



International Society of Biomechanics Newsletter

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AFFILIATE SOCIETIES OF ISB:

American Society of Biomechanics; Australian and New Zealand Society of Biomechanics; Brazilian Society of Biomechanics, British Association of Sport and Exercise Sciences; Bulgarian Society of Biomechanics; Canadian Society of Biomechanics/Société canadienne de biomécanique; Chinese Society of Sports Biomechanics; Comisia de Biomecanica Inginerie si Informatica (Romania); Czech Society of Biomechanics; International Society of Biomechanics in Sports, Japanese Society of Biomechanics; Korean Society of Sport Biomechanics; Polish Society of Biomechanics; Russian Society of Biomechanics; Société de biomécanique (France), Taiwanese Society of Biomechanics.

Money, Money

Brian L. Davis, ISB President

A mark, a yen, a buck or a pound,
a buck or a pound, a buck or a pound,
Is all that makes the world go around,
that clinking clanking sound,
Can make the world go round.

from the musical: Cabaret

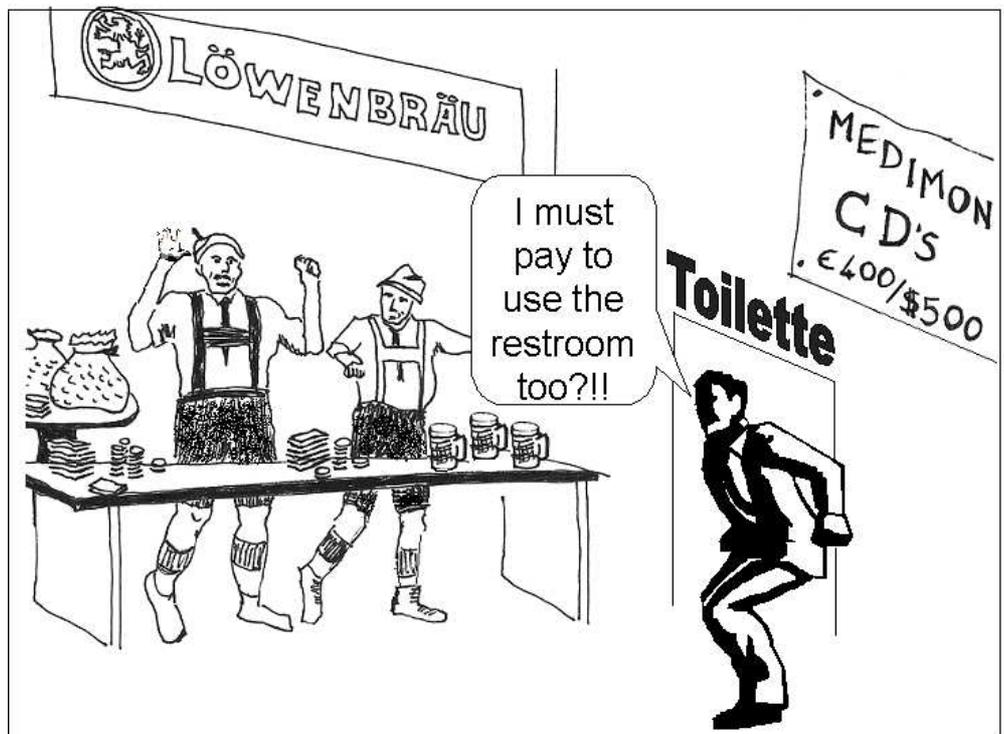
Money---it is an issue affecting everyone in the biomechanics community, including interns, students, graduates, post-doctoral fellows and investigators trying to get grant funding or attend a conference. It is often discussed at ISB Council meetings, where we try to determine how best to serve ISB members.

A number of years ago I was asked to give a short talk at an ASB student luncheon. The topic dealt with postdoc salaries---clearly an issue close to the hearts of both (i) graduating students, as well as (ii) mentors who have to cover these costs. At that time I chose to focus more on the former---especially given the target audience! From a student's perspective, a key issue is the following: Why do a postdoc fellowship when the salary expectation (in US figures and using data from the National Institutes of Health website) starts at \$37,000, and when the starting salaries (www.salary.com) for various professions are as follows; biomedical engineer (\$46,800), biologist (\$41,000), and entry level engineer (\$52,000)? These figures should also be compared with salaries for 34 postdoc job announcements listed on Biomch-L over the past year. Two Italian postdoc opportunities were listed (mean salary in USA terms was \$25,000), a few labs in the UK were offering salaries of about US\$32,000, two in Australia had levels around US\$43,000 and the highest was US\$53,000 for a lab in the Netherlands. While postdoc opportunities have benefits beyond money, including (i) the chance to work in a different field, (ii) the chance to work with an expert, and (iii) in some fields, a postdoc is a required step in one's career path options, the issue of salary is always going to be a major issue.

While salaries may be the first thought crossing a person's mind when money is mentioned, what is clearly important is "what we can do with money". In other words, "output" may be as important as "in-

put". For biomechanics researchers, recent entries in the expense column were costs associated with the World Congress of Biomechanics in Munich, Germany. This was a meeting where the ISB assisted in terms of organizing tracks and session speakers. There was no financial agreement between the ISB and the WCB---other than the fact that the ISB offered to help offset some of the costs for certain delegates from countries where the exchange rate was unfavorable. The aspect that disturbed me was an email invitation sent to all presenters to buy a CD and congress proceedings for 398 Euro (slightly over US\$500)!!! I initially thought this must have been a misprint because the costs for indexing and formatting the CDs for ISB2005 came to a little over US\$3 per person. Admittedly, a book accompanied the WCB's "extended abstract" CD, but in my opinion, the amount of money required by the company who handled this (not the WCB itself), was exorbitant.

On a separate "money" topic, I would like to touch on the issue of membership rates and whether members "get their money's worth". I recently went through the websites of various biomechanics societies (ASB, ISB, CSB, International Society of Biomechanics in Sports, ESB etc.) as well as other professional societies (see table below).



CD's were not the only cost at WCB2006!

Clearly, all biomechanics societies have membership rates well below "clinical" societies. However, ISB appears to have relatively high membership fees when compared with other biomechanics societies. In this regard, I would like to share the following:

1. The purpose of ISB is to foster biomechanics around the world. Members' dues are therefore used extensively for promoting biomechanics activities in places where biomechanics is still a new discipline. The ISB's programs that (i) allow students to travel to established labs around the world, and (ii) permit colleagues, in countries where the exchange rate makes traveling difficult, to receive ISB assistance, are two examples that are unique to ISB. Our society also promotes young investigators through special awards, and provides inexpensive congresses and tutorials, particularly for students. I should add that, contrary to the situation at the WCB meeting in Munich, the ISB includes "all the trimmings" for students who attend an ISB congress---this includes the abstract book and/or CD, social gatherings and the banquet. I had many students come to me in Munich and say they were disappointed they did not get these at the WCB meeting.

