

December 2013

ISB *Now*



**December
2013**

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President's Blog, December 2013

By Ed Chadwick | December 2013

As this issue of ISB Now was in preparation one of our Past-Presidents passed away. John Paul was president of the International Society for Biomechanics from 1987 to 1989 and was the winner of the Muybridge Medal at the Congress in Tokyo in 1997. Although in his 80's, he attended the Cape Town Congress in 2009, and it was great to hear his Scottish brogue asking questions or making comments to delegates. He made significant contributions as an administrator, and researcher. There have been many personal recollections of Prof. Paul on Biomch-l, these spoke to his intellectual rigor but gentlemanly nature - this corresponds with all of all of my dealings with him. The next ISB Congress will be hosted by his old Department, plans are already in place to acknowledge his contributions when we meet in Glasgow in 2015. More details about [Professor Paul](#) can be found elsewhere in this issue of ISB Now.



*Professor John P Paul,
1927-2013*

There hardly seems to be a day that goes by without me receiving an email from a journal asking for a submission. There are certain journals I would be delighted to receive such an invitation from, but many come from journals I do not know. Most of these journals are open-access journals, meaning they are available freely to the reader on-line. The Directory of Open Access Journals lists close to 10,000 journals, which is an increase of more than 1,600 from last year. With this rate of growth these figures are probably out of date as I type. Most of these journals rely on charges to the authors of the paper, rather than the traditional model of their income arising from library and personal subscriptions to the journal. This is a flipping of the traditional model but perhaps has also heralded other changes.

Research Councils in the United Kingdom have mandated that all the research they fund should be published in journals where access to the paper is freely available. Both the European Union and The US White House Office of Science and Technology Policy are exploring similar requirements. In effect tax payers who pay for the research can now read it. So some authors have to pay for their funded research to be published in an open-access journal, or some of the traditional journals now have the option that you can pay to have your paper freely available on-line.

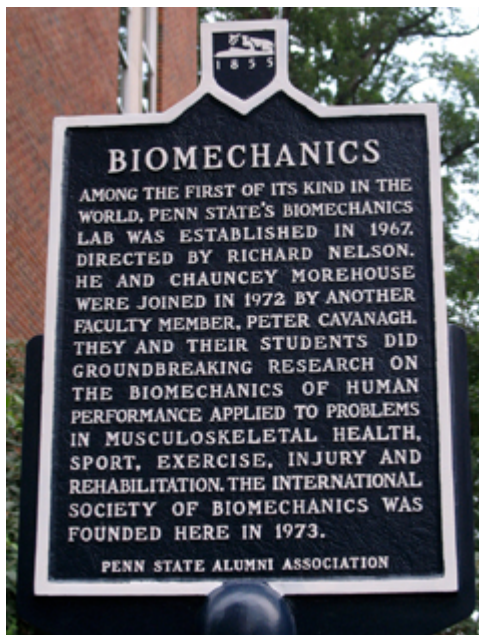
The growth of these open-access journals is not only indicated by their number but in the number of articles they publish. For example, *PLoS ONE* when first published in 2006 had just 138 articles in the year, but by 2012 that number had risen to over 23,000. There have been some papers on biomechanics in *PLoS ONE* which I have found very interesting, but some would argue that other open-access journals do not always publish the same quality of work as their older rivals.

So the positives of open-access journals are that the work is freely available, papers are typically published quickly, and some of the journals allow readers to offer a commentary on published papers, therefore increasing scientific debate. Some of these journals are considered more open to the publishing of negative results, as they only ask reviewers to comment on the validity of the hypotheses and the methods. An initial drawback is that the author needs to have the funds for the publication fee, which for some may be a significant constraint (some open-access journals do offer to sometimes waive this fee). Under the older model, journals were purchased by libraries so librarians could exert some type of quality control over the journals they subscribed to. I have been asked on a number of occasions by my institution's library which journals in biomechanics they should subscribe to. This, along with the peer review process, in theory meant that only quality journals and papers were published. This does not seem a perfect model, but what is the model for many of the open-access journals? It is relatively easy for a publisher to start a journal if the main requirements for the business are a server and some cheap software. The quality control then rests with the editor of the journal and the reviewers. This quality

control is circumvented if a journal is run by a so call predatory publisher.

A predatory publisher is a company which publishes journals, often with very grand sounding journal titles, charges for publishing but makes little effort to solicit or use feedback peer review. A recent article in *Science* illustrates this problem very well (Bohannon, J. 2013. Who's afraid of peer review? *Science* 342:60-65). John Bohannon created a series of fake scientific papers which he submitted versions of to 304 open-access journals. The papers he created contained grave errors including gross misinterpretation of the results of the "study", he also invented the names of the authors and their institutions. The paper was accepted for publication by 157 of the journals, rejected by 98, and was still in limbo for the remaining 49 journals at the time his article in *Science* was published. There was evidence of a review process in only 106 of the journals, and many of these were focused on the paper's layout not on the scientific content. Only 36 of the reviews identified any of the papers problems but editors accepted 16 of those anyway. Clearly not all open-access journals operate in such a cavalier mode - but some will publish any submission as long as the authors pay.

