



# American Society of Biomechanics Newsletter

Vol. 4

December, 1991

No.2

## From The President - Thomas P. Andriacchi -

The American Society of Biomechanics continues to grow in membership and improve the quality of its annual meeting. The 15th Annual Meeting of the Society held at Arizona State University was clearly a success and a true reflection of the Society's strength and maturation. Congratulations and thanks to Phil Martin (Meeting Chair) and Kit Vaughan (Program Chair) along with their committees for their efforts on behalf of the Society. The keynote symposium on topics of biomechanics at the cellular level and biomechanics in Olympic sports were excellent and representative of the scope of biomechanical interest in our Society. Thanks to the Educational Committee (Mary Rodgers) as well as Roger Enoka and Joe Sommer for two outstanding tutorial sessions which were well ended and well received.

The coming year should be an exciting and important year for the American Society of Biomechanics. The Second North American Congress on Biomechanics, NACOB II, will be held in Chicago in August of 1992. This meeting combines the 16th Annual Conference of the American Society of Biomechanics with the Seventh Biannual Conference of the Canadian Society of Biomechanics. The First North American Congress on Biomechanics, held in Montréal, was a huge success and we anticipate an even more successful meeting in Chicago as interest in the specialty of biomechanics continues to grow. I would encourage members to contribute papers and plan to attend this meeting in Chicago since it should be a unique educational experience as well as a pleasant social event.

On a personal note, I am looking forward to serving the Society as President during the coming year and the opportunity to help set some of the future directions of the Society. As such, I welcome any and all input from the members of the Society and their thoughts regarding Society activities and future directions. The Society has a dynamic Executive Board and committee structure. We welcome members to indicate their interest in participating in Society activities. I wish everyone a happy holiday season and a reminder to begin thinking about topics for submission to the upcoming annual meeting in Chicago.

## Zernicke, Biewener Elected

### Membership Also Votes To Include Saturday in Annual Meeting

Congratulations are in order to the winners of the ASB elections conducted earlier in the year. The President-Elect for the Society is Ron Zernicke, who will assume presidential duties at next year's Annual ASB meeting. The new Program Chairperson-Elect is Andy Biewener, and he will be responsible for the program at the 1993 Annual Meeting to be held at the University of Iowa. 49% of the membership voted.

Another item on the ballot last June was whether the ASB Annual Meeting should be structured to include a Saturday. A similar measure two years ago went down to defeat, but this year there was a strong majority (75%) voting to include a Saturday. Evidently, the cheaper airfares available when staying over a Saturday night have gained in importance as the economy has taken a dip. The change will not occur until the 1993 meeting, since next year's joint meeting with CSB in Chicago is already set. The Executive Board has decided that future meetings will retain a similar format to past years, but will run Thurs-Fri-Sat instead of the usual Wed-Thurs-Fri format.

## 1992 ASB Meeting To Be A Joint Meeting With CSB — NACOB —

Following the success of the last North American Congress on Biomechanics held in Montréal in 1986 it was decided to hold another joint meeting as soon as was feasible. That time will arrive next August 24-28th in Chicago. The NACOB meeting combines the 16th Annual Meeting of the American Society of Biomechanics with the 7th Biennial Conference of the Canadian Society for Biomechanics/Société Canadienne de Biomécanique.

Lou Draganich from the University of Chicago is the Meeting Chairperson and has been working closely with the CSB to organize the combined conference which will be held at the McCormick Center Hotel. The NACOB meeting will be substantially larger than the usual ASB meeting with attendance in the range of 350. Joan Bechtold is the ASB Program Chairperson for the meeting, working with Richard Wells, Program Chairperson for CSB, in developing the scientific program. Meeting announcements will be out soon, and the abstract submission deadline is set for April 3, 1992.

The distinctive features of both the ASB and CSB meetings will be retained within the format of the NACOB meeting. A symposium on space biology is being planned to complement the traditional CSB locomotion symposium.

**ASB 1991-92  
Officers and Committees**

**President**

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**Electronic Mail**

? ASB-Net ?