2. Further, the ISB is creating "seed programs" (see elsewhere in this newsletter) that will encourage small groups of people who are interested in biome-

chanics to become associated with ISB. This is, after all, one of the motivations that led to the formation of the ISB. At that time there were no national societies of biomechanics---and thus small groups of people took the initiative and started meeting with each other. Twenty congresses later the "seed", placed by people like Jurg Wartenweiler, Dick Nelson and others, has grown into a very active society!

In closing, the way I look at my membership fee is only partly from a point of view of the "tangibles" I derive. I get reassurance from the fact that the funds are used to benefit the growth of biomechanics in other parts of the world. Furthermore, the "intangibles" such as meeting colleagues at conferences and exchanging ideas with people from other countries is a major draw card to being an ISB member. It is hard to put a price on these international connections.

As always, if anyone has feedback on ways the ISB can better serve our members, please feel free to contact me.

Brian L. Davis

Society	Cost For Regular Members	Cost For Student Members
American Physical Ther. Assoc. (APTA)	\$265	\$ 80
Orthopedic Research Society (ORS)	\$220	\$50
Biomedical Engineering Society	\$175	\$30
IEEE	\$156	\$30
British Assoc of Sport and Exercise Sciences	\$121	\$37
ESB	\$109	\$85
ISB	\$76	\$22
ISBS	\$63	\$51
CSB	\$43	\$17
ASB	\$40	\$15
Australian and New Zealand Society of Biomechanics	\$23	\$11

ISB connection with other groups and individuals

Brian L. Davis

I *SB's connections with other groups and individuals*

Overview. ISB has a long track record of seeking connections with other societies around the world. Examples of societies that have chosen to become affiliated with ISB are listed at the bottom of the front cover of this newsletter. As an extension of these society-to-society connections, the ISB has reached out to individuals in "Economically Developing Countries" or EDC's in which there is a society affiliated with ISB. Dr. Aurelio Cappozzo explained the EDC program best ---at the 1993 ISB General Assembly meeting---when he said it was a matter of fairness. If attendance at an ISB congress required that a participant spend many months' worth of a salary merely to register (because of their country's exchange rate), then this was an unfair situation. Due to these inequities in exchange rates, the ISB has long sought to encourage visits with scientists from EDC countries.

When Dr. Peter Cavanagh was President of ISB, he introduced the student award program. This has been extremely popular---as seen by numerous student reports that have been published in ISB newsletters over the past 10 years.

In this newsletter we would like to (i) remind members of these programs, and (ii) clarify who is eligible for ISB support through these mechanisms. We would also like to extend the EDC-support concept through a "seed program". The intent is to allow students and researchers, in areas where there is no national biomechanics society or similar infrastructure, to get support through the ISB and thereby increase their awareness of the field of biomechanics.

Student Award Program. (See <http://isbweb.org/o/content/view/18/44/>)

Student members of ISB are eligible for three types of grants: Dissertation, Travel and Congress Grants. A number of competitive grants are awarded each year.

Requirements. Applicant must be a full-time student and an ISB member.

Procedures. These are listed on the ISB website. In general, there needs to be some degree of institutional support and mentoring by an ISB member for each of the award categories.

Benefits. The ISB benefits by (i) having new members to join the society, and (ii) in the case of the congress and travel awards, by fostering international links. Students benefit through the vast network of international scientists within ISB. The students' knowledge of biomechanics increases through the time spent with other researchers.

Affiliate Societies.

Requirements. (Summary taken from <http://isbweb.org/docs/affilsoccodes.pdf>). The Society seeking affiliate status must have a constitution and membership on a national or regional scale (e.g., European Society of Biomechanics, Italian Society of Biomechanics). Note: More than one Affiliate per country is possible.

Procedures. For consideration by the ISB Council, the application for affiliate status should be sent to the ISB liaison officer at least 90 days prior to the opening of the biannual ISB Congress. The application has to include:

A statement of the objectives, scope and nature of the society.

A list of the names and professional or academic affiliations of the officers (with complete addresses, phone numbers and FAX)

The number of "full" members registered in the Society.

A copy of the Constitution of the Society (preferably in English).

The name of a liaison person, preferably a more permanent officer, for communication with the ISB liaison officer.

Benefits. Individual members of an Affiliated Society may register at ISB Congresses and obtain other benefits of price at the ISB individual member price without being an ISB member under the condition that there is a reciprocal agreement. Sharing of newsletters and potential sharing of resources (e.g., both the ISB and ASB teamed up to offer assistance to biomechanics researchers affected by the Katrina hurricane).

Affiliated Societies may publish their Society activities, excerpts from their own newsletters, announcements etc. in the ISB newsletter at no charge.

ISB materials may be extracted for publication in newsletters of Affiliated Societies.

A single representative of each Affiliated Society may sit on ISB Executive Council meetings as a non-

voting but active participant. The ISB liaison officer is responsible for communicating the list of presidents for Affiliated Societies to the ISB president, in due time, each year (6 months before the ISB Executive meeting).

The Affiliated Societies' officers (Executive) and members may participate at the ISB General Assembly but they do not have the right to vote.

There are no fees to be paid to become an Affiliated Society.

An additional benefit for countries that have an Affiliate Society, is that individuals are considered for the following benefits:

Reduced registration costs and affordable housing at ISB congresses

International Scholar awards for the purpose of presenting work at an ISB congress

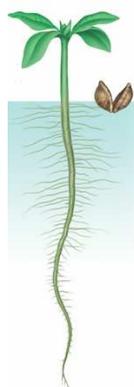
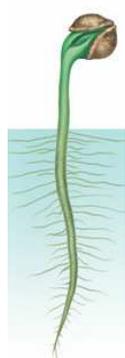
Footnote: The advantage of the EDC program within the "Affiliate Societies" framework, is that there is a mechanism for financially supporting both students and established researchers who would otherwise not be able to attend ISB congresses. The limitations, however, are (i) there are small pockets of people in countries that do not have a national biomechanics society who are nevertheless interested in closer ties with ISB, and (ii) there are individuals in EDC countries who would like to attend both ISB as well as other biomechanics meetings (such at the World Congress of Biomechanics). These limitations are not difficult to overcome---all that is needed is an extension of the EDC concept to include countries where biomechanics is just starting to gain recognition.