As members of the scientific community we should all be worried about predatory publishing as it diminishes all of our scientific efforts. What can we do? Try and avoid these journals, although they may be hard to spot. As always show due diligence when performing reviews. Educate our students about the value of the peer review process and the difference between a good journal and one which is simply out to make money.



The International Society of Biomechanics was officially formed at the 4th International Seminar on Biomechanics at Penn State. To mark that event there is a historical marker on the Penn State University campus. I walk passed that marker everyday on my way to my office, and it reminds me of the work of the ISB (and the ISB emails I need to respond to). The marker was unveiled in the summer of 2009, now winter is upon us in North America and the marker is currently surrounded by snow. This season marks the end of the year, so ISB membership renewal notices should be arriving in your inboxes soon. Please be sure to [renew your membership](#) and encourage others in your lab to join the ISB.

Regards,

John.

John Challis

Penn State University

[*\(jhc10@psu.edu\)*](mailto:jhc10@psu.edu)

Student's Corner

By Ed Chadwick | December 2013

Hi Trainees!

December has arrived and I want to remind you of some of the opportunities available on the Horizon.

The **7th World Congress of Biomechanics**, held in Boston this year from July 6-11, 2014 is accepting abstracts until **January 15** (www.wcb2014.com). Trainees have several opportunities for awards when submitting abstracts to this conference. Here is some information about them to help inform which boxes to check when going through the abstract submission process.

(A) World Congress of Biomechanics Competitions:

- 2014 American Society of Mechanical Engineers Student Paper Competition

Open to all students (not limited to members of ASME), see wcb2014.org for details. Several Undergraduate, Masters, and Doctoral theme-based competitions ranging from \$100-\$400 for each award will be held. This award does not require further action beyond indicating interest at the time of WCB abstract submission.

(B) American Society of Biomechanics: (Must be an ASB member)

1. Clinical Biomechanics Award (\$1000) - open to scientists at any stage of career
2. Journal of Biomechanics Award (\$1000) - open to scientists at any stage of career
3. Student Travel Awards for WCB (\$250) - apply through ASB website, Due Jan 15, 2014

Eligibility for ASB Awards can be found at <http://www.asbweb.org/awards-and-grants/>

(C) Canadian Society of Biomechanics: (Must be a CSB member)

1. Masters Student Award (\$500) - supplementary materials must be sent to CSB
2. Doctoral Student Award (\$500) - supplementary materials must be sent to CSB
3. David Winter Promising Young Investigator Award (Post-Doctoral, \$1000) - supplementary materials must be sent to CSB
4. Student Conference Travel Grants (\$300) - apply through CSB website, due 2 months before beginning of conference (<http://www.health.uottawa.ca/biomech/csb/students.htm>).

Eligibility for CSB/SCB awards and information regarding supplementary information can be found at <http://www.health.uottawa.ca/biomech/csb/Executive/handbook2013.pdf>.

(D) European Society of Biomechanics: (Must be an ESB member)

1. Student Award (1 first prize € 1000 and three runners up € 200)- supplementary material required to ESB,
2. Clinical Biomechanics Award (€ 1000)
3. Travel award (€ 400): Due April 14, 2014

Eligibility for ESB awards and information regarding supplementary information can be found at esbiomech.org.

(E) German Society of Biomechanics: (Must be DGfB member)

- German Society of Biomechanics Award

In addition, two ISB Technical Groups will hold their meetings in 2014:

- The **3-D Analysis of Human Movement Technical Group** has opened its abstract submission site and will be accepting papers until **January 25, 2014**. Please visit <http://3dahm2014.epfl.ch/> for details.
- The **International Shoulder Group** is accepting abstracts for its conference in Waterloo, Canada, until **February 14, 2014**.
See <https://uwaterloo.ca/international-shoulder-group-2014/> for details.

The ISB offers Technical Group Travel Grant funding to help support travel to technical group conferences, and the deadline for this year is February 28, 2014. Please refer to the website for details <http://isbweb.org/student-section/student-grants>.

As always, please connect on LinkedIn (International Society of Biomechanics), Facebook (International Society of Biomechanics Public Group International Society of Biomechanics Student group), and Twitter (@ISBiomechanics) to receive updates as more exciting opportunities and information pops up.

