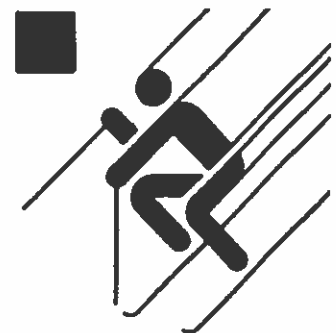
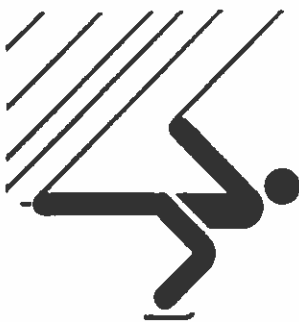

Vol 3 No 2

December 1986

SPORTS BIOMECHANICS NEWSLETTER

I S B S

International Society



of

Biomechanics in Sports

SPORTS BIOMECHANICS NEWSLETTER
VOL 3 No 2

DECEMBER 1986

Marlene Adrian, Acting President
Gail Evans, Acting Secretary General
John Ostarello, Treasurer
Hans J. Gros, Newsletter Editor Vol. 3 No 2

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Editor's note

Do you look for a way to enjoy the "Fifth International Symposium of Biomechanics in Sports" in Athens, Greece even more? Well here it is ! Design a Logo for ISBS and win free room and board, registration and access to all social events at our next conference. Check for more details below.

Communication between Researchers in different parts of the world has been greatly simplified with the availability of computer networks connecting institutions like universities or research centers. Do you wish to transfer files, texts, programs or simply messages with in a few minutes ? My EARN/BITNET address is ULAC at DS0 RUS0 you'll find more details in this Newsletter.

Just in case you'd like to give me a call instead....
Please note my new business phone number: 0711 / 121 3035.

LOGO CONTEST

The International Society for Biomechanics in Sports is looking for a new Logo. Thanks to the generosity of Dr. L. Tsarouchas, Chairman of the Organizing Committee of the Fifth International Symposium of Biomechanics in Sports, we are in a position to offer a truly valuable prize to the winner:

- free room and board
- no registration fees
- all social events free

at our next conference in Athens, July 13-17 1987. In order to participate in the contest you have to submit your LOGO to the Newsletter editor before May 1, 1987.

Some Rules and Hints:

- The contest is open to all ISBS members.

The LOGO should...

- symbolize the basic philosophy of ISBS
- not be gender or diszipline specific
- be monochrome and recognizable, even when reduced to a small scale (use on stationnary).

You may use any graphical design, the letters ISBS or a combination thereof. You may submit several different LOGOs or variations of one LOGO.

The first prize will be selected by the Board of Directors. The winner will be announced at the conference in Athens.

Participate ! Send your design on a 8 1/2 by 11 size sheet to:

Dr. Hans J. Gros
IfS, Keplerstrasse 17
7000 STUTTGART 1
West Germany

ISBS Board of Directors meeting

Minutes of ISBS board of directors meeting Halifax, Nova Scotia, Canada June 26, 1986

Present:

Adrian, Barham, Brown, Cooper, Gowitzke, Gros, Kelley, Kilani, Kreighbaum, Luhtanen, Morrison, Ostarello, Plagenhoef, Rodano, Stoner, Terauds, Therrien, Tsarouchas and Waddel (observer).

The following are the minutes of and major items considered at the ISBS Board of Directors Meeting held in Halifax, Nova Scotia, Canada on June 26, 1986:

