenation, spacing before and after the paragraph, and list numbering of consecutive or split paragraphs. By defining styles within your Word document, you essentially automate the formatting of your text. You can even define which style follows a given style. For instance, you can create and apply a style called **Heading1** which assigns a bold font, left justified, with 24 pt spacing to follow a given paragraph, with the following paragraph assigned the style **BodyText**, where the **BodyText** style is defined to have a .25 inch indent in the first line, with plain font, justified left and right, with 12 pt spacing to follow that paragraph.

The style sheets can also be helpful when doing your references, as you can use list numbering to number references in the order in which they are listed, with a special style to (for instance) apply a hanging indent to the formatting of your references. A hanging indent is where the second lines and following of a given paragraph are indented further than the first line, allowing the first line to stand out from the rest.

The reason I like style sheets so much is that when it comes time to fiddle with the formatting of your piece, you just modify the styles, rather than having to modify all the text of your document directly. This allows you to quickly tweak line spacing, font size, spacing between paragraphs, etc. to obtain the final document you desire. And in so doing, it allows you to make the document fit within some prescribed space constraint, regardless of how arbitrary said constraint may be. To begin using styles in your Word document, visit the Format menu within the program, and select Styles from the drop-down menu that is presented there.

Now, what about all those ugly blank lines inserted to produce a page break? Visit the Insert menu in your Word program. One of the first options should be "Break," with further options which allow you to insert a page break, column break, or section





(Into the Woods, continued)

break. While the page break and column break are self-explanatory, the concept of a section break warrants an additional clarification. Section breaks allow one to vary page numbering, header and footer information, the number of columns to be used across different sections. This likewise allows one to vary page numbering between the first page and subsequent pages within a given section, making it simple to number all but the first page of a section.

Finally, what about inserting graphics within Word? Well, this begins to hit the edge of what I believe Word does well (I certainly don't use Word to layout this Newsletter!), but let me make just a few comments about this functionality. Word has the capability to embed graphics (either those you generate from within Word, or an image you import into Word) either directly in the text, or to "float" over the top of your text. Under different circumstances, you might prefer one or the other of these options. When a graphic is embedded in Word, one has the capability to "wrap" text around the image. That means that you can make good use of the space around the image, while protecting the space immediately adjacent to the image. Visit the Insert menu to begin to familiarize yourself with these features.

Well, I have clearly only scratched the surface here. But I hope you will take some time to turn yourself into a Word Wiz, or at least build upon that "typewriter" subset of its features. For additional help in using Microsoft Word, visit the website at <http://www.microsoft.com/office/word/using/default.htm>

Snowflake Facts:

Did you know?

- * These intricate beauties fall at speeds from 1.5 to 9 miles per hour.
- * Large snowflakes can measure up to two inches wide.
- * It's never too cold to snow. Even at incredibly cold temperatures, snow can form as long as there is some source of moisture and some way to lift or cool the air.
- * More snow falls each year in southern Canada and the northern United States than at the North Pole.
- * Snow crystals form around tiny bits of dirt that have been carried up into the atmosphere by the wind.
- * Each snowflake is made up of from two to about 200 separate crystals.
- * About 10 inches of wet snow will melt down to the equivalent of one inch of rain. If the snow is dry and powdery, 40 to 50 inches may melt to just an inch of water.
- * Reportedly, the largest snowflake ever found measured eight inches by twelve inches. It fell in Bratsk, Siberia in 1971.
- * Most heavy snowfalls occur with relatively warm air temperatures near the ground—typically 15° F or warmer because air can hold more water vapor at warmer temperatures.
- * Snow is a terrific insulator. Fresh, uncompacted snow typically has 90-95 percent air trapped among the lattice structure of the accumulated snow crystals. The air can barely move, so heat transfer is greatly reduced.
- * The Eskimos or Inuits, who live in the north, have many words in their language to describe the different types of snow, including:
 - * anniu — falling snow
 - * api — ground snow
 - * siqoq — smoky, drifting snow
 - * upsik — wind-beaten snow
 - * kimoaqtruk — snow drift
 - * salumaroaq — smooth snowy surface of fine particles
 - * natatgonaq — rough snowy surface of large particles
- * On a diet? Snow has negative calories because you use more energy eating it than you gain by hydrating (adding fluid to) your body. So, if you ever find yourself stranded in the snow and are getting hungry, put the snow in your mouth and let it melt slowly.

Want to learn more
Check out www.snowcrystals.net

From the Past-President

James A. Ashton-Miller

– Call for 2002 ASB Award Nominations –

As Chair of the Awards Committee, I am pleased to call for nominations for the 2002 ASB awards to be presented at the annual meeting to be held in August in Calgary in affiliation with the World Congress of Biomechanics. All abstracts for the 2002 ASB/WCB meeting (including those for the Young Scientist Award) should be submitted online through the official WCB web site to its Program Chair, Walter Herzog. All materials supporting nominations for the Borelli, the Young Scientist, the Travel, and the Student Travel awards should be submitted directly to me. Deadlines for these awards are given below.

The nominees for Clinical Biomechanics, Journal of Biomechanics, and ASB-Microstrain awards will be selected by the ASB Awards Committee from among the top-rated abstracts submitted to the 2002 WCB meeting, as ranked by the Program Committee. The ASB Awards Committee will then select two finalists for each of the three awards, and each of these six authors will present their work in a special ASB awards session at the WCB meeting. The winner of each award will be selected by the ASB Awards Committee after this session.