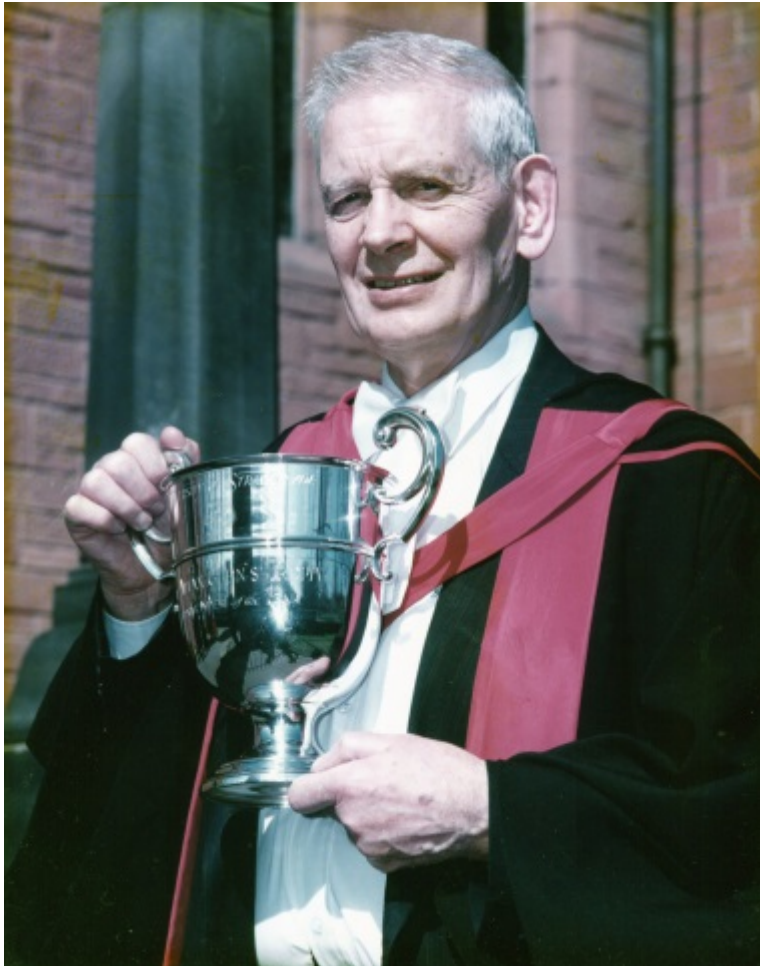
Feel free to send me an email with questions, comments, or ideas. I am always available at isb.studentrepresentative@gmail.com.

Best wishes for a fun and restful holiday season.

Take care, Kelsey.

Professor John P Paul, 1927-2013

By Ed Chadwick | December 2013



Professor John P Paul

Professor John Paul, a former ISB President passed away Wednesday, November 13 2013 at the age of 86. John Paul contributed to biomechanics in many ways, he published important papers, helped form and lead an influential department, and had leadership roles in societies and standards committees.

John Paul was raised in Old Kilpatrick, Scotland. He studied as a school boy at Alan Glen's School, a secondary school in Glasgow. As an undergraduate he studied Mechanical Engineering at the Royal College of Science and Technology. In 1962 he was a founding member of the Bioengineering Unit at the Royal College of Science and Technology. In 1964 the Royal College merged with the Scottish College of Commerce to form the University of Strathclyde. He was to remain at the University for the rest of his career, and was the head of their Bioengineering Unit from 1977 to 1992.

Early in his stay at the University of Strathclyde he formed a collaboration with an orthopaedic surgeon who wanted design assistance for pins to secure fractured femurs. This project spurred his research on the forces transmitted by bones. His work in this area became a classic source. He went on to perform fundamental work on prosthesis design. In acknowledgement of his many research achievements the ISB awarded him the Muybridge Medal in 1997. Invited lectures include the joint Royal Academy of Engineering/ Royal Society of Edinburgh meeting in 1977, the Carl Hirsch Lecture of the Karolinska Institute, Stockholm in 1995, Institution of Mechanical Engineering Donald Julius Groen Lecture in 1991, and he was awarded the W.W. Marriner Medal of the Institution of Engineers and Shipbuilders in Scotland for his lecture in 2002.

In recognition of his research and administrative achievements he was appointed an honorary member of the ISB. His many other honors include fellowships of,

- Royal Academy of Engineering

- Royal Society of Edinburgh
- Institution of Mechanical Engineers
- International Society for Prosthetics and Orthotics
- Institute of Physics and Engineering in Medicine

He was also a Companion Fellow of the British Orthopaedic Association.

Ironically for someone who made many contributions to the design of prosthetics he had four hip replacements, the first at 51 years of age, and one knee replacement. Some of us may remember him attending the ISB Congress in Cape Town and getting around on elbow crutches.

Of course many of us may be familiar with John Paul's achievements related to academe, but he was also a good athlete, playing rugby union well into his thirties, before becoming a referee. He was the father of three (Gillian, Graham and Fiona), and the grandfather to five.

Biomechanics has benefitted from his research and administrative efforts - his contributions will continue to be influential.

Professor Alf Thorstensson, 1947-2013

By Ed Chadwick | December 2013



Professor Alf Thorstensson

It is with great regret that I must inform the ISB community that one of our senior members, Alf Thorstensson, passed away on the 3rd of November this year after a protracted illness.