1. The ISBS has approximately 171 members of which 35 are students. There are 29 countries represented. The following 16 countries have identified an ISBS representative from their countries: Australia, China, Czechoslovakia, England, Finland, Egypt, West Germany, Greece, Italy, Japan, Jordan, Korea, Norway, Poland, Spain, and the U. S. S. R.
2. The board approved the 1985 minutes as submitted.
3. The board accepted the treasurer's report for 1984-85 and 1985-86.
4. The board accepted a report from nominations committee chairperson, Ellen Kreighbaum. The following were nominated for office: Larry Holt, President; Leftheris Tsarouchas, Vice President for Conferences and Meetings; Eugene Brown, Peter Francis, Barbara Gowitzke and Carol Zebas, Vice-President for Public Relations and Awards; and Walt Cryer and Jackie Hudson, Secretary General. Nominations will be solicited from the floor of the general meeting. The slate of candidates will be published in the fall newsletter. The ballot will be by mail. The elected officers will become officers-elect until the 1987 conference at which time they will assume office. The officers-elect will be part of the executive board and will be invited to the board meeting preceding the 1987 conference. William Morrison was elected chairperson of the 1987 nominating committee. Officers to be elected are Vice-President for Publications, Vice-President for Projects and Research and Treasurer.
5. Eugene Brown presented the publications and proceedings report. Academic Publishers made a written offer to ISBS to publish its conference proceedings and give a 20% royalty to ISBS. The cost of the proceedings will be included in the registration fee. It was moved, seconded and approved to accept the proposal. An editorial board will be formed to review papers.
6. Larry Holt reported that there were 85 pre-registrants for the Halifax conference. There is a special registration for medical people for the first day of the conference and special registration for hockey and paddeling related people for the last day of the conference. There was no Dyson Memorial Lecturer selected.

7. The ISBS newsletter was compiled and edited by Hans Gros and Kathy Barthels. Hans was charged with the responsibility of finding a logo for ISBS.
8. The 1988, 1989, and 1990 conference locations were discussed. The following locations were suggested:
1988-China, Japan, U. S. at California State University-Hayward
1989-West Germany
1990-Australia
It was decided to try and have our conferences close to world class or national sport competition to encourage participation of the coaches and cooperative research projects with the athletes.
9. Dave Kelley submitted a working draft of " Guidelines for Selecting Conference Sites." No action was taken.
10. Leftheris Tsarouchas distributed materials on the 1987 conference in Athens, Greece.
11. It was moved, seconded and approved to accept the report from the constitution committee, John Cooper, Chairperson. The report will be submitted to Dave Waddell for scrutiny in meeting international law requirements. The Secretary-General will remain an elected office. The sports directors will remain as appointed positions based on interest.
12. President Adrian reported that she had been soliciting exhibitors for the conferences and advertisers for the newsletter. Kelley suggested that the president appoint a liaison for communicating with commercial people about sponsorship.
13. President Adrian opened discussion on the issue of changing the name of ISBS. After lengthy discussion it was decided 16-2 to not change the ISBS name.
14. Barbara Gowitzke was appointed as chairperson of a committee to write criteria for the selection of the Dyson Memorial Lecturer. The lecturer does not have to be from the biomechanics field. The lecture should set the tone for the conference. The lecture could be provocative. Elftherios Tsarouchas is authorized to invite the Dyson Memorial Lecturer for the 1987 conference in Greece.
15. The following research efforts were endorsed by the ISBS board of directors: the 1986 World Cup of Athletics, Australia; the Gold Cup Wheelchair Basketball Championship, Australia; the World Weightlifting Championship, Australia; the Junior World Athletics Championships, Greece; the World Badminton Championships, Canada; the Pan Am Wheelchair Games, Puerto Rica; and the National Track and Field Championships, United States.

Ellen Kreighbaum
Acting Secretary General

CONFERENCE TIDBITS

Australians Zoom Halifax

The results are in following a year of extensive training the Australians claim rightful ownership to the coveted Zoom Olympics championship trophy. The event took place during ISBS 86 at a quiet pub known as the Thirsty Duck. After 26 gruelling innings of play the Canadians, Americans, Greek and Jordanians realized they were no match for the mighty Ausralians. We were all out-zoomed, out-schwartzed and out-profiglianod until we finally pleaded to become a ghost. Final standings were:

1. Australia
2. United States
3. Greece
4. Canada
5. Jordan

United States wins comeback player of the year award and Greece wins Rookie of the year award.