ASB members are asked to nominate individuals whose work they admire or consider applying for any award that is appropriate for their membership status and research area.

Borelli Award

The Borelli Award, the most prestigious honor given by the ASB, recognizes outstanding career accomplishment and is awarded annually to an investigator who has conducted exemplary research in any area of biomechanics. The award is open to all scientists, including non-ASB members, but excluding ASB officers and members of the Awards Committee. Candidates may be nominated by themselves or by others. Selection is based on originality, quality and depth of the research and its relevance to the field of biomechanics. A letter of nomination, a comprehensive curriculum vitae, and five publications on a single topic or theme must be submitted. The awardee is expected to attend the 2002 Annual Meeting of the ASB (held in affiliation with the World Congress on Biomechanics) in Calgary in order to receive the award and to deliver the Borelli lecture. The award consists of an engraved plaque and a check for \$1,500 (USD). The submission deadline is **April 1, 2002**.

Young Scientist Awards

These awards recognize early achievements by promising young scientists. They are awarded annually to one pre-doctoral student and one post-doctoral scientist. Nominees for these awards must be current or pending members of the ASB at the time of submission. Candidates may be self-nominated or nominated by an ASB member. For the pre-doctoral award, submitted materials

must include a letter of support from the department head or graduate research advisor, a short description of the nominee's current research involvement, a curriculum vitae, copies of published papers and/or submitted manuscripts, and an abstract of original research submitted for presentation at the 2002 WCB meeting having the nominee as first or sole author. The predoctoral award nominee must be a doctoral student at the time of the deadline for abstract submissions to the 2002 WCB meeting. For the post-doctoral award, submitted materials must include a letter of nomination, the nominee's curriculum vitae, copies of published papers and/or submitted manuscripts, and an abstract of original research submitted for presentation at the 2002 WCB meeting having the nominee as first or sole author. The postdoctoral award nominee must have received his/her doctorate prior to January 31, 2002. These awards each consist of an engraved plaque, a check for \$500 (USD), and a waiver of conference registration fees for the 2002 WCB meeting. The submission deadline is **January 31, 2002**.

ASB-Microstrain Award

Microstrain, Inc., of Burlington, Vermont annually funds an award that recognizes superior achievement in the area of instrumentation. The award competition is open to scientists of any age and stage in their career (for example, undergraduate and graduate students, postdoctoral fellows, faculty and researchers) both in and outside the U.S. The award recognizes the individual's innovative application of existing instrumentation or newly developed instrumentation for use in the field of biomechanics. Candidates for the award must be the first or sole author on an abstract of original research submitted to the 2002 WCB meeting. Candidates for the award will be selected from the top 20th percentile of abstracts submitted to the WCB meeting, as evaluated by the WCB Program Committee. The ASB Awards Committee will then select two finalists for the award from this pool, and each of these two authors will present their work in a special ASB awards session at the WCB meeting. The winner of each award will be selected by the ASB Awards Committee after this session. The award includes an engraved plaque and a check in the amount of \$1,000 (USD). The submission deadline is **January 31, 2002**.

Journal of Biomechanics Award

This award, sponsored by Elsevier Science, Ltd., publishers of the Journal of Biomechanics, recognizes substantive and conceptually novel mechanics approaches explaining how biological systems function. In addition to being ASB members, candidates for the award must be the first or sole author on an abstract of original research submitted to the 2002 WCB meeting. Candidates for the award will be selected from among the top 20th percentile of abstracts submitted to the WCB meeting as evaluated by the Program Committee. The ASB Awards Committee will then select two finalists for the award from this pool, and each of these two authors will present their work in a special ASB awards session at the WCB meeting. The winner of each award will be selected by the ASB Awards Committee after this session. The award includes an engraved plaque and a check in the amount of \$500 (USD). The submission deadline is **January 31, 2002**.

Clinical Biomechanics Award

This award recognizes outstanding new biomechanics research targeting a contemporary clinical problem, and is sponsored by Elsevier Science, Ltd., publishers of Clinical Biomechanics. In addition to being ASB members, candidates for the award must be the first or sole author on an abstract of original research with special relevance for clinical applications submitted to the 2002 WCB meeting. Candidates for the award will be selected from the top 20th percentile of abstracts submitted to the WCB meeting, as evaluated by the WCB Program Committee. The ASB Awards Committee will then select two finalists for the award from this pool, and each of these two authors will present their work in a special ASB awards session at the WCB meeting. The winner of each award will be selected by the ASB Awards Committee after this session. The award includes an engraved plaque and a check in the amount of \$500 (USD). The submission deadline is **January 31, 2002**.

Travel Award

A Travel Award of up to \$1,000 (USD) is offered to foster collaborative research and interaction among scientists by helping to offset the cost of travel to a host institution. Reasons might include learning a new technique, having access to a special facility, or presenting at a workshop, for example. All regular ASB members (i.e., not student or corporate members) are eligible to apply. A cover letter describing the details of the planned project, a copy of the applicant's curriculum vitae, and an indication of the availability of any matching funds from the host's or candidate's institution (desirable but not required) should be submitted to the Chair of the Awards Committee. The funding period is from July 1, 2002 through June 30, 2003. The recipient of the Travel Award is expected to present a poster of the funded project at the 2003 ASB annual meeting. The submission deadline is **April 1, 2002**.