Alf was professor of biomechanics and motor control at The Swedish School of Sport and Health Sciences (GIH) as well as being closely affiliated with the Department of Neuroscience at the Karolinska Institutet in Stockholm. He was founder and director of the biomechanics and motor control laboratory (BMC) at GIH, where he supervised 16 PhD students to completion as well as hosted scores of international guest researchers. His research record is impressive, with more than 150 peer reviewed publications and more than 20 of these having 100 or more citations. Perhaps his most well known paper was one published in 1976 on the force-velocity relationship and fibre composition in human knee extensor muscles, which has been cited more than 420 times.

Alf became a member of ISB in 1975 and attended many conferences from then on. He was a member of the advisory committee for the 1985 and 1993 conferences in Umeå and Paris, and it was at the Paris meeting that Alf was elected to the ISB Council as publications officer. In 1995, in Jyvaskyla, Alf was reelected for a second term and continued to serve on the council until 1997. Alf's research was presented by himself and his many collaborators at ISB conferences from 1975 to 2011.

Alf also served on several editorial boards including the Journal of Applied Biomechanics, the European Journal of Experimental Musculoskeletal Research and the Scandinavian Journal of Medicine and Science in Sports.

I am sure many of us have fond memories of engaging in scientific conversations with Alf. He had exceptional patience and an enviable ability to unravel complex issues into their simpler elements. He will be missed by many of us.

Andrew Creswell, *ISB President-Elect*.

New members, December 2013

By Ed Chadwick | December 2013

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14th International Symposium on Computer Simulation in Biomechanics

By Ed Chadwick | December 2013

The 14th International Symposium on Computer Simulation in Biomechanics was held at the Praiamar Natal Hotel & Convention, Natal, Brazil between the 1st and 3rd August 2013. 66 delegates from 15 countries attended the International Symposium which consisted of 36 oral presentations (plus associated computer demos), and 2 keynote presentations (Prof. Ton van den Bogert, Cleveland State University, USA, and Prof. André Fabio Kohn, University of São Paulo, Brazil). The Andrzej Komor Young Investigators Award (sponsored by the International Society of Biomechanics) was awarded to two students in this edition, Gustavo Leporace from Federal University of Rio de Janeiro for his paper entitled "Simulation of ground reaction forces during gait based on accelerometer data using a neural network model", and to D Anitha from the National University of Singapore for her paper entitled "Implications of local osteoporosis on the efficacy of anti-resorptive drug treatment: a 3-year follow-up finite-element study in risedronate-treated women".



Gustavo Leporace and D Anitha being presented the Andrzej Komor Young Investigators Award by Federico Casolo and Ton van den Bogert

At the banquet the delegates enjoyed “Caipirinhas” and were entertained by a Brazilian music band and Mark King who organised the “special awards” which included, among others, B.J. Fregly who received the “most expensive visa in history award”, Glen and Sam with the “I thought you were paying the bill award” and Matthew Brodie with the “special request award”!

Special thanks go to Jeff Reinbolt for organizing the website and the rest of the programme committee for their contributions to the symposium, without whom it would not have been possible to organise this successful meeting.



Some of the participants after unsuccessful efforts to gather all delegates for a photo just before lunch

Marko Ackermann, Chair, 14th ISCSB

Mark King, Co-Chair, 14th ISCSB

Report on ISB 2013, Natal, Brazil

By Ed Chadwick | December 2013

ISB2013 - AN EXHILARATING EXPERIENCE

A personal report of the conference from organiser Marco Aurélio Vaz

When I was first invited in September 2005 by Prof. Antônio Carlos Stringhini Guimarães to share with him the responsibility of bringing the ISB Congress to Brazil, I surely did not have a clear idea of the real meaning of what he was asking me. We had organized together the IX Brazilian Congress of Biomechanics in 2001, and I tried to train myself and my team organizing small symposia on a yearly basis in the last five years. These experiences were expected to give us a good grasp of what we would have ahead of us. However, I think that nothing prepares us for such an exhilarating and challenging experience. With these words we would like to congratulate all previous ISB Congresses organizers for their courage, for their passion, for their investment in ISB and in the development of Biomechanics worldwide.

In addition of being a challenge, organizing a scientific event is also one of the most important activities to bring together scientists and students from a specific area or field. During these meetings they discuss science, get to know new knowledge and new technologies, and they have the unique opportunity to get

to know each other, establish new relationships, strengthen old ones and share a few brief moments of their lives. Some of these brief life experiences that they share are the ones that sometimes make a difference and become unforgettable in their lives. So, having the opportunity to share with the Biomechanics community some of our brief moments was an exhilarating and unforgettable experience not just for our team, but for all Brazilians, and we would like to thank the ISB Executive Council for choosing Natal and Brazil for the XXIV ISB Congress and for giving the Brazilian Society of Biomechanics the chance of including Brazil and Latin America in the history of ISB.

Science is usually made of dreams. Scientists dream (sometimes during their sleep, sometimes while awake) about things they would like to investigate or about things that they would like to achieve in their academic careers. Prof. Guimarães started this dream, but unfortunately was unable to see it come true due to his untimely passing. Making it true in his memory was something special, as we had the opportunity of paying a tribute in the honor of a very important and special person in the academic and personal life of many people from our team and, also of so many Brazilian scientists and students.