The Australians have left a challenge for Athens in 1987. See you there!

Thank you...

The Australian contingent, at the ISBS symposium, would like to express its thanks and appreciation to a number of individuals for their hospitality, professional interaction and total contribution to a most meaningful experience. The individuals to whom this expression of appreciation is extended are as follows: Dr. Larry Holt, Dr. Barbara Gowitzke, Dr. David Kelly, Dr. John Cooper, Dr. John Osterello and Dr. Marlene Adrian. Each and every member of our crew found the symposium valuable and rewarding. Hopefully you will have an opportunity to experience Australia and we will be part of it.

??? HELP ?help?help?help?help???

Anyone who has Biomechanical Analysis Software for an IBM PC and is willing to share it please contact:

Dr. T. Bauer
Lakehead University
School of Phys. Ed.
Thunder Bay, Ontario, P7B 5E1
Canada

??? HELP ?help?help?help?help???

Ode to....

I. S. B. S. 1986

To the delegates meeting here in Halifax,
We've come from all over to work and relax,
We gathered together here in '86
So scientists, coaches, and jocks could all mix.

I. S. B. S. you're the one for me,
I'll not take a back seat to old I. S. B. ,
Here at I. S. B. S. we share ideas with ease
In Deutsch and Polish and e'en Japanese.

Our papers were written a month in advance,
Our talks were rehearsed we left nothing to change,
But we jammed the machine with the very first slide,
The second was cleverly turned on its side.

Oh simply admit that it's written in stone,
What's perfect to start with is quickly undone,
The best of intentions " gang aft agley ",
When you have to depend on the skill of A-V.

We came with umbrellas, we really were set,
They promised us rain, but we barely got wet,
On a few rare occasions some drops from the sky,
But inside the Union the speakers were dry.

To keep us from straying they brought in our lunch,
We filled up our plates and all ate in a bunch,
By the end of the week we could balance with ease
Soup and salad and coffee and a slice of swiss cheese.

We were promised a Bar-B-Que down in the park,
Three miles we ran just to eat before dark,
Whenever a picnic is planned just for us,
You'd best have a snack before boarding the bus.

But we cannot gripe for we all got a thrill
When we saw the Tattoo with such talent and skill,
And the trip to the South Shore was beautifully planned,
Even ordered the sun so we all came back tanned.

We learned we cannot trust the 40 yard dash,
From the NFL this should bring quite a backlash,
But our mission is clear ,we'll continue, of course,
To tear down such shrines we'll employ THE FORCE.

We've filled up our minds with great wisdom this week,
We all had a chance to be heard when we speak,
So for I. S. B. S. let us hear a big cheer,
And we'll all see 'Leftherios in Athens next year.

(Tune: Bonnie Dundee
Words: Gay Ostarello)

BRIDGING THE GAP . . .

In Quest of a Common Language for Biomechanists and Coaches.

By Dr. Petr Susanka, Karls University, Prague.

Research always lags behind practice. Searching for reasons is not subject of this short article. I will rather discuss the necessity for close collaboration between researchers on the one hand and teachers and coaches on the other side. We will neglect the fact that the informations needed by teachers and coaches in the preparation and education of athletes is interdisziplinary in nature. Thus increasing knowledge in a number of scientific disciplines is required. But even if one considers only a single scientific discipline the problem does not necessarily diminish.

At the present time the body of knowledge in Biomechanics and in a more general sense, in Bionics, the number and quality of methods at our disposition is so enormous, that no single Lab in the world can even attempt to employ all methods simultaneously.

Applied Sports Biomechanics is not only applicable to the analysis of single sports skills, but also in the training process, rehabilitation, and in solving problems of overloading and damaging. Further applications are the development of implements, gear and facilities.

Thus, the amount of work is caused not only by the number of Sports and disciplines that we should strive to get to know better in order to be able to deliver truly new and relevant information to the experts.