Student Travel Awards

These awards, generally around \$250 (USD), are available only to ASB student members and are intended to offset the cost of travel to the 2002 WCB. Application for these awards should only be made after receiving notification of an abstract's acceptance. A copy of the accepted abstract, acceptance letter, and a letter from the student's faculty advisor indicating a need for assistance should be submitted to the chair of the Awards Committee as soon as possible after receiving notification of the abstract's acceptance. The submission deadline is **May 1, 2002**.

Graduate Program Information

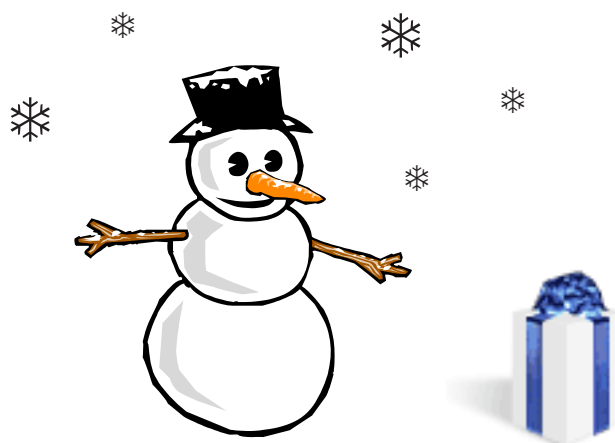
The ASB maintains an on-line database of universities and colleges with graduate programs in biomechanics. The database is organized alphabetically by country and state and currently includes more than 70 institutions from Canada, the United Kingdom, and 32 different states within the US. This is a great resource for undergraduate students who may be considering graduate school as well as for anyone who just wants to find out what's going on at other institutions.

Is your institution included in the database? If not, new information can be sent to Gary Heise at University of Northern Colorado via email: gheise@hhs.unco.edu. Because the information contained in these listings may gradually become outdated as equipment and personnel at laboratories change over time, all institutions are encouraged to review and update their information periodically.

New and updated program information can be transmitted directly in an e-mail. Alternatively, an online form can be used to submit updated grad program details.

The graduate program database can be accessed through the Society's internet homepage at:

www.asb-biomech.org



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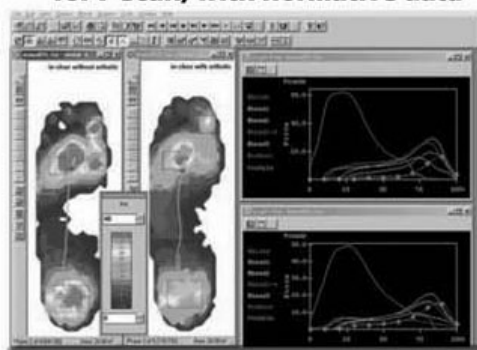
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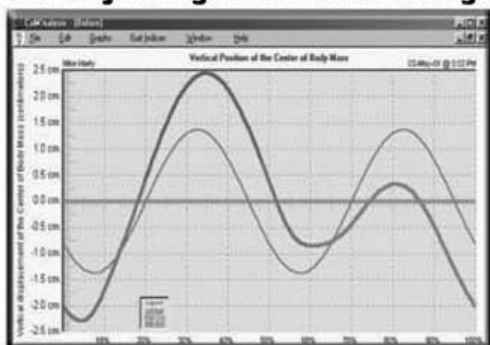
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Calendar of Events

Andrew Karduna

10th Annual Symposium on Computational Methods in Orthopaedic Biomechanics (Pre-ORS)

February 9th, 2002, Dallas, Texas
Abstract deadline - December 10, 2001
www.ruf.rice.edu/~preors

47th Annual Meeting of the Orthopaedic Research Society

February 10-13, 2002, Dallas, Texas
Abstract deadline - past
www.ors.org

7th Annual Meeting of the Gait and Clinical Movement Analysis Society

April 17-20, 2002, Chattanooga, Tennessee
Abstract deadline - past
www.utc.edu/gait2002

28th Annual Northeast Bioengineering Conference

April 20-21, 2002, Philadelphia, Pennsylvania
Abstract deadline - January 15, 2002
www.biomed.drexel.edu/nebe2002

28th Annual Meeting of the Society for Biomaterials

April 24-27, 2002, Tampa, Florida
Abstract deadline - past
www.biomaterials.org/meetings/2002

49th Meeting of the American College of Sports Medicine

May 29 - June 1, 2002, St. Louis, Missouri
Abstract deadline - past
www.acsm.org/conferencesmeetings.htm

4th World Congress on Biomechanics

26th Annual Meeting of the ASB

August 3-8 2002, Calgary, Canada
Abstract deadline - January 31, 2002
www.wcb2002.com

13th Conference of the European Society of Biomechanics

September 1-4, 2002, Wroclaw, Poland
Abstract deadline - January 15, 2002
www.esb2002.pwr.wroc.pl

20th International Symposium on Biomechanics in Sports

July 1 - 5, 2002, C-eres, Spain
Abstract deadline - February 17, 2002
www.unex.es/congresos/isbs2002

46th Annual Meeting of the Human Factors and Ergonomics Society

September 23-27, 2002, Pittsburgh, Pennsylvania

Abstract deadline - February 20, 2002
hfes.org

12th Annual Meeting of the European Orthopaedic Research Society

October 11-13, 2002, Lausanne, Switzerland
Abstract deadline - March 31, 2002
www.eors2002.ch

21st Southern Biomedical Engineering Conference

September 27-29, 2002 - Washington DC
sbec.abe.msstate.edu

7th International Symposium on the 3-D Analysis of Human Movement

2002, Erlangen, Germany

World Congress on Medical Physics and Biomedical Engineering

August 24 - 29, 2003 - Sydney, Australia
www.wc2003.org

* * * *

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



Happy New Year!