The feedback we received from several members of the ISB Executive Council, from Brazilian biomechanists, from students, from friends was so positive that we are really glad that things worked well and the congress was, in our personal opinion, a success. However, this success is a result of a team work. Therefore, we would like to thank everyone that helped in so many different ways to make ISB2013 this success: the ISB Executive Council, the BSB Directory Board, the Organizing Committee, the Scientific Committee, the Invited Speakers, the Chairs, the Sponsors, the Exhibitors, Natal Convention Bureau, Natal Convention Center, CAPES-Brazil, Shopping Tour, Cem Cerimonia, ESEF-UFRGS, and GPBIC (my Biomechanics and Kinesiology Research Group). We really hope that our Brazilian flavor was experienced by everyone in Natal, and that people had the chance to work hard during the congress, but also to have a good time in Natal.

ABOUT THE VENUE

Natal was chosen as the venue for ISB2013 for several different and important reasons: it is a safe city, popular with tourists, close to Europe and North America, with a venue within walking distance from hotels, hotels with different and affordable prices, a large enough Convention Center to receive at least 1000 people. We hope that people had a good experience in Natal, despite the small number of people fluent in English. We apologize for some of the small problems we experienced during the congress. Some of them occurred due to some local difficulties related to demonstrations during the period of the congress, others due to technical problems we experienced at the Convention Center. Nevertheless, these problems were small and did not affect substantially any of the Congress activities.

ISB2013 PARTICIPANTS

ISB2013 welcomed 795 participants from 41 different countries; 331 (41.6%) were from Economically Developing Countries (EDC), 254 (32%) were ISB members, 205 (25.8%) were ISB non-members, and 2 (0.6%) were accompanying persons to the banquet. These numbers show that our lower EDC registration fee strategy to bring a large contingent of people from EDC was successful. It also shows that ISB has done a great job helping people from these countries to have an opportunity to participate in an ISB Congress. Therefore, I would like to congratulate Andrea Hemmerich and António Veloso for the great job done with the EDC portfolio. Students were nearly 50% of total delegates.. Brazil (290, 36.48%) had the largest number of participants followed by the USA (88, 11.07%), Canada (48, 6.04%), United Kingdom (47, 5.91%), Japan (42, 5.28%), Germany (38, 4.78%), Australia (32, 4.03%), Belgium (24, 3.02%), France and Italy (20, 2.52% each). This is evidence that the Brazilian Society of Biomechanics did a great job in advertising the congress amongst Brazilian Biomechanists. It is also evidence that ISB is truly international, and is reaching countries from all over the world.

SCIENTIFIC PROGRAM

A total of 859 abstracts were evaluated, and from this total 792 abstracts were selected to be presented

either as an oral or a poster presentation. These abstracts were allocated on nine different specific areas:

1. Balance, Gait and Locomotion: 215
2. Biomaterials and Devices: 20
3. Cardiovascular and Respiratory Biomechanics: 09
4. Clinical Biomechanics: 167
5. Dental Biomechanics: 04
6. Modeling: 77
7. Neuromuscular Biomechanics and Physiology: 97
8. Sports Biomechanics: 173
9. Tissue, Cells and Molecular Biomechanics: 30

During the congress we received several compliments from different groups around the world, congratulating us for the quality of the work being presented during the congress. Therefore, we would like to congratulate the ISB community for the quality of the work presented in all sessions and also the Scientific Committee for the fantastic job in reviewing, selecting and organizing the scientific program.

In addition, ISB2013 had a total of nine invited speakers that talked about different themes.

Invited Speakers

Wartenweiler Memorial Lecture

Prof. Miguel Nicolelis - Medical Center, Duke University, USA

Title: Brain Machine Interfaces to Restore Mobility

Muybridge Award Lecture

Prof. Benno Nigg - Faculty of Kinesiology, University of Calgary, Canada

Title: From Biomechanik to Biomechanics to Biomechanigg

ISB President's Lecture

Prof. Antonie van den Bogert - Department of Mechanical Engineering, Cleveland State University, USA

Title: Limb Design - From Horses to Prosthetics

Antônio Carlos Stringhini Guimarães Memorial Lecture

Prof. Walter Herzog - Human Performance Laboratory, Faculty of Kinesiology, University of Calgary, Calgary, Canada

Title: The EMG-force relationship revisited: a story that began with A.C.S (Tony) Guimarães

Keynote Lectures

Prof. Jim Parry - Charles University, Prague, Tcheck Republic

Title: Transhumanism - the role of technology in the development of posthumans

Prof. Margareta C. Nordin - Department of Orthopaedic Surgery, Environmental Medicine and Hospital for Joint Diseases, New York University, USA

Title: Biomechanics in Muskuloskeletal Clinical Rehabilitation for Common Spine Pain