It is therefore logical, that a review of the international literature reveals a great deal of redundancy in the selection and solution of problems, a constant re-inventing of the wheel, an abundance of citations and compilations. Research lags a concentrated, long term, detailed program for the solution of the biomechanical problems of a sports discipline.

This partially justifies the scepticism of successful teachers and coaches who have doubts about the applicability of published research to their practical needs. The international societies ISB and ISBS have a great possibility to change this situation.

The complexity of the problem guarantees that every sports biomechanist, every Lab has an abundance of tasks. It is not necessary to waist time on disputing respective areas of responsibility. The question is quite clear: How can one achieve the solution of complex problems in single disciplines with the cooperation of national or even international research teams?

One of the possible approaches for ISBS is the formation of several international teams, each covering an Olympic Sport that is practised world-wide. Simultaneously one should strive to standardize methods and procedures used to gain knowledge in selected events.

The international cooperation and close contact with the coaches is the basis for a mutually beneficial relation and a further development of the professional quality. In addition this cooperation may be beneficial to international associations in their efforts to a further increase of the body of knowledge and development of their sport. Such a cooperation is impossible without the close involvement of the respective international or world-wide associations.

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A concrete and positive example is the policy of the I.A.A.F. under the leadership of their President Primo Nebiolo. A number of actions and a constantly developing program have an indisputable positive effect on the development of Track and Field in all continents. Furthermore the IAAF created a scientific committee with Prof. Dr. August Kirsch, Director of the German Institute for Sports Sciences in Cologne, as chairman. In 1986 the first issue of the IAAF quarterly magazine called "New Studies in Athletics" was published. All of this creates an atmosphere conducive to the utilisation of scientific disciplines for the development and exertion of a positive influence on Track and Field. The scientific committee will surely continue to tackle a number of tasks with a variety of projects.

One such project, called "Biomechanical Research 1986-88" is focussed on the technique analysis of selected Track & Field events. Young athletes have attempted for some time to reach their natural goal, the braking of records, through the use of doping- the so called 'Biochemisation' of Training. It is our duty to explore alternative ways for reaching top performances without putting the athlete's health on the line. Biomechanics is one possible way to achieve this goal.

The Biomechanics Research Project is based on the analysis of the major I.A.A.F. competitions, namely the World Junior Championships, the World Championships and the Olympic Games. This research is supplemented with smaller projects of the involved institutes covering international competitions in the respective countries. Of course the detailed analysis of the pertinent literature and available film and videomaterial is a "must".

The first major part of this international project covered the World Junior Championships in Athens. Previously, biomechanical research was done for European Championships, 1978 in Prague and 1982 in Athens and 1st World Championships in Helsinki, 1983.

In Athens Coaches and Athletes received the following materials:

- Measurements of intermediate times and run-up velocities derived from photocells were ready within 24 hours of the end of the competition in selected events.
- Videotapes of the events were presented the following day.
- A written report of 247 pages containing detailed 2- and 3D analysis of the best performances in each event was prepared and completed 96 hours after the championships.
- A 2.5 hour videotape with a summary of each event and the respective biomechanical analysis was also presented 96 hours after the championships.

To achieve this, an international team of 50 biomechanists and technicians collaborated. Eight synchronized Locam and three phase locked Photo Sonics cameras with frame rates set between 100 and 200 FPS were used. The film was digitized with four online analyzers hooked up to Personal Computers. Specialized 2- and 3D software was written ahead of time to extract the relevant parameters. Run up speeds were also measured with doubled IR photocells. The video equipment included 6 semi-professional cameras, U-matic recorders and two editing systems.

...continued

This tremendous effort was undertaken to tackle the following goals:

1. The development of specialized software for the fast extraction of performance relevant parameters.
2. The creation of an international database containing high speed film of the world's best athletes on the Junior and Senior levels taken in a way , that enables any laboratory to perform a 3D analysis and obtain videotapes to be studied by experts, coaches, for mental training and further development in general.
3. The generalisation of findings keeping in mind the individuality of the athlete. This will result in publications and videotapes dealing with specific events.
4. The creation of teaching aids for technique training in different age groups with emphasis on the Junior class, where correct technique training is most important for the future development of the athlete.

