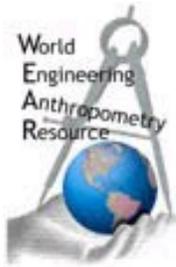


WEAR newsletter Year 5 No.1 – November 2010



What is WEAR?

WEAR (world engineering anthropometry resource) is an international collaborative effort with the goal to contribute actively to the diffusion and the advancement of knowledge of anthropometry, ergonomics and human factors engineering for health, safety and well-being for all people.

Target group of this newsletter

This newsletter aims to inform all the people interested in applied anthropometry about the progress in the realization of the strategic plan for WEAR.

WEAR Beijing Report

In Beijing (August 2009) we had 7 sessions of oral papers about anthropometry within the 17th IEA conference (IEA = International Ergonomics Association www.iea.cc). The total number of attendees for the IEA conference was more than 1000, so we had a large audience. The President of the IEA (David Caple) explained what WEAR was and what it meant to be. WEAR was asked in 16th IEA conference Maastricht (NL) in 2006 to initiate a Technical Group of the IEA. So we did formally in Beijing and at the same time WEAR launched successfully their pilot anthropometric database.

During the 7 sessions we had about 35 papers and 15 posters about anthropometry apart from the WEAR booth, which draw a lot of attention especially because of looking at the demo of the WEAR-database and because of getting a 2 month free access of the database. Also there was a formal meeting of the IEA-TC-Anthropometry which has as main purpose to prepare the anthropometric oral sessions, workshops, posters and possible other ways of disseminations of our anthropometric knowledge and perhaps other ways of interactive communications about anthropometry. Current chair and co-chair of IEA-TC-Anthropometry are Johan Molenbroek (NL) and Sandra Alemany (ES). To become a member of IEA-TC is free of cost. When interested please mail j.f.m.molenbroek@tudelft.nl or Sandra.alemany@ibv.upv.es.



An impression of the WEAR booth in Beijing

WEAR 2010 Anthropometry Conference and Workshop
Auckland Bioengineering Institute, University of Auckland, NZ
17-19th February 2010

The Auckland Bioengineering Institute (ABI) hosted an international conference on anthropometry in conjunction with the World Engineering Anthropometry Resource (WEAR) group in February 2010. This conference was attended by 27 participants, with 14 of these being international guests (Australia, Netherlands, USA, France, Japan, Canada). It was a valuable opportunity to promote New Zealand research to a wider audience and the feedback from participants is that it was a great success. The two day conference ran very smoothly, along with the one day post-conference workshop.

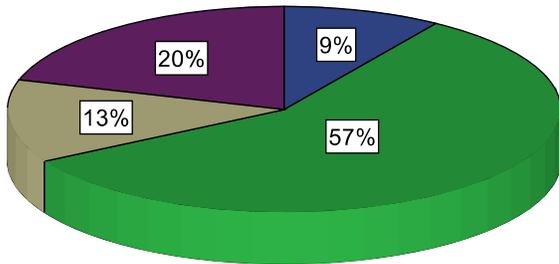
Two keynote presentations were given, the first by Dr Kathleen Robinette (Air Force Research Laboratory, USA) and Daisy Veitch (SHARP Dummies, Australia), and the second by Dr Masaaki Mochimaru (Digital Human Research Center, Japan). Kathleen and Daisy spoke about anthropometry in the electronic age and the need for 3D data exchange between researchers and organizations in many different countries. Masaaki spoke about 3D and 4D surface anthropometry and statistical methods of analysis, demonstrating a variety of applications from the sport, fashion and healthcare fields.

This conference was of great benefit to the ABI. Anthropometry is an emerging area of research for the ABI and this conference allowed world-class researchers to share their knowledge and experiences with us. It also encouraged other New Zealand researchers (from University of Otago, AUT, and Defense Technology Agency) working in similar fields to engage with us and broaden our research networks.

Cheers,
Sarah Thompson
Conference Convener WEAR 2010

WEAR Valencia Report

The annual WEAR meeting took place at the Instituto de Biomecánica de Valencia in Spain, September 20-24 2010. This event was an opportunity to organize the conference: 'Anthropometry applied to product innovation'. Addressed to the industry, their aim was to show to the industrial sector the innovation opportunities provided by this research field to develop new products and services. Over 80 registrations coming from industry (57%), universities (20%), research laboratories (13%) and public administration (9%) created a forum to bridge the scientific developments and knowledge with the current interests and needs coming from the companies.