Prof. Georg N. Duda - Julius Wolff Institut & Center for Musculoskeletal Surgery, Charité - Universitätsmedizin Berlin, Berlin

Title: Mechanobiology of tissue regeneration: using bone healing as an example system for tissue regeneration

Prof. Yasuo Kawakami - Faculty of Sport Sciences, Waseda University, Saitama, Japan

Title: Form and function of skeletal muscle tendon unit in humans

ISB-ISEK Invited Lecture

Prof. Roberto Merletti - Laboratory for Engineering of the Neuromuscular System, Politecnico Di Torino, Torino, Italy

Title: High density EMG: Perspectives in Prevention and in Rehabilitation Medicine

ISB2013 also had a few Special Sessions. Amongst these were,

- CLINICAL BIOMECHANICS AWARD
- PROMISSING SCIENTIST AWARD
- EMERGING SCIENTIST AWARD
- YOUNG INVESTIGATOR AWARD - PODIUM PRESENTATION
- YOUNG INVESTIGATOR AWARD - POSTER PRESENTATION
- KNEE LOADING SPECIAL SYMPOSIUM
- INTERNATIONAL SHOULDER GROUP SESSION
- BRAZILIAN CONGRESS OF BIOMECHANICS SPECIAL SESSION

SOCIAL EVENTS

ISB2013 had social events in all six nights of the congress. Sunday started with the Welcome Reception, which was followed by two evening cocktails on Monday and Wednesday evenings, whereas the Poster Sessions' cocktails were held on Tuesday and Thursday evenings. The congress final social activity was the Banquet on Friday night. It was quite nice to see that all social activities had a fantastic interaction

amongst participants, and we hope that people had a chance to discuss science while having a bite to eat and a nice Brazilian drink (caipirinha). We also hope that people enjoyed the soccer demonstration during our Opening Ceremony.

ISB2013 SATELLITE EVENTS AND SYMPOSIA

ISB2013 was also an important venue for several scientific groups to get together and discuss biomechanics in their specific fields. A total of 9 Satellite Events took place in Natal (see Table). These events gathered scientists to discuss not just science in these specific fields, but there were also discussions on how ISB can help to improve and develop biomechanics at remote areas in the globe.

These satellite events also show the growth of biomechanics in these specific fields. Some of these groups originated from ISB, and now they hold their own scientific symposia. I would like to take the opportunity to thank all the organizers of these events, as they created unique opportunities for scientists and mainly for students to get a good grasp of the state of the art in these specific areas.

Table. ISB2013 Satellite Events.

11 th Biennial Footwear Biomechanics Symposium http://www.fbs2013.org/
14 th International Symposium on Computer Simulation in Biomechanics http://isbweb.org/~tgcs/isbsb-2013/index.htm
Educational Workshop on Dynamic Load Distribution Measurement http://novel.de/novelcontent/newsflash-2013/962-dinvitation-to-the-workshop-on-dynamic-load-distribution-measurement-in-natal-brazil
Measurement of Knee Loading Symposium http://www.ljmu.ac.uk/sps/RISES/115598.htm
Neurophysiology meets Biomechanics: ISEK-ISB joint workshop http://nmsworkshop.nre.bccn.uni-goettingen.de/
ISB Economically Developing Countries Symposium Workshop on Surface Electromyography http://www.isbbrazil.com/conteudo/view?ID_CONTEUDO=845
Satellite Symposium of the VII World Congress of Biomechanics http://www.isbbrazil.com/conteudo/view?ID_CONTEUDO=842

One hundred and forty four attended the Tutorials held at the conference (see Table).

Table. ISB2013 Tutorials.

TUTORIAL	INVITED SPEAKER
Human movement analysis using inertial sensors	Dr. Kamiar Aminian, PhD Ecole Polytechnique Federale Lausanne, Lausanne, Switzerland Dr. Julien Favre, PhD Department of Mechanical Engineering, Stanford University, Stanford, USA
Opensim - New developments and future directions	Dr. Scott Delp, PhD Co-Director, Stanford Center for Biomedical Computing, Stanford University, Stanford, USA
Grant writing workshop	Dr. Tom Buchanan, PhD Department of Mechanical Engineering, University of Delaware, Delaware, USA

ISB2013 SPONSORS AND EXHIBITORS

ISB2013 was also a fantastic opportunity for business. Several companies presented their state of the art technology. Among these were, in alphabetical order: AMTI, Bertec, Carci, C-Motion Inc., Contemplas, Delsys Inc, Elsevier, EMG System, INN Sports, Kinetec, Kistler, Materialise, Miotec, Motion Analysis, NDI, Nike, Noraxon, Novel, RSSCAN, SIMI, Taylor & Francis, Tekscan, Vicon and Xsens. We would like to thank all these companies for supporting ISB2013.

Finally, we would like to thank everyone that attended ISB2013. We sincerely hope that our efforts to make you feel at home were successful and that you were able to make new friends in Brazil. We also

hope that you had a fantastic experience during the congress and that Natal brings you wonderful memories for the rest of your lives.