All of this represents a very demanding task. Therefore, the existing international group will gladly accept any concrete offer from biomechanists or Track and Field experts who are willing to tackle the outlined problems.

At the same time it is our task to have an ongoing discussion with teachers and coaches about our work and the results.

The linking of research findings and practical experience of coaches, the use of international manpower and equipment and last not least the necessary financial background is, in our opinion, one of the few realistic ways to ensure progress in any specific sport.

For further information about the Videotape and Report please contact:

I. A. A. F. office
3, Hans Crescent
Knightsbridge
LONDON
SW1 X 0LN,
ENGLAND

ISBS DUES FOR 1986 - 87

Our treasurer, John Ostarello, reminds us that ISBS dues for the 1986-87 year are now due. The dues are \$10.00 per year for a professional membership and \$3.00 for a student membership. Dues may be paid for three years in advance - just mark the appropriate spaces on the membership form supplied with this Newsletter. If there are no changes required on the form, just print your name, sign the form and enclose your payment. *Payment should be in U.S. funds. The cost of processing foreign checks exceeds the annual dues, so if you are outside the USA please use an INTERNATIONAL MONEY ORDER !!!*

Official Symposium of the
**INTERNATIONAL SOCIETY
OF BIOMECHANICS IN SPORTS**



**ANNOUNCEMENT
and
CALL FOR PAPERS**

**FIFTH INTERNATIONAL
SYMPOSIUM
OF BIOMECHANICS
IN SPORTS**

13-17, July 1987 Athens Greece
Organized by Hellenic Sports Research Institute

INVITATION

The aim of the symposium is to report research in the area of biomechanics in sports.

Researchers from different disciplines as well as coaches and teachers who share a common interest in Sports Biomechanics and its applications will have an opportunity to exchange scientific knowledge and experience and enhance collaboration and friendship.

TOPIC

BIOMECHANICS OF SPORTS

- Biomechanics of power sports
- Biomechanics of endurance sports
- Biomechanics of skill sports

SPECIAL TOPIC

- Biomechanics of Track and Field
- Biomechanics of Wrestling

GENERAL BIOMECHANICS OF SPORTS

- Biomechanics of the musculoskeletal system
- Orthopedic Biomechanics
- Rehabilitation Biomechanics
- Biomechanical methods
- Biomechanics of sports equipment

GENERAL INFORMATION

The Symposium will be held in the congress hall of the stadium of "Peace and Friendship" in Piraeus. The official language is English with simultaneous translation into Greek. The registration fee of 200 US \$ includes registration materials, social events, the program, exhibitions, proceedings and much more. Accompanying persons may participate in a special social program.

Authors who wish to present papers or posters must submit abstracts of approximately 250 words in English before March 30, 1987. Papers must represent new findings and techniques relevant to the Biomechanics of Sports. Selection of papers will be based upon quality of content and relevance. The accepted papers will be published in the proceedings.

The program includes a **FILM AND VIDEO FESTIVAL!**

If you are interested to attend or wish to present a paper, please contact the conference secretary at your earliest convenience !

**CONFERENCE SECRETARY
HELLENIC SPORTS RESEARCH INSTITUTE
Olympic Sports Center of Athens
37, Kifissias Ave. Maroussi 151 53 ATHENS GREECE
TEL.(01) 6834060-TELEX. 210247 OLST GR**

It's ELECTION time !

The Board of Directors has accepted the report of the chairperson of the nominations committee, Ellen Kreighbaum. Nominations were solicited from the floor during the ISBS general business meeting in Halifax. Now the complete slate of candidates for the different offices is presented to the membership.

The elected officers will become officers-elect until the 1987 conference and will assume office at that time. We have compiled a very brief resume on each candidate based on the information supplied to the nominations committee to facilitate your decision. Please vote for one candidate for each office on the supplied ballot form and send it to:

Dr. Gail Evans
Dept. of Human Performance
San Jose State University
San Jose, CA 95192 U.S.A.