Biomechanics "seed" groups

Background.

The rationale for setting up ISB "seed groups" is that there are relatively small groups within clinics or colleges that (i) are connected with the field of biomechanics, but (ii) are not affiliated with regional or national biomechanics societies. As a result, they do not enjoy the same privileges as ISB "Affiliated Societies".

This initiative is aimed at strengthening the awareness of, and growth in, biomechanics within these groups.



Requirements:

The "seed group" must be a non-profit organization or affiliated with a non-profit organization. A group of people associated with developing biomechanics products with a private company is excluded from this initiative. Similarly, groups within military organizations are excluded.

The group should consist of between ten and one hundred people.

The day-to-day duties of these individuals should relate to the field of biomechanics. Examples include, but are not limited to, (i) designing prosthetics, (ii) evaluating patients in a rehabilitation setting, (iii) evaluating sports performance, (iv) studying hominid fossils.

There should be research and/or educational components to the group's activities. Groups that simply take care of patients (e.g., provide wheelchairs or are solely involved with providing clinical care) are excluded from this initiative.

Procedures:

Submit an application to the ISB Council, including the following information:

The government approved facility/hospital/college with which you are affiliated

Examples of how your groups' studies are relevant to biomechanics (e.g., Name several projects that your group is currently working on)

Name the members of your group (provide names with complete addresses, phone numbers and email addresses)

State clearly if you agree for mutual sharing of contact lists of full members. (These lists will in no way be used for commercial purposes)

Designate one liaison/contact person (preferably a more permanent officer who has been a member of the group for the longest time) for communication purposes with the ISB liaison officer

Benefits of becoming a "seed" group

Free ISB Newsletters

Two annual financial awards (< \$100.00) for superior biomechanics students

Visiting lecturers

Selected textbooks provided by ISB

Reduction of the registration fee for those wishing to attend ISB or ISB-endorsed congresses

No payment necessary to become a "seed group"

Inclusion in the ISB email list

Eligibility for ISB travel grants to those individuals who are part of the seed group.

Brian Davis, Ph.D.

ISB President

ISB and AnyBody Technology awards African research

ANYBODY
TECHNOLOGY



In support of the [International Society of Biomechanics](#) initiative to support biomechanical research and education in Africa, AnyBody Technology has sponsored [a competition for African biomechanics researchers](#).



The winners are:

[Dr. Mark Kayanja](#) and co-workers (Cleveland Clinic, OH, USA; Mbarara University, Uganda; Mulago Hospital, Uganda): *The effect of operative surgical correction of the neglected club-foot on the work of walking*

[Mr. Andrew Todd](#) (Rhodes University, South Africa): *Manual materials handling in large industries* (Award jointly sponsored by the ISB and AnyBody Technology).

Congratulations!

Student Representative

Hello everyone!

It has been quite a busy time in the ISB council recently with the council organising new ideas and support for members. I would like to update you on a couple of things and, as ever if you have any suggestions for things you would like to see, or feel the ISB should be providing then please contact me at the address below. I would like to encourage student members to participate in the society and put forward any ideas you might have for future initiatives.

Thanks to Joe Hamill we now have access to discounted books related to biomechanics available through Amazon.com, which I know you will find useful. For more information, see the link from the ISB homepage.

We have arranged for future pre-conference workshops at ISB conferences to be recorded and made

available to members via the website. This means that those who cannot attend the conferences can still have access to specialist tutorials.

We are trying to develop easier access to reference materials and resources for student members in Economically Developing Countries. If you are a student who would qualify for EDC support and would like further information on how the ISB can support your research, or support your department/centre then please contact me or Jill McNitt-Gray for further information.

That's all for now but please get in touch with any ideas and I hope to have more exciting news on new member benefits in the next newsletter.

Cheryl Metcalf
cdm1@soton.ac.uk

Report of the Affiliated Societies & Developing Countries Officer *Jill McNitt-Gray*

Summary of Activities:

1. Strengthen relationships between biomechanics societies world wide
2. Foster ISB support of biomechanics related activities in economically developing countries
3. Coordinate the application process for societies interested in becoming affiliated with ISB

1. Strengthen relationships between biomechanics societies world wide

During 2005-6, my focus has been to strengthen the relationship between biomechanics societies in Europe, Asia, and South America. Brian Davis has led the effort in Africa and has successfully initiated a project in Tanzania (ISB newsletter). This year began by hosting a face-to-face meeting (EDC Forum) as part of the ISB meeting in Cleveland, OH and solicitation of multi-year commitments by individuals willing to build bridges (ISB Liaison to EDCs).

EDC Forum at ISB 2005: As part of the ISB meeting in Cleveland, OH, in August, 2005, ISB hosted the first EDC Forum on the Sunday, preceding the ISB Executive Council meeting. The purpose of the EDC Forum was to identify meaningful and feasible ways that ISB can work with other biomechanics societies in the region to help support biomechanics-related activities in EDCs. At the conclusion of the meeting, we identified a team of people that are willing to work over the next two years to strengthen biomechanics-based relationships between ISB, biomechanics societies in their region, and their local biomechanics societies. Minutes of the meeting are provided in Appendix A.

This forum was planned in concert with the current ISB president (Mary Rodgers), ISB president-elect (Brian Davis), and the ISB conference organizers in Cleveland. ISB 2005 received 14 abstracts from EDCs with over 15 from Brazil (ISB Affiliation application pending vote at ISB in 2005). With assistance from the conference and program organizers, authors from EDCs with abstracts accepted by the ISB Program committee were identified. Qualifying EDC countries were defined based on gross national product/income (GNP/GNI) measures published by the World Bank. Authors from EDCs were invited to

participate in the EDC Forum as well as ISB members interested in serving as ISB Liaisons to EDCs. All ISB Executive Council Members interested in participating in the EDC Forum were also invited. From our discussion the following goals were identified:

- ➔ Develop long lasting relationships between biomechanics groups and societies in geographical locations by
 - a. sharing of information (education, research, technical assistance) and
 - b. providing access to resources (e.g. equipment, books, funding opportunities, user groups, ISB website).

These relationships and identification of critical needs will need to be maintained and initiated by local people in leadership positions. ISB Liaisons to EDCs will continue to be the primary contact to help develop these relationships.

- ➔ Support educational experiences for young scientists by providing conference assistance (discounted registration, travel support both to and from the EDC).