Porto Alegre, December 14th 2013.

Marco Aurélio Vaz

President of the Brazilian Society of Biomechanics

Chair of the XXIV Congress of the International Society of biomechanics and of the

XV Brazilian Congress of Biomechanics

ISB Travel Grant Reports

By Ed Chadwick | December 2013

Vera Moniz-Pereira

Biomechanics and Functional Morphology Laboratory

Faculty of Human Kinetics - University of Lisbon, Portugal

I was very pleased when I received one of the ISB congress travel grants to attend the XXIV Congress in Natal, Brazil. It was my third time in an ISB congress, probably the last as a student and, with the recent cuts in travel grants in Portugal, it would have been impossible to attend this meeting without the ISB support.

During the meeting I presented the work entitled “The Influence of joint constraints in joint moments’ estimation during level walking in the elderly” in a poster session. I had therefore the opportunity to discuss the results with other scientists, whose contributions and feedbacks were very important for the improvement of my work.

As in previous conferences of the society, the presentations had a very high scientific level, especially in what concerns the invited speakers’ lectures and the young investigators award session. Not only I had the opportunity to hear some of the best researchers of each field, but also the diversity of talks gave me new perspectives about research in/and biomechanics.

Finally, being a student member of the society, allowed me to participate in the students’ events (roundtable mentoring workshop and beach excursion). The themes discussed in the roundtable mentoring workshop (teaching research, publications, industry versus academic career and the balance between work and life) were all of great use. Besides it was very positive that this event was in the beginning of the conference, creating the opportunity for debate and networking within students and between students and mentors early on. During the beach excursion on the day after, we had the opportunity to visit Natal, reinforce our network connections and have fun!

I would like to finish by thanking the ISB for giving me the opportunity to have all these scientific, networking and leisure experiences!

Jose Ignacio Priego Quesada

Research Group in Sports Biomechanics (GIBD)

University of Valencia, Faculty of Physical Activity and Sport Sciences,

Valencia, Spain

The travel grant was received in June 2013. The visit was performed from August 11th to October 11th in the Federal University of Pampa, in Uruguaiiana (Rio Grande do Sul, Brazil).

Tasks to be developed

During the course of the grant, the tasks that I was involved were:

1. I attended to the laboratory activities and daily routine of the researchers and students of Professor Carpes' group;
2. I fully used laboratory facilities;
3. I attended to different seminars of the members of Professor Carpes. This seminars was about the next topics:
 1. Oxidative stress in the exercise.
 2. Gait asymmetries in walking obstacles of elderly fallers and non-fallers
 3. Plantar pressure and ageing.
 4. Ankle injuries in sports.
4. I presented a seminar about the use of thermography in sport.
5. I

start to develop a research project under supervision of Dr Carpes.

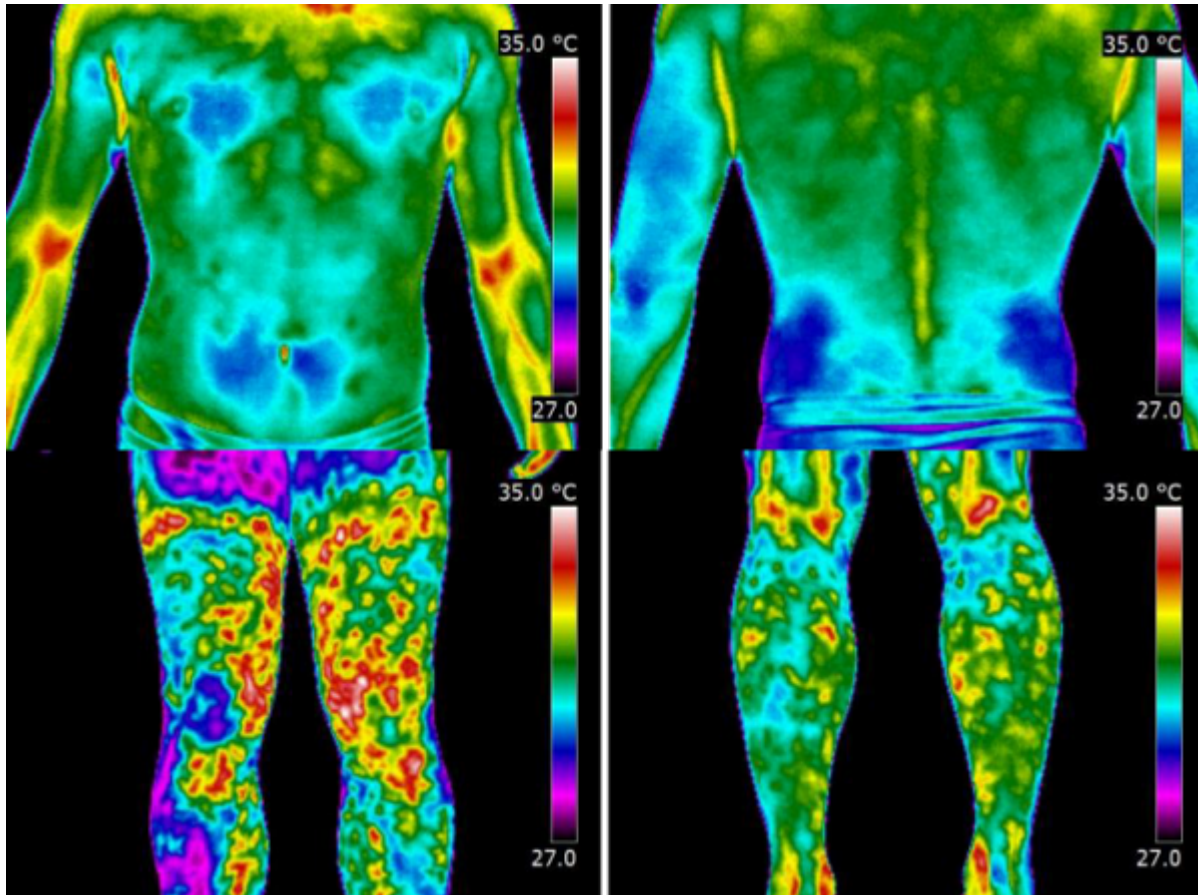
The experiments are about the differences between running barefoot and shod in plantar/foot temperature and plantar pressure parameters.