THE SLATE OF CANDIDATES

President

LARRY HOLDT

Larry is a Professor at Dalhousie University and Adjunct Professor at Lakehead University. He received his B.Sc. and M.Sc. degrees at Springfield college and earned his PhD at Southern Illinois University.

The eclectic approach to the analysis of sports activities and neuromuscular factors in sports conditioning are among his primary interests in sports biomechanics. Larry has published many articles, several books and films and has frequently held or spoken at coach clinics around the world. Larry also served on ISBS committees and - last but not least - hosted the 1986 ISBS conference.

Vice President for Conferences and Meetings

LEFTHERIOS TSAROUCAS

Leftherios is the Director of the Hellenic Sports Research Institute and head of the biomechanics laboratories. He earned his Dr. of Sports Science degree at the Institute of Physical Culture in Leipzig.

His primary research focus is the analysis of the kinematic chain of the human body, the major sports interest is in Track and Field. Leftherios has served ISBS as Vice President, Committee Chairman and Country Representative for Greece. He will also be host of the 1987 ISBS conference.

Vice President for Public Relations and Awards

EUGENE BROWN

Eugene is an Associate Professor in the School of Health Education, Counseling Psychology and Human Performance and a member of the Institute for the Study of Youth Sports at Michigan State University. He earned his M.A. at Iowa and his PhD at Oregon.

Eugene's main research interest is the application of biomechanics to youth participants in sports. The main area of sports interest is Soccer. He is currently chair of the ISBS Youth Sports Committee.

PETER FRANCIS

Peter is an Associate Professor of Physical Education and Adjunct Professor of Mechanical Engineering at San Diego State University. Peter completed his undergraduate Studies in England and went on to earn his M.A. in Iowa and his PhD from the University of Oregon.

His research emphasis is on injury prevention through alterations in mechanics with special emphasis on the lower extremity. Peter's sports interests are Dance, Volleyball, Cycling and Synchronized swimming. He was Chair of the Kinesiology Academy and is a Board member of the International Dance Exercise Association.

BARBARA GOWITZKE

Barbara is an Associate Professor at the School of Physical Education and Athletics at McMaster University. She completed her M.Ed. at the University of North Carolina and her PhD at the University of Wisconsin.

Barbara's main research interests are the parameters of rapid limb movements and Gerontology. Her main sports interests are Badminton and Tennis. She is the Chairperson of the respective ISBS committee. Barbara was also the ISEK representative to the 1984 Olympic Scientific Congress.

CAROLE ZEBAS

Carole is a Professor of Physical Education and Director of the Kinesiology/Biomechanics Laboratories at the University of Kansas. She did her M.S. degree at Arizona State University and earned her P.Ed. from Indiana University.

The transfer of theory to practise in sports skills with a special emphasis on Laban motion analysis, running injuries and flexibility are among Carol's main interests in biomechanics research. Her favourite sports are Bowling, Tennis and Track and Field.

Carole is President of the Kansas association for HPERD, Editor of the Kinesiology newsletter, JOPER-AAHPERD Bowling guide chair Vice President of the Central Association for P.E. in Higher Education and newsletter editor for HPERD.

Secretary General

WALTER CRYER

Walter is an Associate Professor of biomechanics at Brigham Young University. He earned the B.S. and M.S. degrees at the University of Illinois and his Ed.D. at Brigham Young University.

His main area of interest is the biomechanical analysis of sports techniques in Swimming, Diving, Handball, Gymnastics and Golf.

Walter has served as a parliamentarian in several ISBS Board of Directors meetings.

JACKIE HUDSON

Jackie is an Assistant Professor at the University of North Carolina. She recieved her M.S. degree from Purdue University and completed her PhD after graduate studies at Penn State and MIT at the Temple University.

Jackie's research focusses on the identification of basic dimensions underlying human movement and the distinguishing characteristics of proficient performance. Her sports interests include Basketball and jumping skills. She is chair-elect of the AAHPERD Kinesiology Academy.