The ISB website has been updated to include links to affiliated societies, provide information regarding travel and research assistance opportunities, and publicize needs and/or "wish lists" that ISB members may be able to provide (e.g. Tanzania's request for technology; China's request for books)

2. Foster ISB support of biomechanics related activities in economically developing countries

ISB Liaison to EDCs : Volunteers to serve as ISB Liaisons to EDCs were solicited by BIOMECH-L and the ISB newsletter. ISB Council members were asked to participate in this recruitment process (e.g. volunteer and/or provide names and contact information for ISB members that may like to serve as an EDC Liaison). Two individuals have responded. Li Li is serving as the ISB Liaison to China and Taiwan. Witaya Mathiyakom is serving as the ISB Liaison to Thailand. Both also serve as members of the ISB committee for international collaboration with economically developing countries (ICEDC). Our aim is to add to the membership of this committee as part of activities related to the EDC Forum.

China

Dr. Jin Dewen, an attendee of the EDC forum in Cleveland, OH, is in the process of proposing an education and research related project. Professor Dewen is the Director of the Rehabilitation Centre in the department of Precision Instruments and Mechanics at Qinghua University in Beijing. More information regarding this proposed project will be provided as it becomes available.

Dr. Li Li, ISB Liaison to China, contacted Dr. Wang Qing, the president of the CSB. Three areas were identified for consideration:

- ➔ Group ISB membership option for EDC countries.
The Problem: In general, biomechanical researchers in China have very limited access to international currency and have very limited resources. Although some of them would like to be members of the ISB, few can afford to do so. Dr. Wang would like to know the possibility of CSB apply and be accepted for group member of ISB.
Proposed Solution: Affiliated societies of EDC status provide membership information for EDC members interested in gaining access to ISB website.
- ➔ Sponsorship of keynote in sports biomechanics at the CSB's 2007 annual meeting to be held in Taiyun, Shanxi province in late spring next year.
Proposed solution: CSB organizers identify the individual they are interested in asking to be a keynote speaker. ISB can offer partial assistance (e.g. \$1500 to off set travel related expenses as previously done with the Polish Society of Biomechanics) and encourage CSB organizers involve the keynote speaker in some kind of student-related activity (tutorial, workshop) and faculty related event (curriculum/program development).
- ➔ ISB or its members donate some biomechanics textbook and/or reference books to the library of CSB (library of the biomechanics group in the National Institute of Sport Science).
Proposed solution: Publish this need on the ISB website.

Thailand

Since 2005, Dr. Mathiyakom, ISB Liaison to Thailand, has initiated both research and educational related project that integrates resources at three institutions. Dr. Mathiyakom is working directly with Dr. Roongtiwa Vachalathiti to coordinate these events at Mahidol University, Chiang Mai University, and Naresuan University in Thailand. All parties have shared expenses associated with this collaborative project designed to improve biomechanics education and research in Thailand in 2005 and 2006. ISB will partially match these contributions and award \$4000

toward travel costs and software used for processing and analyzing data acquired in a multi-year collaborative research project.

Year 2005

Dr. Mathiyakom traveled to Thailand and gave a 3-day lecture and lab on Introduction of Biomechanics (kinematics, kinetics, and EMG) to the faculty members, graduate and undergraduate students at the Faculty of Physical Therapy and Applied Movement Science, Mahidol University, Thailand. This project was well received by the faculty members and graduate students. As a result, Dr. Mathiyakom was invited to serve as an external examiner of a PhD student in Physical Therapy. In addition, a research study related to control and dynamics during momentum redirection in gait in young and older adults was initiated. The plan is to continue data collection and analysis in older adults (2006) and older adult fallers or older adults participated in balance activity (2007). The traveling cost and expenses (room & travel) while in Thailand were paid by Dr. Mathiyakom. However, the research project was funded in part by the Mahidol University.

While in Thailand, Dr. Mathiyakom continued to promote the biomechanics education by being a guest lecture (3 days) for graduate students in Movement Science and Physical Therapy, Chiang Mai University. The lecture was focused on kinetics of lower extremity and how to apply the knowledge to patient populations. Dr. Mathiyakom also served as a research consultant for graduate students in Movement Science and Physical Therapy, Chiang Mai University. In addition, Dr. Mathiyakom and Dr. Ratanapinunchai initiated a research project related to rehabilitation of the shoulder and shoulder girdle in hemiplegic patients. The goal of this project is to investigate the neuromuscular control of the scapula during therapeutic exercises and several rehabilitation approaches commonly used in physical therapy.

Year 2006

As a result of the lectures given the Mahidol University and Chiang Mai University, Dr. Mathiyakom was invited to give a 6-day workshop on biomechanics and research in biomechanics at the Department of Allied Health Sciences, Naresuan University, Thailand. The Department of Physical Therapy and Dr. Mathiyakom worked together to identify the need to provide basic knowledge and hands-on experiences in biomechanics to the faculty members of physical therapy schools in the northern part of Thailand. Dr. Roongtiwa provided assistance as needed during this workshop. The focus of this workshop was to introduce the concept of integrated biomechanics approach to understand the control and dynamics of

goal-directed, whole body movements. The target audience was physical therapy educators and researchers from 9 physical therapy programs in Thailand. Several biomedical engineers who are interested in biomechanics are also invited. This project was fully funded by the Naresuan University Thailand. Thirteen faculty members and clinicians attended the workshop during Apr 30-May 5, 2006. The workshop included 1) one day of group discussion to identify the direction of multidisciplinary research, 2) three days of intensive lectures and labs on basic biomechanics, data collection and analysis (kinematics and EMGs), and 3) two days of group study to identify and initiate research projects specific to the problems of the community. Dr. Mathiyakom is following up with Dr. Roongtiwa and her students at Mahidol University to continue their research efforts on momentum redirection during gait. Through blogging, they are analyzing and discussing the results collected in young adults (2005) and coordinating data collection on older adults. We expect to present the results of this study at the ISB meeting in Taiwan (2007). In addition, Dr. Mathiyakom and Dr. Ratanapinunchai (Chiang Mai University) will also continue with their research on control of the shoulder girdle in hemiplegic patients. The expenses (Dr. Mathiyakom's room and travel) were paid by Dr. Mathiyakom.

Year 2007

The purpose of our project in year 2007 is to provide an opportunity for the biomechanists (Dr. Mathiyakom and Dr. Roongtiwa), physical therapy educators and researchers to continue the collaborative works in order to promote and improve the biomechanics education and research in Thailand. Dr. Mathiyakom will travel to Thailand to discuss and follow up with physical therapy and biomechanics researchers and educators as well as students. A seminar in recent advanced in biomechanics will be held at that time. ISB has been requested to support these educational and research related activities in Thailand by providing financial support to offset travel costs and multi-user software license (Matlab) for data processing.