Job Opportunities

Kathy Browder

FACULTY POSITIONS

Wallace H. Coulter Eminent Scholars Chair in Biomedical Engineering: Qualifications: Expertise in any area of biomedical engineering. Special consideration given to applicants with established nationally recognized research programs in the areas of tissue and cellular engineering, biomaterials, bio-nanotechnology, or bioMEMS. Responsibilities: Build vigorous research programs and lead further development of graduate programs in biomedical engineering. Send CV and names of 5 professional references to: Richard T. Schoephoerster; Biomedical Engineering Institute; Florida International University; 10555 West Flagler Street - EAS 2610; Miami, Florida 33199. Email: bmeinfo@eng.fiu.edu. Website: www.eng.fiu.edu. Deadline: 12/15/01.

Wallace H. Coulter Professorship in Bioinstrumentation and Biomeasurement: Qualifications: Preference given to candidates with clinical and research expertise and experience (e.g. MD/PhD recipients) in the general areas of bioinstrumentation and biomeasurement. Opportunities exist for joint academic and clinical appointment at clinical partner institutions. Responsibilities: Build vigorous research programs and lead further development of graduate programs in biomedical engineering. Send CV and names of 5 professional references to: Richard T. Schoephoerster; Biomedical Engineering Institute; Florida International University; 10555 West Flagler Street - EAS 2610; Miami, Florida 33199. Email: bmeinfo@eng.fiu.edu. Website: www.eng.fiu.edu. Deadline: 12/15/01.

Engineering – Multiple positions/Any rank: Positions available in Aerospace Engineering and Engineering Mechanics, Biomedical Engineering, Mechanical Engineering. Qualifications: Commensurate with rank, including outstanding academic record, significant achievement in original research, commitment to quality teaching, and a doctorate or satisfactory progress toward completion of requirements for a doctorate or equivalent in engineering. Responsibilities: Teach undergraduate and graduate courses, develop a research program, collaborate with other faculty, and be involved in service to the university and the profession. Send resume (detailing past professional accomplishments, teaching philosophy and experience, and research interests) and names and addresses of 3 references, to Chair, <Appropriate Department>; The University of Texas at Austin; Austin, Texas, 78712-1080. Website: www.engr.utexas.edu/.

Dean – Health & Human Services: Qualifications: Earned doctorate from an accredited university and qualify for appointment as a full professor in a department in the college; a record of scholarly achievement; distinguished teaching experience; administrative or leadership ability in an academic setting; a demonstrated commitment to collegiality in governance; evidence of the ability to maintain and strengthen ties with educational, social service, and health-related communities; ability to acquire external resources through fund raising, grants, and contracts; strong interpersonal and communication skills. Send letter of application, resume, and the names, addresses, and telephone numbers of 5 references to: College of Health and Human Services Dean Search Committee; Human Resources Office; Southeast Missouri State University; One University Plaza; Cape Girardeau, MO 63701; FAX: 573-651-2108. Start date: 7/1/02. Deadline: 1/15/02.

Athletic Training – Athletic Trainer/Assistant Professor: Qualifications: Master's degree in related field, NATABOC, SC licensure eligible, and 2 years' experience required. Responsibilities:

Assist in planning and supervision of conditioning, acute injury care and rehabilitation of student athletes in 13 sports and clinical supervision of 20 student-athletic trainers; teaching in PE Department, and Athletic Training curriculum. Send letter of application, resumé, copy of transcripts, and 3 references to: Dr. Charles Cuning; Executive Vice President; Limestone College; 1115 College Drive; Gaffney, South Carolina 29340.

Cell & Molecular Biology – Two positions: Program Coordinator, and Faculty at Assistant/Associate level. Qualifications: Ph.D. in Cell and Molecular Biology or related field; experience in and a strong commitment to curriculum development, teaching and creating undergraduate and graduate research opportunities is required. Responsibilities: Teach in interdisciplinary undergraduate degree program in cell and molecular biology. Send application letter, CV, brief statement of teaching/research interests, goals, and expectations, and the names, phone numbers, and e-mail addresses for 3 professional references to: P. Douglas Kindschi; Dean of Science and Mathematics; Grand Valley State University; Allendale, MI 49401. Email: kindschd@gvsu.edu. Website: www.gvsu.edu. Start date: Fall, 2002. Deadline: 12/3/01.

Athletic Training – Program Director – Assistant/Associate Rank. Qualifications: Master's degree or higher in Physical Education, Physical Therapy or commensurate field, with specialization in Athletic Training; and NATA certification. Experience in teaching and athletic training curriculum administration desirable. Responsibilities: Instruct undergraduate and graduate sport science and athletic training courses. Serve as director of the ATEP. Coordinate and supervise all aspects of the athletic training education program. Send, fax or e-mail letter of application, CV and 3 references, including e-mail addresses, to: Dr. Robert Tucker; Chair, Physical Education and Sport Studies Search Committee; c/o Department of Human Resources; Loras College; 1450 Alta Vista; Dubuque, Iowa 52004-0178. TEL: 563-588-7196. Fax: 563-588-7964. Email: rtucker@loras.edu or hr@loras.edu. Website: http://www.loras.edu. Start date: 01/02. Open until filled.

