

**VOL. 9 NO. 2**

**SEPTEMBER 1992**

**ISBS**  
**SPORTS BIOMECHANICS**  
**NEWSLETTER**





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## LABORATORY FEATURE

### BIOMECHANICS UNIT AT THE VICTORIA UNIVERSITY OF TECHNOLOGY

From February 1985 to April 1991, the Biomechanics Unit of the Department of Physical Education and Recreation at Victoria University of Technology was led by Professor Bill Morrison. During this time, the Biomechanics Unit grew from very humble beginnings into an internationally recognized, professional unit that held the 1989 ISBS symposium. Bill is currently executive director of the Office for Research at V.U.T. and involved with various projects including the National Teaching Company Scheme to develop a prototype head protection device for special populations such as cerebral palsy.

In April 1991, Russell Best became the Director of the Biomechanics Unit and was joined in July 1992 by Krystyna Gieloperczak. Russell recently performed a 3D analysis of the javelin throwing event at the 1991 World Student Games. He was also awarded the highly prestigious Best Physical Science Research Paper by the International Olympic Committee World Congress on Sport Science based on his Ph.D. research, "Javelin Release —

Applied Optimal Control. Krystyna is a moderator of BIOMCH-L, An Electronic Mail Discussion Forum for Biomechanics and Movement Science. Earlier this year she presented a paper at the NATO Advanced Research Workshop titled, "Biomechanical Analysis of the Wrist Joint in Ergonomical Aspects."

The Biomechanics Unit consults to industry and government agencies. For example, analyses are regularly performed on a range of athletes from the Victorian Institute of Sport, and two Australian Sports Commission grants are currently funding research into wheelchair propulsion techniques and optimizing javelin and discus release conditions.

Eleven post graduate research students work on various projects within the Biomechanics Unit. These include: foot problems in children, qualitative modeling of gymnastics skills, human modelling in throwing, cycling biomechanics, information content and decision making in isokinetic dynamometry, anthropomor-

phic leg design for impact assessment, 3D analysis of golf techniques, and a number of areas associated with gait analysis.

There is a strong international link with the Unit. Last year, Helmut Geiblinger (tutor and Ph.D. candidate) worked with Professor Peter Brueggemann at Koln as part of his professional experience program. Collaboration with Dr. Hans Gros at Stuttgart has resulted in foreign research students working with the Unit during the past 3 years. There is also an Australasian research link with Peak Performance Technologies Inc., involving the Beta Pal systems.

Present and future research of the Unit is looking at expert systems development (artificial neural networks applied to sport and medical biomechanics), chaos applications to biomechanics, modelling of joints utilizing video fluoroscopy and MRI, and the Unit is bringing together state universities and hospitals to develop a data base of biomechanical information for use in preventative, diag-

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nostic, and corrective medicine research. Continued research in applied sport biomechanics will expand with affiliations in the Australian Institute of Sport (Canberra) and the Victorian Institute of Sport (Melbourne).

Biomechanics Unit  
Centre for Human Performance  
and Development  
Victoria University of  
Technology  
P.O. Box 14428  
MMC, Melbourne  
AUSTRALIA 3000

TEL:(03) 688-4470  
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Russell J. Best  
email: russel@elk.vut.edu.au

Krystyna Gielo-Perczak

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## ANNOUNCEMENTS

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### ISBS '93 XI International Symposium of Biomechanics in Sports Amherst, MA June 23 - 26 1993

On behalf of the ISBS, we have pleasure in inviting you to attend the symposium of the Society "ISBS '93", which will be held at the University of Massachusetts in Amherst, Massachusetts. The ISBS was organized in 1982 with the express purpose of "bridging the gap between biomechanics researchers, teachers and coaches". The annual symposium, with its published proceedings, provides the vehicle through which biomechanics applications may be transmitted to practitioners.

#### Topics

- Biomechanical methodology in sports
- Basic and applied biomechanics
- Biomechanics in coaching and teaching
- Biomechanical rehabilitation in sports
- Sport biomechanics for people with special needs
- Free topics in sports biomechanics

Chairman:  
Joe Hamill

#### Scientific Committee:

K. Holt  
T. Foti  
T. Derrick

The symposium  
will include:

Keynote lectures, oral and poster presentations, biomechanics equipment demonstrations, and a trade exhibition.

#### Awards

A special award will be taken into account for the most promising work presented by young researchers.