Europe

The European Society of Biomechanics has continued to work with ISB to identify how ISB and ESB can work together to assist development of biomechanics activities in all European countries, including those in Eastern Europe. At the ISB meeting in Cleveland, Marco Viceconti, Secretary) discussed the idea of providing lodging assistance for students from EDC attending the World Congress of Biomechanics in Munich (July 2006). He argued that lodging would be the biggest cost and would encourage attendance by students thereby providing a valuable

educational opportunity. ESB and ISB agreed to provide resources to offset lodging costs associated with attendance at the WOB. This travel related opportunity for students of EDCs was advertised on the WOB website. ESB and ISB worked together with the WOB organizing committee to identify and reserve inexpensive housing options. WOB organizers were asked to waive registration for these students, however, WOB initially declined. Marco handed off ESB over sight of the project to Jos Vander Sloten. At present, Jos Vander Sloten is working directly with WOB organizers to identify students who need assistance. It is not clear at this time, how many students may qualify for partial support. We hope that WOB will reconsider our request to waive registration related costs as done by organizers hosting the ISB 2005 in Cleveland.

Venezuela

Dr. Carmen Müller-Karger, an attendee of the EDC Forum in Cleveland, OH, is in the process of proposing a educational and research related project. Professor Müller-Karger is in the Department of Mechanical Engineering at the University SimónBolívar in Caracas, Venezuela. More information will be provided as it becomes available.

All other attendees of the EDC forum have been contacted by email in hopes that other projects will develop.

3. Coordinate the application process for societies interested in becoming affiliated with ISB

The Brazilian Society of Biomechanics and International Society of Sports Biomechanics applications were accepted by the membership to become affiliated ISB societies. Each society was more fully introduced to the membership through recent ISB newsletters with hopes that collaborations will develop. The application requests that the applying society provides includes:

- a. objectives of the regional or national society,
- b. scope and nature of the group the Society serves,
- c. names and professional or academic affiliations of the officers (with complete addresses, phone numbers and FAX)
- d. number of "full" members registered in the Society,
- e. a copy of the Constitution of the Society (preferably in English, if possible),
- f. a statement clarifying if the society agrees to share the list of full members,
- g. name a liaison person, preferably a more permanent officer for communication with the ISB liaison officer.

We await application materials from ISEK.

Report of the Technical Groups officer *Ewald Hennig*

Our technical sections are currently organized in the ISB:

FThe Computer Simulation Group, the Footwear Biomechanics Group, the 3D Analysis of Human Motion Group, and the International Shoulder Group. These groups provide a forum for scientific communication on specific issues. This is achieved through the organization of international symposia, publication of symposia abstracts or proceedings, and web based discussion forums. All technical groups have internet home pages and the Computer Simulation as well as the Footwear Sections each have their own Discussion Forum News Group. Each of the groups has had a history of symposia for many years, before becoming officially affiliated to the ISB as a technical group. There are no exact numbers of active members in most of the groups because no official membership is required. As judged from symposium attendance, the typical number of active individuals in the groups is between 50 and 200. In the following sections there will be information on the history, executive board members, internet address, and planned conferences for each of the groups. The description will be chronologically with the TGCS being the first technical group, affiliated to the ISB in 1991 to the most recent addition of the Shoulder Group in 1999.

Technical Group Computer Simulation (TGCS)

This group provides exchange of information related to computer simulation approaches in biomechanics (methods, software, hardware and applications) and aims to formulate standardized terminology of computer simulation in biomechanics. The Group was founded by Mont Hubbert and the late Dr. Andrzej Komor (Institute of Sport, Warsaw, Poland) in 1986 and held its first meeting at the Institute for Aircraft Engineering and Applied Mechanics, Warsaw University of Technology, Warsaw, Poland in June, 1987. Following symposia were held at the University of California, Davis, USA in 1989 and the University of Western Australia, Perth, Australia in 1991. At the XIIIth ISB congress (Perth, 1991) a general meeting of the Working Group on Computer Simulation voted to become a Technical Group under the revised ISB constitution. Following symposia were held in Paris / France (1993), Tokio / Japan (1997), Calgary / Canada (1999), Milano / Italy (2001), Sydney / Australia (2003) and Cleveland /

USA (2005). For the conferences in Calgary, Milano, Sydney, and Cleveland online symposium abstracts are available via the TGCS homepage.

Next Symposium

The next TGCS meeting will be in Tainan as a satellite conference to the Taipei ISB meeting and will be organized by Prof. Fong-Chin Su.

Executive Board:

Chairperson:

Arthur J. van Soest; Vrije Universiteit Amsterdam, The Netherlands

Secretary General:

Rick Neptune; University of Texas, Austin, USA

Board Members:

Frank "Clay" Anderson; Stanford University, USA

Scott L. Delp; Stanford University, USA

B.J. Fregly; University of Florida, USA

Mark King; Loughborough University, UK

Serge van Sint; Jan Universit  Libre de Bruxelles, Belgium

Frans van der Helm; Delft University of Technology, The Netherlands

Homepage and Discussion Forum:

<http://isbweb.org/~tgcs/>

Technical Group Three-Dimensional Analysis of Human Movement

The Technical Group on the 3-D Analysis of Human Movement provides a forum for the discussion of all issues relating to the measurement of human movement in three dimensions. This is achieved primarily through the organization of international symposia, typically every second year. The Group primarily owes its existence to the efforts of Paul Allard, who organized the first symposium in Montr al in 1991, and helped with the organization of the symposia in Poitiers (1993), Stockholm (1994) and Grenoble (1996). The formation of the group was also strongly supported by the late Herman Woltring. The International Society of Biomechanics recognized the organization as a Technical Group in 1995. The first organizational meeting was held in Grenoble on July 1, 1996. Following symposia were held in Chattanooga / USA (1998), Cape Town / South Africa (2000), and Newcastle / England (2002). The Eighth Symposium takes place this year in Tampa, Florida, USA, from March 31-April 2, 2004 and is organized by Georgios Stylianides.

Next Symposium

The Ninth International Symposium on the 3-D Analysis of Human Movement is in Valenciennes, France from June 28th to June 30th 2006 and will be organized by Franck Barbier and the Laboratoire d'Automatique, de Mécanique et d'Informatique Industrielles et Humaines (LAMIH). Further dates on the next meeting will be available after the conference in Valenciennes.