Exercise Science – Assistant Professor – Qualifications: Earned doctorate (ABD considered with doctorate conferred by position start) in exercise science or closely related field. Demonstrated record of successful teaching at the university level. Strong computer skills and proficiency in using multi-media technology in teaching preferred. Record of scholarship as evidenced by peer-reviewed publications and/or funded research expected. ACSM and/or NSCA certifications desirable. Responsibilities: Teach undergrad exercise science courses in biomechanics, human physiology, exercise physiology, basic statistics and research design. Advise undergraduate students. Conduct research in area of expertise and participate in collaborative research projects with faculty. Serve on departmental and campus committees. Send letter of application including a description of research focus, CV, transcripts, and 3 letters of reference to: Dr. Tom Baechle; Exercise Science Department; Creighton University; 2500 California Plaza; Omaha, NE 68178. Start: Fall '02. Deadline: 11/30/01.

Athletic Training – Program Director – Assistant Professor Rank. Qualifications: Earned doctorate (ABD considered with doctorate conferred by position start) in exercise science or closely related field and a demonstrated record of successful teaching at the university level. ATC certified. Strong computer skills and proficiency in using multi-media technology in teaching is desired. Record of scholarship as evidenced by peer-reviewed publications and/or funded research expected. ACSM and/or NSCA certifications desirable. Responsibilities: Direct the undergraduate ATEP from its current candidacy status through all phases of NATA accreditation. Teach courses in the athletic training curriculum. Supervise clinical instruction

experiences. Advise undergraduate students. Conduct research in area of expertise and participate in collaborative research projects with faculty. Serve on departmental and campus committees. Send letter of application including a description of research focus, CV, transcripts, and 3 letters of reference to: Dr. Tom Baechle; Exercise Science Department; Creighton University; 2500 California Plaza; Omaha, NE 68178. Start date: Fall 2002. Deadline: 11/30/01.

Biomechanics/Motor Control – Assistant/Associate Professor – **Qualifications:** Doctorate with research focus on analysis/control of movement particularly in special populations such as aging or children or in disabling conditions such as Parkinson's, LD, or ADHD. Post-doc experience and neurological background is desirable. **Responsibilities:** Teach in core undergrad biomechanics and motor control/learning courses as well as grad courses in specialization. Develop and continue a program of research and scholarship, participate in departmental activities, and pursue external funding. Send letter of application, CV, sample publications, and names and addresses (including email and phone number) of 5 references to: Dr. Jerry R. Thomas, Chair and Professor; Department of Health and Human Performance; Iowa State University; Ames, IA 50011. Email: jrthomas@iastate.edu. Website: www.educ.iastate.edu/hhp/. Start date: Fall 2002.

Athletic Training – Assistant Professor – **Responsibilities:** Teach in all curricular areas of the care and prevention of athletic injuries, therapeutic exercise and modalities, organization and administration and seminar in athletic training as well as introductory courses. Contact: Dr. Rebecca Cheema. TEL: 559-278-7094; Email: rebeccac@csufresno.edu. Website: www.csufresno.edu/CollegeofHealth.

Exercise Science – Assistant Professor – **Responsibilities:** Teach in at least 3 of the following areas: exercise physiology (all areas); fitness and wellness; exercise testing; existing prescription; clinical exercise physiology; human anatomy; human physiology; strength training and performance development; nutrition; biomechanics; ergonomics; and motor learning. Contact: Dr. Tim Anderson. TEL: 559-278-2203; Email: tima@csufresno.edu. Website: www.csufresno.edu/CollegeofHealth. Start date: Fall 2002.

Exercise Science/Motor Behavior – Assistant/Associate Professor – **Qualifications:** Earned doctorate in an area of Motor Behavior with demonstrated ability to conduct research and acquire external funding. Evidence of positive teaching desirable. **Responsibilities:** Teach undergraduate and graduate courses in an area of Motor Behavior. Conduct nationally visible, fundable research. Supervise master's theses and doctoral dissertations. Send letter of interest, CV, and 3 letters of reference to: James G. Richards, Ph.D.; Search Committee Chair; Human Performance Laboratory; 541 South College Avenue; University of Delaware; Newark, DE 19716. TEL: 302-831-6796. FAX: 302-831-3693. Email: jimr@udel.edu. Start date: Fall '02. Deadline: 1/15/02.

Engineering/Biological Sciences – Assistant/Associate Professor – **Qualifications:** Expertise in biomechanical engineering with a focus on cell/tissue mechanics and engineering design. Strong commitment to high quality undergraduate and graduate engineering education through teaching and advising. **Responsibilities:** Develop strong partnerships with the medical device/biotechnology industry. Maintain an active and funded research program. Send statement of research and teaching interests, CV, and a list of 5 references (with contact information) to: Worcester Polytechnic Institute; Human Resources; 100 Institute Road; Worcester, MA 01609-2280. FAX: 508-831-5715. Email: human-resources@wpi.edu. Website: www.wpi.edu/+bme. Start date: 7/01/02. Deadline: 12/15/01.

Exercise and Sport Injury Prevention & Rehabilitation – Assistant/Associate Professor – Send letter of application, CV, transcripts, and 3 or more letters of recommendation to: Dr. Jacalyn McComb; Search Committee Chair; Health, Exercise, & Sport Sciences; Box 43011; Texas Tech University; Lubbock, TX 79409-3011. Email: tmjir@ttacs.ttu.edu. Website: www.hper.ttu.edu. Start date: Fall 2002. Deadline: 1/25/02.