The first day was dedicated to an introduction to the use and management of anthropometry and the application into product design by means of some case studies on police cars, car seats or eyeframes. The second day was centered on anthropometry apply to garment and footwear design.

A special acknowledgment to all the speakers who made possible the successful program, even collaborating as a conference sponsors. We also thank the Codata organization for funding this event.



Presenters from WEAR. Left to right, top: Johan Molenbroek, Flavia Pastura, Sandra Alemany, Masaaki Mochimaru, Mao-Jiun Wang, Regis Mollard, Marion Wolff, bottom: Shang Shu, Hein Daanen, Makiko Kouchi, Cristina Zamberlan, Sarah Skelton, Carla Guimaraes, Eric Ennis, Kathleen Robinette, Daisy Veitch.

Legal body

WEAR is a legal body. The not-for-profit organization is based in Paris. The IBAN Bank Account number is FR76 1020 7000 7120 2192 9508 654. The SWIFT code is CCBPFRPPMTG. The mail address contact.wear@orange.fr is open for new participants.

New Developments

Management Board

In Valencia, Hein Daanen was re-elected in the board as well as Regis Mollard. They switched functions. Regis Mollard becomes the Chief Financial Officer and Hein Daanen becomes Secretary General. Kathleen Robinette stays in function as president.

Fees

The fee to join WEAR for a year is set at 300 Euro. This fee includes a 10% reduction for work shops and meetings and allows free access to the websites of ARIS and Ergodata.

AMI

The Anthropometric Measurement Interface (AMI) is a web-based software tool that enables data custodians to define how their measurements were taken. AMI was created for the purpose of quickly linking databases of anthropometric data distributed all across the world. The software offers a tool for entering new measurements in a manner pre-defined by the Anthropometry XML Schema (Cheng, Robinette, 2009). The user simply enters the specifics of how the measurement is taken based on 4 key elements (Measurement Description, Body Posture, Instrument Used, and Clothing). In the past, if researchers were searching for data would typically be required to read a narrative of how the data was collected. The narratives were often either too vague, leading to data that didn't apply; or too long, making it difficult to decipher the important description of the data. AMI defines a standard method of entering measurement definitions thereby allowing researchers to browse exactly how particular measurements were collected and subsequently be able to make a determination whether the collection process is close enough to their area of interest to research the data further.

Upon entering a measurement AMI saves it to a back-end database of measurements. In addition, the measurement is given a 'digital descriptor' that digitizes the measurement into a unique key. This unique key is used to create an XML document that is understandable to both human and computer 'eyes'. This standard digital descriptor can subsequently be used to reference and compare measurements across the WEAR Data Network. Researchers will be able to house their physical data in their own data warehouses, while still being able to share data through the use of this digital descriptor.

A prototype example of this is the Anthropometry Research Information System (ARIS) web application has implemented the AMI digital descriptors to connect to a remote database of Army anthropometric data. The data is integrated seamlessly into the ARIS interface. This is done through the use of a Web service. This model could be replicated with other datasets that implement the AMI digital descriptor.

New council member

Sandra Alemany from IBV Valencia is a new council member.

She is a senior researcher of the Instituto de Biomecánica de Valencia, head of the anthropometry research line. She was the project manager of several 3D anthropometric surveys and their application to product design mainly in the industrial sectors of footwear and clothing. She is currently working on the study of the human-product interaction by means of biomechanical instrumentation and their relationship with anthropometry, product material, product shapes and user subjective perception and comfort.

Special journal issue on Engineering Anthropometry

In the last years many interesting papers on Engineering Anthropometry were presented at WEAR meetings. It is planned to combine the most interesting papers in a special issue of a scientific journal. Applied Ergonomics is approached to ask if they have an interest in this offer.

Website

The website www.anthro.org is continuously updated under the leadership of Johan Molenbroek. Please pay a visit to the website and share your comments and ideas with us!

Next WEAR meetings

The next WEAR meeting will be in Adelaide, Australia. The WEAR Conference will be held February 15, the WEAR workshops will be held February 16-17. For more information and subscription: www.sapmea.asn.au/wear2011

In 2012 the WEAR meeting will be held in Recife, Brasil in conjunction with the 18th International Ergonomics Association (IEA) conference (www.iea2012.org). The dates of the conference are February 12-16.