Executive Board:

President:

Franck Barbier; Université de Valenciennes, France

Past president:

Georgios Stylianides; University of South Florida, Tampa, USA

Treasurer:

Paul Allard; Université de Montréal / Canada

Members at large:

Chris Baten; Roessingh Research & Development, Enschede, Netherlands

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Representat. from industry:

Lasse Roren; Vicon Peak -, Lake Forest, CA, USA
Tom Whitaker; Motion Analysis Corporation, Santa Rosa, CA, USA

Webmaster:

Georgios Stylianides; University of South Florida, Tampa, USA

Homepage:

<http://www.utpb.edu/3D-HumanMovement/>

Technical Group on Footwear Biomechanics

The ISB Technical Group on Footwear Biomechanics provides a forum for those interested in biomechanical aspects of clinical, athletic and other kinds of functional footwear. Research in the area of footwear biomechanics has grown over the last 30 years. It started with several symposia in the late 1970s and early 1980s. These symposia were held in Zürich, Switzerland (1978 and 1980, organized by Benno Nigg), Nijmegen, Netherlands (1982, organized by Ned Frederick) and Calgary, Canada (1983, organized by Benno Nigg). Then Bernhard Segesser (Switzerland) and his colleagues who three symposia under the title: „Der Schuh im Sport“ in Munich, Germany (1984), Luzern, Switzerland (1991), and Linz, Austria (1994). The group on Footwear Biomechanics was informally established as a Working Group on Functional Footwear in July 1993 during the XIV Congress of the International Society of Biomechanics in Paris. During the World Congress on Biomechanics in Amsterdam (1994) researchers, interested in Footwear Biomechanics gathered together and thanks to the initiative of Martyn Shorten (Portland) this was the start of the "ISB Technical Group on Footwear Biomechanics". In August 1997,

the ISB Council granted the group formal status as the ISB Technical Group on Footwear Biomechanics. The seven previous symposia of this group were held in Calgary, Canada (1994), Cologne, Germany (1995), Tokyo, Japan (1997), Canmore, Canada (1999), Zuerich, Switzerland (2001), Queenstown, New Zealand (2003) and in Cleveland, USA (2005). Online abstracts for the symposia in Tokyo, Canmore, Zuerich, Queenstown and Cleveland are available through the homepage of the ISB Technical Group on Footwear Biomechanics. The group has 507 active members. 248 of these active members are also registered ISB members

Next Symposium

The 8th Footwear Biomechanics Symposium will be held from 27-29 June, 2007 at the National Yang Ming University, Taipei, Taiwan. Local Organization: Prof Yang Sai-Wei, Chair of the Symposium. Scientific Committee: E. C. Frederick, Chair of Scientific Committee

Executive Board:

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E. C. "Ned" Frederick

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Secretary General:

Nachi Chockalingham

Executive Board Members:

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Student Executive Board Member:

Karen Mickle

Website Manager:

Nachi Chockalingam

Homepage and Discussion Forum

<http://footwearbiomechanics.org/>

International Shoulder Group (ISG)

The International Shoulder Group aims to enhance shoulder research by creating a platform for discussion and exchange of information. The ISG has started at the Congress of the International Society of Biomechanics at UCLA (Los Angeles) in 1989 and is officially a Technical Group of the International Society of Biomechanics since 1999. The ISG aims to enhance shoulder research by creating a platform for discussion and exchange of information. To this end, regular meetings are organized. In addition, the ISG strives to create a platform for exchange of software and data.

The goal of the group is to enhance shoulder research by exchanging ideas, methodologies, data, and results. This is achieved by regular meetings, exchanges of preprints and theses, and exchanges of researchers. The International Shoulder Working Group had their inaugural meeting at the XVI ISB

Congress in Jyväskylä 1995. They conducted a first Scientific Conference August 26-27, 1996 in Delft, Netherlands, as an official pre-conference to the ESB Congress.

Proceedings of the second conference of the ISG organized as an satellite meeting of the ISB Congress, held in Calgary, August 1999 were published as a special issue in *Clinical Biomechanics*, Volume 15(S1), 2000. The third conference of the ISG was held in Newcastle upon Tyne, 4-6 September 2000. The fourth conference of the ISG, was organized in Cleveland, Ohio, 17-18 June 2002. The 5th Conference of the International Shoulder Group was held in 2004 in Lisbon, Portugal, organized by Augusto Gil Pascoal from the Technical University of Lisbon. A symposium entitled "Shoulder function: a compromise between mobility and stability" was held at the ISB conference in Cleveland in 2005. Proceedings from previous conferences are available on the technical group's website.

Next Symposium

The 2006 meeting of the International Shoulder Group will take place in Chicago, USA on 9-10 Oc-

tober, and will immediately precede the BMES meeting taking place there from 11-14 October.

Executive Board

President:

Christian Hogfors; Chalmers University of Technology, Sweden.

Secretary:

Dirk Jan Veeger; Vrije Universiteit Amsterdam, The Netherlands.

Treasurer:

Ed Chadwick; Case Western Reserve University, Cleveland (OH), USA.

Members:

Paula Ludewig; The University of Minnesota, Minneapolis (MN), USA.

Frans van der Helm; Delft University of Technology, The Netherlands.

Homepage:

<http://www.internationalshouldergroup.org/>

On the lighter side: Quotable quote from the Opening Ceremony of WCB2006 in Munich!



***Nominations requested for
ISB President-Elect,
Council members, and
Student-representative***

The elections for ISB president and members of the ISB council, will be held in early 2007.

Please submit your nominations for the position of President-Elect and for the new Council members for 2007-2009. Please state briefly the reasons for your nominations and send it to Mary Rodgers (mrodgers@umaryland.edu).

A final voting list will be prepared by the Executive Committee, attempting to achieve disciplinary and regional representation

Mary Rodgers

Student representative in the Council

Eligible candidates for this position are full-time student ISB members who have finished at least one full year of PhD studies. Those who will finish their PhD prior to the end of their term are still eligible. The responsibilities of the position are to establish communication between student members and the executive board/conference organizers and to initiate and facilitate student initiatives. An added perk is that the student's expenses to the ISB board meeting will be covered by ISB. This is a great opportunity to further develop ISB student initiatives. Interested candidates, please contact Mary Rodgers (mrodgers@umaryland.edu) with your reasons for standing.