In the last Newsletter E-mail addresses were requested from those members desiring to publish their locations to other ASB members. Here are the E-mail addresses at this time. If you would like your mailbox identified, send the address to the newsletter editor.

**Larry Abraham, U. Texas**

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516-626-6926

## EDUCATION COMMITTEE REPORT

Mary M. Rodgers, Chair

### Travel Fellowship Award - 1991 Winners

The award winners for 1991 are Soma Centaur (participating in research in Barcelona, Spain) and Daniel Pflaster (participating in research in Israel).

### Travel Fellowship Award - 1990 Report of Activities

**Anita Bagly:** The funding helped support travel to Vail, CO to perform videotaping and kinematic analysis of the US men's and women's Olympic Alpine Ski Teams. One major outcome of this research was the refinement of a tracking program that allows the video cameras to follow the progress of the skier down the slope via pan and tilt motion. Markers positioned along the ski slope allow subsequent calibration of each camera frame. This software is currently being interfaced with a commercially available motion analysis package to achieve more widespread distribution and use, as its flexibility will allow its application to the analysis of a variety of sports activities.

**Phil Martin:** Funding was used for travel to Vancouver, Canada, to collaborate with Dave Sanderson at the University of British Columbia. The project involved study of the lower extremity joint kinetics during walking and running in amputees using a FLEX-foot below-knee prosthetic. The purpose of the study was to determine if use of the FLEX-foot significantly alters lower extremity joint kinetics during walking and running when compared with other prosthetics that offer little or no strain energy return and when compared to the gait characteristics of normals.

### Tutorials

Included elsewhere in this newsletter is a form developed to solicit proposals for the 1992 conference tutorials. The proposals will be reviewed by the Education Committee and presented to the Executive Board at the mid-year meeting. Based on the executive board recommendations, the tutors will be selected and notified immediately following the mid-year meeting.

**Survey of Participants at the ASB Annual Meeting in Tempe**  
Feedback from evaluations of the 1991 ASB conference was very positive. The tutorials, Borelli lecture, poster sessions, awards, and symposia were well-received. Suggestions included larger rooms, more posters, and more time for questions and answers during the sessions. Most of those who responded were in favor of changing the conference time to include Saturday so that airfares can be reduced.

## Executive Board Notes

Following are some of the actions and discussions that took place during the Executive Board meetings at the ASB Annual Meeting in Tempe in October.

- The mid-year Executive Board meeting will be held on February 20, 1992 in Washington D.C. during the ORS meetings. Contact a board member if you have anything you would like discussed.
- The ASB Executive Board decided that May 1 will be used each year for the deadline for abstract submissions and award

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## 1991 Annual Meeting A Success

Hats off to Phil Martin and other organizers of the 15th Annual Meeting at Arizona State, and to Kit Vaughan and others who worked on the program for the meeting. Thanks also to Roger Enoka and Joe Sommer for their well attended and well received tutorial presentations. By all standards the meeting was a success, even for those who had their tie clipped at the barbecue.

Two authors withdrew papers during the week before the meeting. While this is much preferable to "no shows", it still causes inconvenience to those organizing the presentations and to those who must sit through 15 minutes of silence. In addition, some individuals who might have preferred to present orally instead of through a poster were denied the opportunity. While there will always be legitimate reasons for cancelling on short notice, everyone should make an effort to meet their commitments unless circumstances beyond their control intervene. By the way, no shows are barred from submitting papers for 2 years.

## The Tilted Perspective

....(Somewhat) Tongue-in-cheek comments from a casual observer at the 1991 ASB meeting.....