...continued on p.12

IT'S ELECTION TIME (continued...)

RENE THERRIEN

Rene is a Professor in the Department of Kinanthropology in the Faculty of Sports and Physical Education at the University of Sherbrooke. He earned his PhD in Biomechanics at Penn State University.

Rene's main interest is in the area of safety and sports equipment. Since Ice Hockey and Running are "his" sports he is also a member of the Research Advisory Committee of the Quebec Sports Safety Board and of the Quebec Bureau of Standards "Sports Safety Commission.

++news+news+news+news+news+news++

The Australian Institute of Sport has released 16mm. colour films of the 1985 World Cup of Athletics-Canberra. These films are produced for Biomechanical Analysis (most are recorded for three dimensional analysis). In the near future instructional videos of the events will also be available. For additional information contact Dr. Bruce Mason; A. I. S. Sport Science Laboratory; Belconnen, Australia 2616.

++news+news+news+news+news+news++

Field Experience in Biomechanics at one of the best laboratory facilities in the Sports world; plus room and board all available in lieu of volunteer work at the Australian Institute of Sport. Students wishing to obtain work experience at A. I. S. , whether they be local or foreign should contact Dr. Bruce Mason (at the above address). The student need only provide transportation to and from the Institute. Most of the Field Experience sessions consist of periods between 1-4 weeks in duration. Students from Western Australia, Queensland, Victoria and the United States have taken advantage of this excellent opportunity.

++news+news+news+news+news+news++

In the area of research , at the Footscray Institute of Technology , we are investigating the influence of fatigue and dehydration on kinematic and kinetic parameters of performance. The sports used in these studies are football and rowing.

++news+news+news+news+news+news++

The proposed new constitution for ISBS (NL Vol. 3 # 1) was discussed during the ISBS conference at Halifax. It was suggested, that some changes be made and that it be edited. The reviewed constitution will be published in the Newsletter and voting will occur at that time.

++news+news+news+news+news+news++

Conferences in 1987

April 13-17, 1987

First World Congress of "Science and Football"

Contact:

Secretariat, World Congress of Science and Football
Dept. of Sport and Recreation Studies
Liverpool Polytechnic, Byrom Street
Liverpool, L3 3AF
England

June 9-13, 1987

30th Anniversary ICHPER World Congress, Vancouver B.C.

Contact:

ICHPER Congress Secretariat School of Phys. Ed. and Rec., The
School of Phys. Ed and Rec.
University of British Columbia
Vancouver B.C. V6T 1W5
Canada

June 26-28, 1987

1st International Symposium on Computer Simulations in
Biomechanics.

Contact:

Politechnika Warszawska, ITLiMS
ul. Nowowiejska 22/24
00-665 Warszawa
Poland

June 29-July 3, 1987

XI International Congress of Biomechanics (ISB)

Contact:

Interfaculty of Physical Education
IFLO - Free University
P.O. Box 7161
1007 MC Amsterdam
The Netherlands

July 6-10, 1987

3rd International Archery Seminar

Contact:

Prof. Dr. J.P. Clarys
Dept. Experimental Anatomy
Vrije Universiteit Brussel
Laarbeeklaan 103
B 1090 Brussels
Belgium

July 13-17, 1987

Fifth International Symposium of Biomechanics in Sports (ISBS)

Contact:

Congress Secretariat
Hellenic Sports Research Institute
Olympic Sports Center of Athens
37, Kifissias Ave. Maroussi
151 53 Athens
Greece

Conferences in 1987

....Continued

September 16-17, 1987

European Conference: Biomechanics in Sports

Contact:

Paul Wright, Conference Dept. C349
The Institution of Mechanical Engineers
1 Birdcage Walk
Westminster
London SW1H 9JJ
England

September 28 - October 2, 1987

International Seminar on Ergonometry

Contact:

Prof. Dr. Klissouras
Dept. of Phys. Ed. and Sports Science
University of Athens
41 Olgas Street, Dafne
17237 Athens
Greece

COMPUTER NETWORKS . . .

linking academic institutions, provide facilities for World-wide communication. Through BITNET and EARN you can transfer files, texts, programs and messages or you may submit and execute jobs on a different computer. The world-wide net connects Western Europe, the USA, Canada and Japan. It provides connections to other networks such as ARPA, CSNET or JANET. Connections to the Middle East, South-East Asia and Australia are planned.