Mary Rodgers

**2007 Congress Update
Tzyy-Yuang Shiang**

ISB 2007 Taipei - Preparation Report

- The meeting will be held at Taipei International Convention Center (TICC) in Taipei downtown, near Taipei 101 building which is the tallest skyscraper in the world.
- The program of the conference will have 6 parallel sessions with 360 oral papers and maximum 840 poster papers. There will be 2 tutorial sessions on 1st July (Sun.) 2007. There will be 14 keynote sessions with 14 invited keynote speakers.
- The dates and locations of satellite meetings are as following:
 - a. ISB main conference- 7/1/2007-7/5/2007 at TICC (Taipei)
 - b. Footwear conference- 6/28-6/30/2007 at National Yang Ming University (Taipei)
 - c. Computer Simulation conference- 6/28-6/30/2007 at National Cheng Kung University (Tainan)
 - d. Tutorial- 7/1/2007 at TICC 10AM-12AM & 1PM-3PM (2 sessions in each time period)
- Abstract submission deadline will be on 15th Jan. 2007. Notification of acceptance and rejection will be on 15th March 2007. Early registration will be before 30th April 2007.
- Arrangement with the university student dorm or low price accommodation near the conference center will be made for student accommodation.
- Evening Banquet and Meal Arrangement
 - a. First night (1st July 2007) reception held at 84th floor at Taipei 101 building.
 - b. Last night (5th July 2007) banquet will be held at The National Palace Museum- food and beverages will be served outdoors. (Please note the the opening reception and the last night banquet venue is indefinite at this moment).

Contact with the 101 building manager will be made for the meal supplies between the period of conference.

Notes from the Archives

John Challis

The ISB was formed in 1973 at the 4th International Seminar on Biomechanics held at Penn State University; with the constitution voted on and approved on August 29th. Two hundred and fifty of those present at this meeting became charter members of the society. The ISB conference has returned to the US twice since then; in 1989 in Los Angeles, and last year in Cleveland. In 1973 there were 84 presentations at the conference which were published in a hardback book with each paper typically six pages in length; in 2005 there were 1050 presentations and the one page abstracts were presented on a compact disc. It is interesting to look at the names of authors who had work in the proceedings in both 1973 and again in 2005.

Gunnar Andersson was a co-author on three abstracts at the 2005 meeting examining the lumbar vertebrae. In 1973 he was a co-author on a paper examining the EMG activity of the upper limb muscles during assembly line work.

The quick-release method for determining segmental moments of inertia was examined by **Peter Cavanagh** in 1973; in 2005 he was the co-author on ten abstracts examining biomechanical factors of space flight, and loads on the feet. Peter's co-author in 1974, **Bob Gregor**, was a co-author on five abstracts in 2005. These abstracts examined topics including balance and Parkinson's disease, muscle function in slope walking, and the role of cat muscles in a paw shake.

Jan Clarys was a co-author on two abstracts in 2005 examining spine motion, while in 1973 his focus was the human body's resistance to motion in water.

Paavo Komi examined the mechanical output of human muscle in 1973 in one paper, and similarly in 2005 he examined the triceps surae during human hopping in one abstract.

Benno Nigg presented a system for biomechanically analyzing skiing, and an analysis of twisting somersaults in 1973; while in 2005 his focus in two abstracts was on ankle arthritis, and reactions to unexpected surface changes during running.

Vladimir Zatsiorsky discussed methodological approaches for sports biomechanics in his 1973 paper; in 2005 he was the co-author on six abstracts focusing on the production of the forces by the fingers.

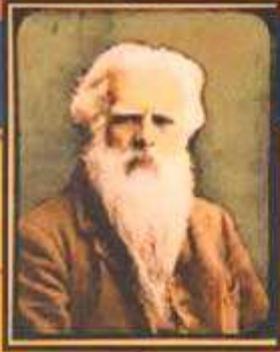
Finally, **Ron Zernicke** examined kicking in one paper, and EMG methodology in another paper in 1973. In 2005 his focus was joint mechanics in one abstract, and bone mechanics in two others.

These eight individuals have made a commitment to our conference over a 32 year period. This represents both remarkable longevity in their respective careers and in their support of our society. It is interesting to see how some people have maintained their research focus over 30 years, and for others their area of research has evolved. Also notable is that these authors have typically increased their productivity. Increased productivity with increasing age is not the norm in academia (Levin and Stephan, 1991); perhaps biomechanics research helps to keep you young.

Reference

Levin, S.G., and Stephan, P.E. (1991) Research productivity over the life cycle: Evidence for academic scientists. *The American Economic Review* 81(1), 114-132.

[The ISB has an archive of its important materials, kept at Penn. State University. If you have any materials you think should be in the archive, and you would consider donating them to the archive please contact John Challis (jhc10@psu.edu).]



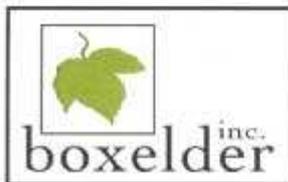
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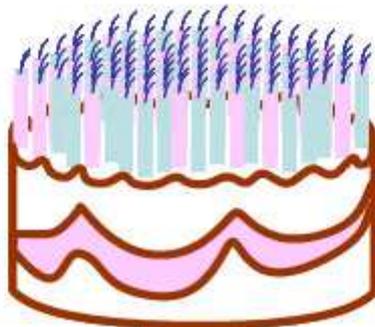
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**Editors notes
Karen Søgaard**

I have several times as Newsletter editor tried to encourage contributions from the readers. It could be anecdotes, comments, letters, opinions or solutions on puzzles. However, I do not recall to have received any response at all from any ISB-member! Therefore I was wondering if there are any readers at all or am I just sending a Newsletter out in an empty space? This seems to be a relevant question at an issue no 100 anniversary. One of the benefits from the electronics version is that you can actually count, how many who

downloads a document. I therefore asked our Webmaster Joe Hamill about the numbers for the Newsletter on the ISB-homepage. I was very surprised and pleased to hear that apart from the job section the Newsletter had the highest number of hits with more than 12.000 downloads!!

So I hope that many members will also enjoy the Newsletter number 100 and let me take the opportunity to stress, that any contributions, in any kind of English language, certainly is welcome.



Recipes from around the world – but to be avoided at congresses!

Sean Davis

Funa Zushi

Ingredients:

1. Crucian carp caught in Lake Biwa in the middle of Japan in April or May.
2. Pure salt
3. Patience



Steps:

- 1) Scrape scales off of the fish.
- 2) Pull intestines out through the gills.
- 3) Stuff pure salt into the fish body.
- 4) Place the fish and salt into a bucket in layers and put under weights for several months. Make sure that no air can reach the fish.
- 5) Wash out the salt and dry fish for a day. Stuff cooked rice into the fish.
- 6) Place the fish back into the bucket in layers and put water, salt, and weights on top, again make sure that no air can reach the fish.
- 7) Leave for another full year.
- 8) Ignore the smell and enjoy!! It can be used in soups, or deep-fried in batter.