- Whatever happened to the question and answer period at the end of a scientific presentation. The "talk" portion of presentations at the ASB meeting averaged 13.75 minutes, followed by 10 seconds of applause, 5 seconds of "We have time for one question", 45 seconds of a question, and 15 seconds for an answer. Do presenters plan it this way, is it the result of sloppy preparation, or are studies getting so complex it is not possible to communicate the results in 10 minutes?
- Future meeting organizers take note:
  - The first gait session had 103 chairs filled and 25 standing locations occupied. It appears conference attendees do not always divide into equal groups. Luckily, the fire marshal did not show up.
  - Rooms with bright sunlight and only partially effective blackout curtains can make viewing slides an exercise for the eye muscles.
  - Pointers which use white light, while having the advantage of showing a true point, often do not make a noticeable appearance on light slides. At the next meeting everyone should be given a lazer pointer as part of the registration packet.
  - 7:50am as a starting time for welcoming addresses does not appear to be the best choice unless you like echos.
- It looks like it is finally time to make three slide projectors standard issue in all meeting sessions. While some presenters used two projectors very effectively, others had difficulty cramming all their slides into two machines - a third controller to manipulate would make it easier to finish on time. ASB meeting chairs should prohibit the use of a single projector so that all presenters are given the same handicap.
- The presentation of 2-D data on 3-D charts is on the increase.
- One of the symposium speakers presented 2-D data in 4-D, overlaying stick figure animation on slow motion video images in an effective high-tech presentation.
- For those of you with color slide making programs - pastels should be eliminated. Purples, light reds, and pinks look great on the video screen, but on the big screen, 9 of 10 slides look fuzzy and furry and illegible.



## ASB Award Nominations

### Borelli Award

The American Society of Biomechanics annually awards the Giovanni Borelli Award to an investigator who has conducted exemplary research in any of the many areas of biomechanics. The Awards Committee will consider submissions by individuals or groups in the form of (a) an original unpublished research paper; or (b) a series of up to five published research papers on a single topic or theme. ASB members may also nominate others for consideration within the second category. If such a nomination is to be made, the member making the nomination must obtain permission from the nominee before submitting his or her name.

The Borelli Award is open to all scientists except members of the ASB Awards Committee and officers of the Society. Membership in the ASB is not a prerequisite for eligibility.

Criteria for selection will include originality, quality, depth of the research, and its relevance to the field of biomechanics as a whole. The award consists of a \$500 cash prize and an engraved plaque. The winner of the award will be expected to present the research at the Borelli lecture at the 16th Annual Meeting of the Society in Chicago, Illinois, August 24-28, 1992.

### Young Scientist Award

The American Society of Biomechanics annually awards one postdoctoral and one predoctoral ASB Young Scientist Award. ASB young scientists will receive an award certificate, a \$200 cash prize, and a waiver of conference fees for the annual meeting in which they present their research. Eligibility criteria for the two awards are similar, with the information specified below in *italics* for the predoctoral award.

Candidates may be self-nominated or nominated by an ASB member, must be a current or pending member of ASB, and must have completed a doctoral degree within the past four years (*pre-doc: must not have completed a doctoral degree prior to the Annual Meeting at which the award is given*). Candidates must supply a current copy of the curriculum vitae (*pre-doc: provide a short description of the research involvement at undergraduate and/or graduate levels*). The candidate must be the first author or only author of the paper(s) and must present the research (if accepted) at the Annual Meeting. His or her work may be in several formats: e.g., unpublished doctoral dissertation, papers submitted for publication, published articles (*pre-doc: a letter endorsing a candidate in support of his or her research from the department head or graduate research adviser must also be submitted*). The candidate must also submit both a short and long abstract according to the ASB Annual Meeting format.

### ASB Travel Award

The American Society of Biomechanics annually awards a travel fellowship of up to \$1000 to facilitate collaborative research and interaction among researchers. All ASB members are eligible to apply. The fellowship is intended to cover travel and lodging costs, and matching funds (from the host's or candidate's institution grants) are desirable, but not required. The funding period is from July 1 through June 30.

## Executive Board Notes

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nominations. Note that the abstract submission deadline for this year may be somewhat different since it is a combined meeting with CSB.