Biomechanics – Assistant/Associate Professor – Send letter of application, CV, transcripts, and 3 or more letters of recommendation to: Dr. Roger James; Search Committee Chair; Health, Exercise, & Sport Sciences; Box 43011; Texas Tech University; Lubbock, TX 79409-3011. Email: roger.james@ttu.edu. Website: www.hper.ttu.edu. Start date: Fall 2002. Deadline: 1/25/02.

Athletic Training – Assistant Professor – **Qualifications:** Ph.D. or equivalent with specialization in athletic training/sports medicine or an exercise science discipline, current NATA certification, and potential to develop an active, nationally-visible research program. College-level teaching experience, a record of research and scholarly publications, and experience with clinical supervision of student athletic trainers preferred. **Responsibilities:** Teach undergraduate and graduate athletic training courses. Conduct research and seek external funds to support research. Assist with development of a graduate program in athletic training. Advise graduate students and supervise graduate student research. Assist with supervision of clinical activities in CAAHEP-accredited athletic training program. Send letter of application, CV, copies of all transcripts, copies of recent publications, and names, addresses, phone numbers and e-mail addresses of 4 references to: Dr. Kirk J. Cureton, Head; Department of Exercise Science; Ramsey Center; 300 River Road; The University of Georgia; Athens, Georgia 30602-6554. TEL: 706-542-4387. Email: kcureton@coe.uga.edu. Start date: 8/02. Deadline: 12/01/01.

Biomedical/Health Science Anatomy – Assistant/Associate Professor – **Qualifications:** Ph.D. in anatomy and demonstrated teaching experience at the post-doctoral level in anatomy and human cadaver labs required. Experience in histology, neuroanatomy or embryology desired. Committed to excellence in teaching and research. **Responsibilities:** Development of a research program that involves undergraduate students. Send application letter, CV, brief statement of teaching/research interests, goals, and expectations, and the names, phone numbers, and e-mail addresses for 3 professional references to the Chair named in each position description. Mail to: Miles Hacker, Ph.D. Chair; Department of Biomedical and Health Sciences; 327 Padnos; Grand Valley State University; Allendale, MI 49401. Email: hackerm@gvsu.edu. Website: www.gvsu.edu. Start date: Fall 2002. Deadline: 12/03/01.

Exercise Physiology/Sports Medicine – Assistant Professor – **Qualifications:** Earned doctorate in Sports Medicine, Exercise Science or related field. Evidence of previous research and publications in scientific journals, and previous university teaching experience are desirable. Background in clinical assessment, exercise prescription, functional anatomy and sport therapy. Ability to seek external funding. **Responsibilities:** Conduct high quality research, grant writing. Direct an exercise testing lab. Teach and advise in the Sports Medicine Program. Send letter of application with summary of accomplishments, CV, transcripts from all graduate and undergraduate work, and 3 or more letters of reference to: Dr. Bruce Etnyre; Chair, Search Committee; Rice University; Kinesiology Department; 6100 Main MS 545; Houston, Texas 77005-1892. Start date: 7/01/02. Deadline: 1/15/02.

Physical Therapy – Department Chair – **Qualifications:** Earned doctorate, Physical Therapy license, experience in research and teaching.

(continued on next page)

(Faculty Positions continued)

Responsibilities: Direct entry-level Master's degree program in Physical Therapy. Send CV to: Dr. Janice Burke, Vice Chair; Ad hoc Search Committee for Chair; Department of Physical Therapy; College of Health Professions, Thomas Jefferson University; 130 S. 9th Street, Suite 810; Philadelphia, PA 19107-5233. Website: www.tju.edu.

Athletic Training – Assistant/Associate Professor: – Send letter of application to: Chair, Department of Kinesiology; California State University, Northridge; 18111 Nordhoff Street; Northridge, CA 91330. Website: www.csun.edu/employment/. Start date: Fall 2002. Deadline: 1/7/02.

Athletic Training – Assistant Professor – Qualifications: Doctorate in athletic training or related field. ABD status will be considered if scheduled to complete degree prior to August 2002. NATABOC certification required, eligible for Mississippi licensure. Evidence of scholarly productivity and active professional service is preferred. **Responsibilities:** Teach undergraduate courses in athletic training and human performance. Assist program director with administration of CAAHEP accredited program. Serve on school, college, and university committees. Send letter of application, CV, and official undergrad and grad transcripts, arrange for 3 letters of reference to be sent to: Cheryl Burnette, Administrative Secretary; The University of Southern Mississippi; School of Human Performance and Recreation; Box 5142; Hattiesburg, Mississippi 39406-5142. TEL: 601-266-6325. Email: Tomi.Burnette@usm.edu. Start: Fall 2002. Deadline: 1/15/02.

Exercise Science – Assistant Professor – Qualifications: Ph.D. in related area. Send all materials to: Dr. Jim Schwane, Chairman; Dept. of Health and Kinesiology; The University of Texas at Tyler; 3900 University Blvd.; Tyler, TX 75799. Website: <http://www.uttyler.edu/news/jobs.htm>. Start Date: Fall 2002.

Health Science – Assistant Professor – Qualifications: Ph.D. or Ed.D. at the time of appointment. Strong commitment to excellence in undergraduate teaching at small Liberal Arts College. Interest in applied undergraduate research. An understanding of applied wellness and alternative medicine in health sciences is also desirable. **Responsibilities:** Teach Anatomy, Physiology, Kinesiology, Exercise Physiology, and a combination of fitness and exercise, cardiopulmonary assessment and rehabilitation, advanced first aid, athletic training, physical education activities, or related courses. Advise students, engage in scholarship and professional activity, and serve the college and community. Send letter of intent, statement of teaching philosophy, CV, graduate transcripts, and 3 letters of recommendation to: Search Committee; Department of Environmental and Health Sciences; Bentley Hall; Johnson State College; 337 College Hill; Johnson, Vermont 05656. TEL: 802-635-2356. FAX: 802-635-1461. Email: manns@bader.jsc.vsc.edu. Website: ehs.academic.jsc.vsc.edu. Start date: Fall 2002 (January 2002 start date considered).