Haggis (this may bring back fond memories of ISB2003 in Dunedin!)

<p><u>Ingredients:</u></p> <ol style="list-style-type: none"> 1. 1 sheep's pluck (stomach bag) 2. 2 lb. dry oatmeal 3. 1 lb. Suet 4. 1 lb. lamb's liver 5. 2 1/2 cups stock 6. 1 large chopped onion 7. 1/2 tsp. cayenne pepper, Jamaica pepper and salt 8. Bagpipe (optional) 	<p><u>Steps:</u></p> <ol style="list-style-type: none"> 1) Boil liver and the onion, then mince them together. 2) Lightly brown the oatmeal. 3) Stir all ingredients together. 4) Put the mixture into the sheep's pluck, pressing it down to remove all the air, and sew it securely closed. 5) Poke holes into the haggis in several places so that the haggis does not burst. 6) Cook the haggis in boiling water and boil slowly for 4-5 hours. 7) Present to your guests with accompanying bagpipe music.
--	---

Argan oil

<p><u>Ingredients:</u></p> <p>Argan berries You will also need a Tamri goat</p>	<p><u>Steps:</u></p> <ol style="list-style-type: none"> 1) Feed the Argan berries to the Tamri goat. 2) Collect the cornels from the goat's droppings. 3) Press the cornels together and collect the oily residue. 4) Enjoy!!
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3. have an outstanding academic record
4. have a good command of the English language
5. engage in doctoral or postdoctoral biomedical engineering research in the U.S.A.

Deadline for Application:

Before October 31 for research starting between June 1 and December 31 of the following year.

Information and [application forms](#)

ISB MEMBERSHIP NEWS - New Members

Prof. Estevam Las Casas
Structural Engineering
Federal University of Minas Gerais
DEES/UFMG
Belo Horizonte
MG 30110-060
Brazil

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Mr. Christian Gammelgaard Olesen
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Aalborg University
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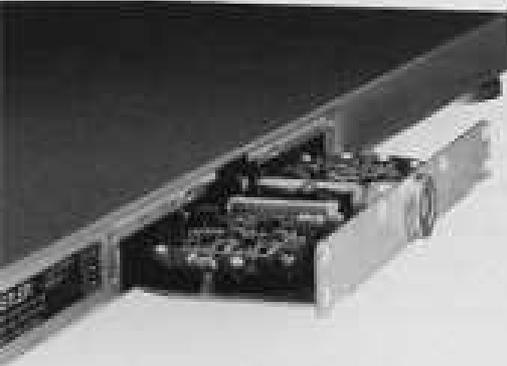
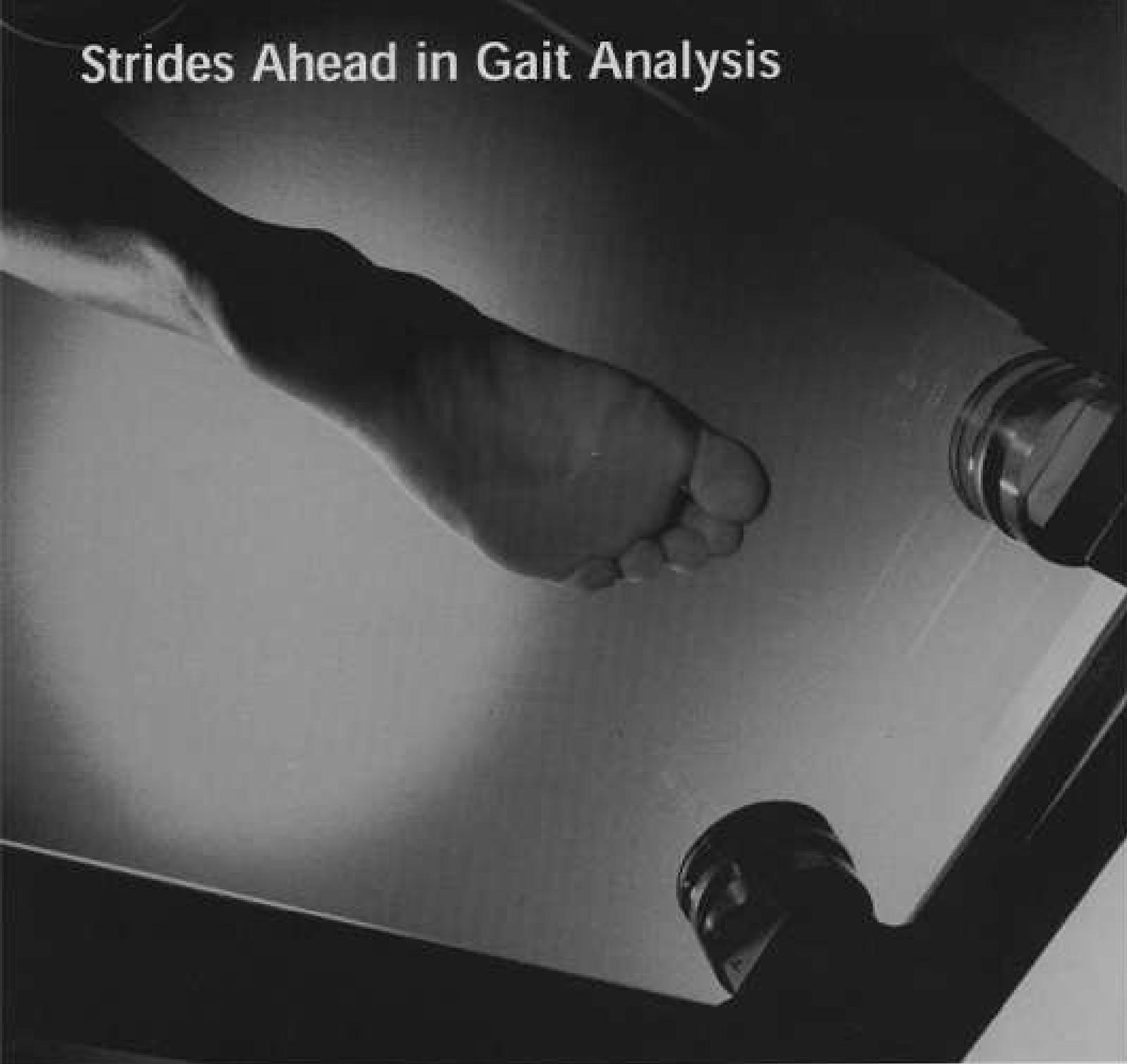
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