- The Travel Fellowship this year was split between two recipients, with each receiving the full amount of the award after some deliberation by the Board. In the future, the Board recommended that the Awards Committee select only one recipient each year. Travel Award recipients will be required to write a report for publication in the Newsletter, and the current requirement to present a report at the Annual Meeting will be relaxed from being mandatory to being suggested.
- The Board discussed exhibitor exclusivity at the Annual Meeting. It was decided that no exhibitor should be allowed to sponsor the meeting in exchange for the right to exclusive exhibition. Exhibitors can be allowed to exclusively sponsor meeting events, however, such as a reception.
- Pergamon Press is pressing for more \$ for the Journal of Biomechanics subscriptions that come with being an ASB member. The Board asked for further information before making a recommendation to the membership.
- The University of Iowa was chosen as the site of the 1993 Annual Meeting. This was the site of the first ASB meeting back in 1977.
- The ASB mailing list can be distributed to other scientific organizations if there is no commercial interest and if the organization pays for the printing and postage costs.
- Manssour Moeinzadeh will serve as the ASB representative on the U.S. National Committee on Biomechanics, replacing Roger Enoka.

Applications must include a current curriculum vitae, a candidate's cover letter, a letter from the host indicating support for the travel, a synopsis (two pages maximum) describing the purpose and significance of travel, and a detailed budget of justification (when appropriate, matching funds should be indicated).

A short report (two pages maximum) explaining the significant outcomes of the travel must be submitted by the fellowship awardee to the Awards Committee of the ASB prior to August 31 of the following year, or at the end of the fellowship. Fellows will be expected to write a report for publication in the newsletter and are encouraged to present a report at the Annual Meeting following the award of the fellowship. This presentation should emphasize the significant outcomes of the travel.

Notice of the award will be given by June 1 to allow at least thirty days notice before the earliest date of proposed travel.

### Awards Submissions

Nominations must be received by April 3, 1992. Requests for information and supporting materials for nominations should be sent to:

George T. Rab, M.D.  
Dept. of Orthopaedics  
2230 Stockton Blvd.  
Sacramento, CA 95817

## Notes & News

- The financial records of ASB were audited by the informal accounting firm of Drs. Scott Hollister and Steven Goldstein, auditors usually posing as scientists and based in the Orthopaedic Research Laboratories of the University of Michigan. They concluded that Melissa Hoy was guilty of no wrong-doings, that no anomalies were found in the accounting procedures, and that all expenditures appeared warranted. Their \$30,000 auditing fee will be audited by next year's auditors (which will probably be the same individuals).
- Roger Enoka spent an extraordinary amount of time revising and updating a document which details the responsibilities of the Executive Board members. Each position has detailed guidelines for what is expected from each position that will greatly help in transitions between Board members. Many thanks to Roger.
- ASB member Don B. Chaffin from the Univ. of Michigan received the Dr. David F. Baker Distinguished Research Award from the Institute of Industrial Engineers (IIE). The award recognizes significant contributions to the advancement and progress of the industrial engineering profession through outstanding research activity.
- ASB member Dr. Tony Keller from the Univ. of Vermont was awarded a Fulbright grant to conduct research in Sweden on biomechanical and epidemiologic factors associated with low back pain.

### ASB 1991 Annual Meeting Abstracts

Phil Martin reports that there are some proceedings from the 1991 meeting available for purchase. Included are 123 two-page mini-papers and a total of 304 pages. The cost, which includes mailing fees, is \$18.00 US. Checks should be made out to 1991 ASB Annual Meeting. Send request and payment to:

Philip E. Martin  
1991 ASB Meeting Chair  
Department of Exerc. Science and Phys. Educ.  
Arizona State University  
Tempe, AZ 85287-0404

### The Newsletter Needs Your Contribution!

Members are encouraged to contribute to the newsletter. A note, a letter to the editor, a lead to an interesting story, information about a scientific meeting, an opinion, or a feature article - anything that might be of interest to others in the Society. There is particularly a need for contributions specific to the various subdivisions within ASB, including information about upcoming meetings. Send information scrawled in longhand or on disk via Macintosh or IBM Microsoft Word or text format. Anyone interested in contributing on a one-time or regular basis should send suggestions to:

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Next Newsletter Publication Date - June, 1992

Deadline for Submission Of Materials - May 15th, 1992

## S T U D E N T S'

During the past year efforts have been made to formally and regularly involve students in the activities of the Society. Much of the credit for this activity can be given to Norman Murphy who has put in considerable effort toward having students represented in the organizational structure of ASB and in trying to stir up student interest in being involved. An increased level of participation is welcomed by ASB and all students are encouraged to become involved.