If you are interested in using the system, I suggest that you contact your local computer center. If your University or institution is already hooked up, ask for the EARN or BITNET Pocket Reference Summary. With the help of this brief manual you should have no problem sending and receiving mail.

However - as in any mailing system, you need the address of the person you wish to contact. This address consists of two parts: first your sign-on ID and second the code for your local computer center. Here is an example: If you want to send me a note the address to use is:

ULAC AT DSORUSØ

where ULAC is my sign-on ID and DSORUSØ (use Zero, not the letter O) is the code for the CYBER 170-835 of the Stuttgart University Computing Center.

The next time I log in, the operating system tells me "YOU HAVE GOT MAIL". I'm looking forward to hear from you !!!

In order to improve communication among our membership I suggest, that you send me your "address" via the network. I will then confirm your note and publish your address in the next Newsletter.

Hans J. Gros

BENCHMARK

P · R · E · S · S

INTRODUCING ...

THE BIOMECHANICS INSTRUMENTATION VIDEO LIBRARY

by Dr. Marlene Adrian, Director
Biomechanics Research Laboratory
University of Illinois

A series of five unique videocassettes designed to provide basic instruction in biomechanics instrumentation for students of biomechanics, exercise physiology, physical therapy, and related areas. Each 9-to 15-minute color tape is available in either VHS or Beta format.

THE BIOMECHANICS INSTRUMENTATION LIBRARY

TAPE 1 HIGH-SPEED CINEMATOGRAPHY

This 9-minute color video tape covers the basic use of high-speed cinematographic cameras and the application of data provided by the use of cinematography in biomechanics. It includes detailed explanations of camera shutter operations, exposure time, shutter factor, film speed and ASA index, film type, camera loading, lenses and focal lengths. The tape also reviews the use of information sheets, camera placement, background considerations, subject clothing, and use of contrasting marks and scaling factors.

TAPE 2 FORCE INSOLE

This 13-minute color video tape describes the use of telemetry and the force insole in measuring forces generated by the body during movement. The tape describes the use of specialized equipment including the storage oscilloscope, and radio transmitters to remote receiver for telemetry. Frequency matching, antenna placement, measuring output, signal centering, signal sweep adjustment, and data storage and retrieval are also covered.

TAPE 3 DIGITIZING

This 15-minute color video tape describes the use of digitizing in the analysis of movement. It includes detailed explanations of equipment make-ready, projector loading, and the use of the cursor. The tape illustrates the use of the Numonics digitizer and control box computer program and data disc loading, and film advance and reverse. The origin of X and Y axis, cursor accuracy, multiplier, data recording methods, data smoothing, sources of digitizing error and data checks are covered. The tape includes concepts of linear and angular displacements, getting kinematic information, and the use of analysis.

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TAPE 4

ELECTROMYOGRAPHY

This 10-minute color video tape describes the use of electromyography (EMG) in analyzing muscle activity. It includes clear explanations of the use of such equipment as electrodes, amplifiers and pre-amps, and recorders (pen recorder). Electrode placement and application, ground electrode placement, electrode testing, calibration, amp and pre-amp settings and recording, correcting the subject to the amplifier, adjustments, chart speed, and interpretation of data, and normalization are covered. The tape also provides references for further study.

TAPE 5

FORCE PLATFORM

This 15-minute color video tape describes the use of computerized force platform systems in analyzing ground reaction forces during human movement. It includes detailed illustrations for calibration and operation of the AMTI system, comprised of strain gage type force platforms. The type of graphic data output is described and applications are presented.

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