ISBS '93 Symposium  
Secretariat  
Department of Exercise  
Science  
Boyden Building  
University of Massachusetts  
Amherst, MA 01003  
Phone (413) 545-2245

#### Wanted

Sigma Research Ltd, a research development company in Russia is looking for partners to design and manufacture computerized sports games for children. Currently, three different sports training games have been developed; automobile, toy-pony, and balance platform. They are designed for children

aged 4-7 years to help develop their motor skills and enhance decision making in complex situations.

Interested parties should contact:



СИГМА ИТОСОО

Россия, 192007,

С-Петербург,

Курская ул.,

28/32, терп.

(812)584-80-39

SIGMA

RESEARCH LTD

ISBS '94  
will be held at the

Hungarian University of  
Physical Education  
Budapest, Hungary  
PH: (36-1) 156-44-44  
Fax: (36-1) 156-63-37

## JOURNAL OF APPLIED BIOMECHANICS

In response to the growing concern that the International Journal of Sport Biomechanics was too limited in its focus strictly on sport, the name of the journal will be changing to the Journal of Applied Biomechanics and the mission will be expanded to publish articles that pertain to the applied aspects of human biomechanics in sport, exercise and rehabilitation.

Linda Anne Bump, Ph.D.  
Director  
Human Kinetics Publishers,  
Journal Division.

The laboratory of Human Movement Studies, Faculty of Physical Culture, Palacky University Olomouc in cooperation with the

- Czechoslovak Society of Biomechanics
- Faculty of Physical Education, Charles University, Prague,
- Czechoslovak Ski-Association,
- Czechoslovak Inteski
- CONSPORT Prague

would like to extend to you an invitation to:

**International Seminar  
Biomechanics of  
Nordic Skiing '93**

(Ski-Jumping! Cross-country Skiing, Nordic Events)

Topics:

- Biomechanical analyses of the technique
- Diagnostic systems based on biomechanical measurements
- Biomechanics of Sport equipment
- Biomechanics - Bioenergetic
- Biomechanics in Coaching and Teaching
- Video presentation and exhibition of hardware and software systems

Date:

June 28 - 30, 1993

Place:

Olomouc, Czechoslovakia

Fee:

200 US  
(including accommodation)

Language:

English

For more information and preliminary registration (along with paper title) send to:

**BIOMECHANICS OF  
NORDIC SKIING '93**  
Laboratory of Human Movement Studies  
Palacky University  
tr. 17. Listopadu 6  
772 00 OLOMOUC  
CZECHOSLOVAKIA

Tel: 042 068 24241  
Fax: 042 068 28762

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# BIOMCH - L

## an Electronic Mail Discussion forum for Biomechanics and Movement Science

Krystyna Gielo-Perczak\*  
Ton van den Bogert+  
Herman J. Woltring#

Under the Patronage of the International Society of Biomechanics

An electronic discussion forum was created in 1988 for members of the International Society of Biomechanics (ISB) and of related organizations (e.g., American, Canadian, and European Societies of Biomechanics; International Society of Electrophysiological Kinesiology - ISEK) which, for users of many electronic communication systems (EARN/BITNET/NETWORTH, INTERNET, JANET, etc .) allows free exchange of information with fellow-subscribers world-wide. It is a useful, efficient and (in)formal contact modality complementary to classical means such as journal publications, congress participation, society newsletters, and private contacts by visits, letter, facsimile, or telephone.

In view of the overlap between Biomechanics and other fields such as Kinesiology, Bioengineering, Motor Control, and Physiology, subscription is open to anyone. At the time of writing (October 1992), there are more than 640 subscribers world-wide.

Subscription to BIOMCH-L as such is free, but electronic communication costs must be absorbed by the subscriber or his/her institution. For many academic and research institutions, electronic mail is a standard facility not charged to individual end users; for others, there are increasing possibilities for low-cost access.

BIOMCH-L activities include discussions, congress reports, calls for help, calls for papers, announcements of new publications, position advertisements, and anything else relevant to the target domain. It is considered good practice that replies received in response to "calls for help" are summarized and posted onto the list for the benefit of all readers.

EARN/BITNET/NETWORTH users can subscribe interactively or by electronic mail, by sending the following command to LISTSERV@HEARN.BITNET,  
SUBSCRIBE BIOMCH-L <name>

where <name> should be the user's full name (e.g., initials and last name), containing at least one space(1). Users on other networks should subscribe at the equivalent Internet address LISTSERV@NIC.SURFNET.NL.