To facilitate involvement, the ASB Executive Board has put in place a student representative position on the Education committee, with Norman as the interim representative. He is working on student involvement at the next Annual Meeting in August in Chicago, so students (or anyone else for that matter) should contact him if you have suggestions. He would like to develop a forum for student interaction, establish contacts among students for job and educational opportunities, and PR for student awards.

The process for increased involvement has been initiated - now it is up to the rest of the students in ASB to collectively put in the effort to make this a useful and worthwhile endeavor.

### Students' Corner

By Norman Murphy  
Interim Student Representative

On the subject of student correspondence, several letters (dated September 24, 1991) that were previously mailed to the students were "Returned to sender" with an additional correspondence on the envelope. For those who have a new mailing address, could you forward your new correspondence to Dr. Melissa G. Hoy, Secretary/Treasurer.

Concerning the 15th Annual Meeting held in Tempe, I take this opportunity and congratulate Dr. Joseph H. Sommer III and Dr. Roger Enoka for their excellent tutorial presentations. Their effort in preparation and presentation was highly appreciated by the audience.

Additionally, I send forth my appreciation to the ASB executive officers as well as to Dr. Philip Martin and Dr. Christopher "Kit" Vaughan for their support and time they have allocated me concerning the subject of student representation.

On a final note, I invite all students as well as other members of the Society to address their comments, opinions, or suggestions concerning the subject of student representation to:

Norman Murphy, M.Sc.  
Human Movement Laboratory  
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3rd Floor, Block 7  
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Montreal, Quebec, Canada  
H3T 1C5  
Phone: (514) 345-4740  
Fax: (514) 345-4801  
Email: aissaoui@ere.umontreal.ca

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## Jobs! Jobs! Jobs!

This location will be used to advertise any positions that might be of interest to ASB members. Forward a copy of the position announcement and it will be included in the next issue of the newsletter.

### The Cleveland Clinic Foundation

Professional Staff position for someone with a demonstrated interest in the application of modeling and optimization techniques to research and clinical questions regarding analysis of human motion of the normal and pathological human neuromuscular and musculoskeletal systems. **Responsibilities:** All areas of research interest will be considered, however, individuals with research programs in biomechanics, biomaterials, or medical imaging or artificial organs are preferred. Candidates will be expected to teach both graduate and undergraduate courses and to develop a funded program of Bio/Biomedical Engineering Research. **Qualifications:** PhD in Bioengineering or Biomedical Engineering or in another Engineering discipline with a history of research activity in Bioengineering or Biomedical Engineering. **Application:** Submit a cover letter, curriculum vitae and three letters of recommendation to: Dr. Mark Grabiner, Chairman, Biomechanics Search Committee, Department of Biomedical Engineering and Applied Therapeutics, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio, 44195-5254.

### Arizona State University

Tenure-track position in Bioengineering at the assistant, associate, or full-professor level. Nomination or application of individuals qualified as "Prominent Scholars" are encouraged. **Responsibilities:** Participate in ongoing research projects, develop new research areas, and pursue and develop funding sources. **Qualifications:** PhD degree in biomechanics, biomedical engineering, mechanical engineering or related area. **Application:** Send a curriculum vitae, a statement of teaching and research objectives, and a list of three references to: Dr. Eric J. Guilbeau, Chair of the Search Committee, Dept. of Chemical, Bio and Materials Engineering, Arizona State Univ., Tempe, AZ 85287-6006. **Deadline:** February 1, 1992 or until the position is filled.

### University of California, Davis

Assistant/Associate Professor in Biomechanics with research expertise in the biomechanics of human movement. **Responsibilities:** Contribute to and extend current offerings in the area of biomechanics and neuromuscular function, including development of independent research program, development of additional UG and G courses in biomechanics, and advising of students. **Qualifications:** Earned doctorate in biomechanics, bioengineering, or other appropriate areas and evidence of scholarly achievement in biomechanics. **Application:** Send a cover letter describing interests and qualifications, a curriculum vitae, copies of three relevant research publications, and the name, phone number, and name and address of three individuals who you have asked to submit letters of recommendations to Keith R. Williams, PhD, Chair, Department of Physical Education, University of California, Davis, CA, 95616-8674. **Deadline:** Jan. 31, 1992.