Anatomical Kinesiology – Assistant Professor – Qualifications: Doctorate preferred, ABD considered. Background in neuromuscular development, structural anatomy, biomechanics, and/or motor control. University teaching experience and a record of research/scholarly activity preferred. **Responsibilities:** Teach undergraduate courses. Send letter of inquiry to: Dr. Fred D. Baldini, Chair; Department of Kinesiology and Health Science; CSUS; 6000 J St.; Sacramento, CA 95819-6073. TEL: 916-278-6441. Email: baldinif@csus.edu. Website: www.csus.edu/fas/fsaindex.htm. Start date: Fall 2002. Deadline: 1/14/02.

Athletic Training – Assistant Professor – Qualifications: Doctorate in athletic training or related field. ABD status will be considered if scheduled to complete degree prior to August 2002. NATABOC

certification required, eligible for Mississippi licensure. Evidence of scholarly productivity and active professional service is preferred. **Responsibilities:** Teach undergrad courses in athletic training and human performance. Assist program director with administration of CAAHEP accredited program. Send letter of application, CV, and official undergrad and grad transcripts, arrange for 3 letters of reference to be sent to: Cheryl Burnette, Administrative Secretary; The University of Southern Mississippi; School of Human Performance and Recreation; Box 5142; Hattiesburg, Mississippi 39406-5142. TEL: 601-266-6325. Email: Tomi.Burnette@usm.edu. Start: Fall 02. Deadline: 1/15/02.

Biology – Qualifications: Earned doctorate in the area of anatomy and/or physiology. Broad based education in human biology, including thorough background in Human Anatomy and Physiology. Documented evidence of at least one year, full-time teaching experience at the college level preferred. **Responsibilities:** Teach advanced human anatomy and physiology courses to pre-health care students (including pre-medical, dental, physical therapy, physician assistant, and occupational therapy.) Use current educational technology and keep abreast of advances in educational technology in the discipline. Send letter of application, CV, copies of undergraduate and graduate transcripts, and 3 current letters of recommendation to: Dr. Anil Rao; Department of Biology; Campus Box 3; The Metropolitan State College of Denver; P.O. Box 173362; Denver, CO 80217-3362. Email: raoa@mscd.edu. Website: www.mscd.edu. Deadline: 12/1/01.

Physical Therapy – Rank Open – Qualifications: Earned doctorate (tenure/tenure-track) or post-professional Master's with specialization (clinical specialist track); MA license/eligible; Record of teaching/research/clinical activities preferred. **Responsibilities:** Teach in physical therapy curriculum in one of the preferred practice patterns. Mentor graduate students in scholarly projects. Perform service, research, or clinical practice. Send letter of interest and CV to: Carol Konis, Dean's Office; 134 Mugar Life Science Building; Northeastern University; 360 Huntington Ave.; Boston, MA 02115. Website: www.neu.edu.

Physical Therapy – Department Chair – Qualifications: Earned doctorate. Eligible for licensure in Nebraska. Possess academic and administrative leadership experience. **Responsibilities:** Provides academic, intellectual, administrative and scholarly leadership for department. Send CV, names, addresses and telephone numbers of 4 references to: Dr. Charlotte Royeen; Chair, Search Committee; Associate Dean for Research; School of Pharmacy and Allied Health Professions; Creighton University; 2500 California Plaza; Omaha, NE 68178. TEL: 402-280-5944. FAX: 402-280-5738. Email: croyeen@creighton.edu

Recreation and Sport Sciences – School Director – Qualifications: Earned doctorate in one program area offered by School. Experience and qualifications for appointment to associate or full professor rank. University level teaching experience in one or more program areas offered by School. Experience in curriculum development, program evaluation and accreditation. Commitment to teaching, scholarship, and service. **Responsibilities:** Academic program development and administration. Faculty and staff recruitment and development. Facilitate scholarly activities. Establish and maintain relations with internal and external constituencies. Budget management, fundraising, and other duties normally associated with academic department administration. Teach one course per quarter. Send resume, letter describing how qualifications and accomplishments fit the requirements of the position, and names, titles, addresses, e-mail addresses and telephone numbers of 3 current references to Lee Cibrowski, Ph.D.; Associate Dean, College of Health and Human Services; Grover Center W380; Ohio University; Athens, Ohio 45701. Website: www.ohiou.edu/rsps/index.htm. Start date: 7/1/02. Deadline: 1/1/02.

Rehabilitation Sciences – Department Chair – Qualifications: Earned doctorate in a profession or discipline related to rehabilitation sciences. Strong leadership and communication skills. Experience must be commensurate with appointment at the rank of Associate or Full Professor. **Responsibilities:** Provides academic, intellectual, administrative and scholarly leadership for department. Send letter of interest, CV, sample reprints, and the names, addresses and telephone numbers of 3 references to: Ronald T. Brown, Ph.D.; Co-Chair Search Committee; MUSC – College of Health Professions; Office of the Dean; 19 Hagood Avenue, Suite 910; P.O. Box 250822; Charleston, South Carolina 29425; TEL: 843-792-2419. Website: www.musc.edu/chp/chair.htm. Start date: 7/1/02. Deadline: 12/15/01.