Further information on LISTSERVer facilities can be obtained by sending the request HELP to either of the above addresses. Archives of posted items are on-line, and can be retrieved with commands of the form SEND BIOMCH-L LOG9206 (for the June 1992 issue) to either LISTSERVer address. Postings can be sent to BIOMCH-L@NIC.SURFNET.NL

(not to the LISTSERVer address which is for administrative purposes only!), without editorial interference. At present, subscription and distribution are open to anyone. BIOMCH-L's world-wide distribution can be studied by sending the request REVIEW BIOMCH-L (COUNTRIES to the LISTSERVer address; names

and electronic addresses of individual subscribers are provided to subscribers only, and may be "concealed" if so preferred.

Readers not familiar with electronic mail are referred to the extensive surveys by Quarterman (1990) and LaQuey (1990). For access facilities in their own environment, they should contact the networking staff at their local computer center, while the BIOMCH-L moderators shall be glad to provide pointers to alter-

native channels if no institutional facilities are available.

We look forward to seeing you on BIOMCH-L!

#### References

John S. Quarterman (1990), *The Matrix - Computer Networks and Conferencing Systems world-wide*. Digital Press, 12 Crosby Drive, Bedford, MA 01730, USA.  
Tracy L. LaQuey, Ed. (1990), *The User's Directory of Com-*

puter Networks. Digital Press, 12 Crosby Drive, Bedford, MA 01730, USA.

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1. In the main body of an email note - the Subject: line is irrelevant.

\* KGP@ELK.VUT.EDU.AU, Melbourne, Australia.  
+BOGERT@ACSUCALGARY.CA, Calgary, Canada.  
#WOLTRING@NICLKUN.NL, Eindhoven, Netherlands .

### ISBS - BOARD OF DIRECTORS

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Elfterius Tsrouchas (Greece)

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## ISBS EXECUTIVE COMMITTEE

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OFFICE	OFFICER	ADDRESS
President	Bill Morrison	Victoria University of Technology Footscray Campus P.O. Box 14428 MMC MEEBOURNE VIC 3000
President-Elect	Lela June Stoner	University of Minnesota Minneapolis, Minnesota U.S.A. 55455
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Treasurer	John Ostarello	Dept. of Kin and P.E. California State University-Hayward Hayward, California 94542 U.S.A.

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## FINANCIAL STATEMENT INTERNATIONAL SOCIETY OF BIOMECHANICS IN SPORTS

### OUTSTANDING EXPENSES 1991 -1992 (Estimates - Bills not yet submitted)

Human Kinetics	\$ 1,696.00
USB Subscription - 53 @ \$32.00	60.00
Foreign shipping - 15 @ \$4.00	200.00
Presidential Conference Travel	1,600.00
Dyson Lecture	
Executive Expenses	70.00
W. Morrison	50.00
B. Gowitzke	100.00
E. Kreighbaum (history project)	<u>100.00</u>
<b>TOTAL</b>	<b>\$3,776.00</b>

### 1992 - 1993 PROPOSED BUDGET

<b>INCOME</b>	<b>\$ 3,800.00</b>
Memberships Dues/Subscriptions	<u>3,800.00</u>
<b>TOTAL INCOME</b>	<b>\$ 3,800.00</b>
<b>EXPENSES</b>	<b>\$ 1,900.00</b>
USB Subscription Expenses	1,000.00
Dyson Lecture	650.00
Newsletter 2@ \$325	200.00
Presidential Travel	200.00
Awards	250.00
Membership Pins (G Brown)	300.00
Executive Council Expenses	50.00
Office Supplies	50.00
Bank Charges	<u>50.00</u>
<b>TOTAL EXPENSES</b>	<b>\$ 4,600.00</b>

### PROPOSED BUDGET SUMMARY

Balance 31 May 1992	\$10,589.41
Estimated Income ('92-'93)	<u>3,800.00</u>
<b>Total</b>	<b>\$14,389.41</b>
Outstanding Expenses ('92-'93)	3,776.00
Estimated Expenses ('92-'93)	<u>4,600.00</u>
<b>Total</b>	<b>\$ 8,376.00</b>
<b>ESTIMATED BALANCE</b>	
<b>31 MAY 1993</b>	<b>\$ 6,013.41</b>



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