### University of Illinois at Urbana-Champaign

Tenure track position starting August 21, 1992, in Dept. of Kinesiology, specializing in biomechanics. Rank open, but primarily seeking individuals at the Asst. Professor level. **Responsibilities:** Research function includes independent research, directing student research and seeking grant support. Instruction involves teaching and advising both undergraduate and graduate students. **Qualifications:** Academic background and training relevant to biomechanics. PhD required. **Application:** Letter of application, vitae and three letters of recommendation should be sent to Les Carlton, Chair of Search Committee, Dept. of Kinesiology, Univ. of Illinois at Urbana-Champaign, Louise Freer Hall, 906 S. Goodwin Avenue, Urbana, IL 61801. **Deadline:** Feb. 1, 1992.

### Indian Institute of Technology, New Delhi

Assistant Professor of biomechanics with special interest/experience in injury mechanics/ergonomics in general end injury control/safety. **Application:** Professor Dinesh Mohan, Centre for Biomedical Engineering, Indian Institute of Technology, New Delhi 110016.

## Coming Events

### February 3-4, 1992

Mountain Sports and Sciences, International Scientific Congress, Winter Games 1992, Grenoble Session, France. (c/o Cerna, B.P. 35, 73202 Albertville Cedex, France)

### May 12-14, 1992

International Scientific Conference on Prevention of Work-Related Musculoskeletal Disorders, Stockholm, Sweden. (c/o Ms. Gun Carlsson, National Institute of Occupational Health (IU), S-171 84 Solna, Sweden. Tel: +46 8 730 91 00, Fax: +46 8 730 19 67).

### May 23-27, 1992

XIth International Symposium on Posture and Gait. (c/o Posture & Gait Symposium Coordinator, Good Samaritan Hospital & Medical Center, 1015 NW 22nd Avenue, N300, Portland OR, USA, 97210-5198 Tel. 503-229-7348 Fax: 1-503-790-1201).

### June 2-6, 1992

International Conference on Computer Applications in Sport and Physical Education, Wingate Institute, Israel. (c/o Conference Secretariat, Int. Conf. on Com. Appl. in Sport and Phys Ed., Wingate Institute, Netanya 42902, Israel. Tel: 972-53-29548 Fax: 972-53-54374)

### June 10-14, 1992

Annual International Industrial Ergonomics and Safety Research Conference, Denver, Colorado. (c/o Secretariat, Mrs. Kim Dalmer, Dept. of Physical Therapy, 2-50 Corbett Hall, Univ. of Alberta, Edmonton, Alberta, T6G 2G4. Tel: 403-492-4823 Fax: 403-492-1626)

### June 15-19, 1992

X International Symposium of Biomechanics in Sports (ISBS '92), Milano Italy. (c/o ISBS'92 Symposium Secretariat, Centro Di Bioingegneria, Fondazione Pro Juventute, IRCCS, Politecnico di Milano, Via Capocelatro 66, I-20148 Milano, Italy. Tel: 39 2 40308305 Fax: 39 2 26861144)

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## ASB Brochure/Database

During the past year the Education Committee has received a number of inquiries from various individuals, mostly from students. Inquiries have been from students, national and international, undergraduate to doctoral, looking for specific types of information or particular types of academic programs related to biomechanics. Less numerous have been requests by members of the legal profession who have a need for experts in biomechanics. These requests were either responded to directly by Education Committee member Mark Grabiner, or a contact person within ASB was supplied. In order to respond to these types of inquiries more effectively, an ASB Referral Database is being developed. If you will fill out the form below you will be added to the database. Return the form to: M.D. Grabiner, Ph.D.