Bioengineering – Assistant Professor – Qualifications: Ph.D. or equivalent degree in Engineering or Physical Science. Evidence of excellence, originality, and productivity in teaching and research. **Responsibilities:** Teach courses in medical ultrasound and image-guided therapy. Assume leadership roles and develop an independent research program. Participate in undergrad and grad teaching. Send CV, list of publications, statement of interest and goals, proposed initial research program, and names, addresses, and e-mail addresses of 5 references to Professor Lawrence Crum; Chair, Faculty Search Subcommittee; Department of Bioengineering; Box 357962; University of Washington; Seattle, WA 98195, USA. Deadline: 1/15/01.

Engineering – Assistant Professor – Qualifications: Expertise in theoretical, computational or experimental aspects of materials science. Areas of particular research interest include multiscale materials modeling, biomaterials, micro/nano materials systems and MEMS. **Responsibilities:** Teach undergraduate and graduate courses, advise graduate students, and develop a strong sponsored research program. Send letter of interest with resume, statement of teaching and research interests, copies of 3 principal publications (where appropriate), and names, addresses, and telephone numbers of 3 references to: Chair, Materials Search Committee; Department of Mechanical Engineering; Yale University; P.O. Box 208284; New Haven, Connecticut 06520-8284. Deadline: 12/1/01.

Materials Engineering/Science – Assistant Professor – Qualifications: Earned Ph.D. degree in Mechanical Engineering, Materials Engineering, Material Science or a closely related field. Expertise in composite materials, manufacturing, nano-materials, or biomaterials. **Responsibilities:** Teach undergraduate courses in material science, manufacturing, basic mechanics (statics, dynamics, and strength of materials) and offer graduate courses in a specialty area. Direct undergraduate research/design projects and teach undergraduate laboratories. Maintain an active research program. Send CV, a short teaching/research statement, and 3 letters of professional reference to: Ronald B. Bucinell, Ph.D., P.E.; Chairman of the Search Committee; Department of Mechanical Engineering; Union College; Schenectady, NY 12308. Website: http://engineering.union.edu/me_dept/me_dept.html. Start date: 9/1/02. Deadline: 12/1/01.

Clinical Biomechanics – Assistant Professor – Qualifications: Doctorate in Biomechanics or related field required; significant post-doctoral experience desired; evidence of publication in general area of clinical biomechanics required; evidence of, or potential for, successful grant procurement required; University-level teaching experience desired. **Responsibilities:** Teach relevant undergraduate and graduate courses for students preparing for clinical and health related careers. Conduct independent and collaborative research in area of clinical biomechanics and/or related areas (e.g. neural control of movement). Develop funded research program and clinical biomechanics laboratory. Seek extramural funding. Direct student research. Participate in student advisement. Perform university and professional service. Send letter of application, CV, 3 letters of reference specific to this position, and

official transcripts from all institutions attended to: Robert Gotshall, Ph.D.; Health and Exercise Science; Colorado State University; Fort Collins, CO 80523-1582.† TEL: 970-491-6374. Email: gotshall@cahs.colostate.edu. Website: www.cahs.colostate.edu/hes/. Start date: 8/2002. Deadline: 12/1/01.

POST-DOCTORAL POSITIONS

Biomedical Engineering – Qualifications: Ph.D. or equivalent in the field of Biomedical Engineering or Biomechanics with strong interest in the interface of biology and biomechanics of bone.† Knowledge of animal experimentation and cellular/molecular biology preferred.† **Responsibilities:** Develop independent research initiatives in the area of bone bioengineering.† Initial appointment for one year with possibility for renewal for 2nd and 3rd years.† Send CV, 3 names of references to Dr. X. Edward Guo; 238 S. W. Mudd MC 4703; Columbia University; New York, NY 10027.† TEL: 212-854-6196. FAX: 212-854-3304. Email: exgl@columbia.edu.

OTHER POSITIONS

Research Technician (Reference ID: 01-0003816) to work in Orthopedic Biomechanics and Biomaterials Laboratory at Massachusetts General Hospital in Boston, MA. **Qualifications:** B.S. in related field. Familiar with operation of scanning electron microscope, infrared spectrometer and differential scanning calorimeter. Familiarity with Macintosh and Microsoft Windows and Matlab preferred. **Responsibilities:** Assist with detailed study of polymeric materials for use in total joint replacements. Sample preparation and treatment requiring manual dexterity. Analyses of data with subsequent preparation of reports. Contact information: Joseph T. Clifford. Email: Tclifford2@partners.org.

Research Scientist (Reference ID: 049005) to work in Orthopedic Research Institute at [Via Christi Regional Medical Center](http://www.via-christi.org) in Wichita, KS. **Qualifications:** Doctoral degree (Ph.D) in mechanical engineering or closely related discipline; or ten or more years of related experience and/or training; or equivalent combination of education and experience. **Responsibilities:** Direct and conduct applied research in support of Orthopaedic medicine, help generate external support for research, monitor and direct activities of the Biomechanics lab, and support orthopaedic resident education. Contact information: Hagan Featherston. TEL: 316-268-5740. FAX: 316-291-4570. Email: hagan_featherston@via-christi.org.

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 website (www.isbweb.org/jobs), and on the Biomechanics World Wide website (www.per.ualberta.ca/biomechanics) under the Career Opportunities category.

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