6. I conducted some additional experiments that will be part of my doctoral thesis, as well as start some additional collaboration between the laboratories. This research project addresses the relationship between temperature and electromyography parameters, during incremental and constant workload cycling test. In Brazil a group of non-cyclists was evaluated to be included and compared with the group of cyclists I already collected data in Valencia.

Results

The next results are expected by the projects carried out in the travel grant:

1. Continue collaboration with Professor Carpes. This grant has helped to know personally each other, which has been good for strengthening our ties for future collaborations.
2. To prepare a scientific article about the differences in plantar temperature and plantar pressure parameters between running barefoot and shod. We will submit this article to the Journal of Biomechanics.
3. To prepare a scientific article or a short-communication about the correlation between temperature and electromyography parameters, during incremental workload cycling test. We will submit a short-communication to Journal of Biomechanics.
4. To prepare a scientific article about the temperature differences between cyclist and non-cyclist during 45 minutes of constant workload cycling test. We will submit this article in the Journal of Biomechanics.



Thermography images examples in the cycling project

Acknowledgements

I would like to express my gratitude to Dr Felipe Carpes for the confidence and opportunities in Brazil. He not only helped in the academic field, he is also a friend that dealt with provide me good social experiences. I'm grateful that I can consider myself a friend of professor Felipe. I also would like to thank the friendship and support of Dr Carpes' students Marcos Kunzler, Alvaro Machado, Caio Borella and Helen Lidiane during my time in Uruguaiana, especially during the data collection and of course, in the social life. Thank you very much International Society of Biomechanics for this amazing opportunity. I would like to encourage the biomechanics students to join the ISB and apply for this grant.

Meet Your Executive

By Ed Chadwick | December 2013

Catherine Disselhorst-Klug: Awards Officer

I am Catherine Disselhorst-Klug and I am one of your new executives on the ISB council. Presently, I am a full Professor at the RWTH Aachen University, Germany, and the head of the Department of Rehabilitation & Prevention Engineering (RPE). In 1990 I graduated with a Masters degree in Physics and I received my PhD from the Faculty of Electrical Engineering in 1996. Very early in my scientific career I had the luck becoming a research associate at the Helmholtz-Institute for Biomedical Engineering, Aachen, Germany. During that time my mentor Günter Rau introduced me to the field of

biomechanics and I have become interested in understanding muscular control mechanisms. Later on, my strong background in engineering science in combination with an increasing expertise in movement physiology forms the basis for my present research activities, which aim to kinematic and kinetic analyses and modelling of physiological and pathological movements. In particular my research interests are focused on the development of methods improving diagnosis, prevention and rehabilitation of musculoskeletal dysfunction.

I have served as a Council Member of the International Society of Electrophysiology and Kinesiology (ISEK) for eight terms and I was the president of ISEK from 2004 to 2006. Since 1995 I have been with the International Society for Biomechanics and, of course I have attended several ISB conferences. I have organised several ISB-ISEK-joint-sessions which are now institutionalized during the conferences of both societies.

To me ISB is an outstanding community of colleagues and friends with passion for biomechanics. It offers a unique platform to a large variety of disciplines to discuss the most recent advances in this steadily growing field. I can see ISB and ISEK as being complementary with an overlapping area of interest and which can achieve valuable progress by institutional exchange and joint efforts. It is the scientific association that brings together interdisciplinary researchers in order to form a bridge from basic research to practical application. Since science transport through education and training means transporting science to the next generation, young investigators should be encouraged to join the scientific community of ISB. This is the basis for the creative atmosphere of ISB which gives rise to creative ideas and innovative approaches. It will be a pleasure to me serving the ISB as executive council member.