Department of Biomedical Engineering  
and Applied Therapeutics W1-552  
The Cleveland Clinic Foundation  
9500 Euclid Avenue  
Cleveland, Ohio 44195

\*\*\*\*\*  
Full Name \_\_\_\_\_ Present Position \_\_\_\_\_

Highest Degree \_\_\_\_\_ Degree Awarded From \_\_\_\_\_ Date \_\_\_\_\_

Affiliation Address \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_

Home Address (Optional) \_\_\_\_\_

Phone \_\_\_\_\_

Keywords Related to Area of Expertise (Both *general* and *very specific* terms that reflect areas of expertise)

Keywords Related to Academic Areas (Terms that reflect academic areas in one's undergrad and grad biomechanics programs)

\*\*\*\*\*  
**Coming Events**

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**June 21-24, 1992**

Eighth Meeting of the European Society of Biomechanics in association with the European Society of Biomaterials. (c/o Conference Secretariat: ESB92 Istituto di Fisiologia Umana, Università, 'La Sapienza', Piazzale Aldo Moro 5, 00185 Rome Italy. Tel 39-6-49-673 Fax 39-6-4452824)

**June 27-30, 1992**

International Symposium on 3-D Scoliotic Deformities & VII International Symposium on Spinal Deformity and Surface Topography, Montréal, Canada. (c/o Int. Symposium on 3-D Scoliotic Deformities, Institut de génie biomédical, Dr. Jean Dansereau, École Polytechnique, PO Box 6079, Station "A", Montréal, Quebec, H3C 3A7, Canada)

**June 28-July 2, 1992**

9th International Congress of ISEK, Florence, Italy. (c/o CE.S.P.R.I, Fondazione Pro Gnocchi, Via Imprunetana 124-50020 Monte Oriolo, Florence-Italy Tel: 39-055-208322/208426, Fax: 39-055-208428)

**August 18-21, 1992**

3rd International Symposium on Sport Surfaces, Calgary, Alberta, Canada. (c/o Conference Office, Faculty of Continuing Education, The Univ. of Calgary, 2500 Univ. Drive N.W., Calgary, Alberta, T2N 1N4. Tel. 403-220-5051 Fax: 403-289-7287)

**August 24-28, 1992**

Second North American Congress on Biomechanics, Chicago, IL. (c/o Louis Draganich, Dept. of Surgery, Univ. of Chicago, 5841 South Maryland Ave. Box 421, Chicago, IL 60637, Tel: 312-702-6839)

**September 4-5, 1992**

International Conference on Experimental Mechanics: Technology Transfer Between High Tech. Engineering & Biomechanics, Univ. of Limerick, Ireland. (c/o Conference Secretariat, BSSM'92 Fax: 353-61-330316 (Ireland, Eire) or e-mail at LittleT@ul.ie

**December, 2-4, 1992**

Seventh International Conference on Biomedical Engineering, National Univ. of Singapore. (c/o Secretary, 7th ICBME 1992, Dept. Orthopedic Surgery, National Hospital, Lower Kent Ridge Road, Singapore, 0511. Tel(65) 772 4424 Fax: (65)778 0720)



## ASB Tutorial Proposal

Title of Tutorial \_\_\_\_\_

Principal Presenter:

Name \_\_\_\_\_ Degrees \_\_\_\_\_

Affiliation/Organization \_\_\_\_\_

Address/City/State/Zip: \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

Email \_\_\_\_\_

Other Presenters:

Name \_\_\_\_\_ Degrees \_\_\_\_\_

Affiliation/Organization \_\_\_\_\_

Principal Presenters:

Name \_\_\_\_\_ Degrees \_\_\_\_\_

Affiliation/Organization \_\_\_\_\_

Course Description (150 words or less)

Audiovisual Needs \_\_\_\_\_

Please return to: Mary Rodgers, ASB Education Chair  
Institute for Rehabilitation Research and Medicine  
Wright State University Research Center  
3171 Research Blvd.  
Dayton, OH 45420

Deadline for submission is December 10, or as soon as possible after that.

**NACOB (North American Congress on Biomechanics), the combined 16th Annual Meeting of the American Society of Biomechanics and the 7th Biennial Conference of the Canadian Society of Biomechanics, will be held in Chicago, Illinois on 24-28 August 1991.**

**Abstracts for NACOB are due 3 April 1992.**

**The Call for Papers and Authors Instructions will be mailed in January.**