

## A Busy Time for Visual Ergonomics

Thank you to everyone who contributed to this month's newsletter. One of the aims of this newsletter is to document visual ergonomics activities taking place in research and in practice. This edition is bursting at

the seams with news and I am thrilled to report that visual ergonomics is being presented to varied audiences, including ergonomists, health and safety professionals, ophthalmic groups, industry

groups and academics.

Well done everyone! I look forward to your continued contributions.

Jennifer Long  
IEA Visual Ergonomics TC  
Chairperson

### Around the world

#### **FEBRUARY 2013—Portugal**

The 13<sup>th</sup> international symposium on Occupational Safety and Hygiene (SHO2013) <http://www.sposho.pt/sho2013/index.htm> was held in Guimarães at the University Minho, Portugal, 14-15 February 2013. Authors from 20 different countries presented more than 250 papers. Many papers addressed physical ergonomic issues in heavy industry, e.g. postural problems or heat stress. The keynote speech addressed lighting aspects of highway tunnels and concluded that lighting levels imposed by international standards should be significantly increased to reduce the high risk of accidents near tunnel portals. A collection of peer reviewed full papers will be published by CRC press (Taylor & Francis) in mid 2013.

#### **FEBRUARY 2013—Germany**

More than 200 papers were presented at the German Society for Occupational Science ([www.gfa-online.de](http://www.gfa-online.de)) conference in Krefeld, Germany (27<sup>th</sup> February to 1st March). The theme was occupational science in the production and service sector. Papers related to visual ergonomics included visual driving assistance tools for elderly, the dynamic visual field of truck drivers and the effect of smoking on contrast sensitivity. The conference was organized in collaboration with the "Hochschule Niederrhein", which is a university of applied science. This was a significant event since joint ventures between universities and universities of applied science are uncommon in many European countries.

#### **MARCH 2013—Australia**

An industry conference on the topic "Control room design & operations" was held in Sydney (11-13 March). Although only one paper was presented specifically on visual ergonomics, visual ergonomics issues were discussed in 9 of the 22 papers presented, including design of control rooms of the future, information display and 3D imaging technology.

#### **MARCH 2013—Australia**

The Human Factors and Ergonomics Society of Australia hosted a half-day workshop in Perth (14th March) on the topic "New technology, ageing workers". The interactive workshop presented by Jennifer Long was attended by 32 ergonomists and safety professionals. The aim was to improve participants confidence dealing with ageing vision in the workplace and help participants understand how to best communicate with eye care practitioners.



*Peter Wedgenwood (physiotherapist), Brad Pfeiffer (AGL), Jennifer Long (optometrist) and Russell Ockenden (architect) presented a workshop on collaborative partnerships in control room design.*

## Upcoming Events

International  
Colour Vision  
Symposium,  
Winchester, UK,  
14-18 July 2013

Nordic Ergonomics  
Society Annual  
Conference,  
Reykjavik, Iceland  
11-14 August 2013  
(will include  
parallel sessions  
and a keynote  
presentation on  
visual ergonomics)

Visual Image  
Safety Conference,  
Stratford-upon-  
Avon, UK, 3-5  
September 2013

International  
Ergonomics  
Association World  
Congress,  
Melbourne  
Australia  
9-14 August 2015

## Menozzi honoured



Dr Marino Menozzi was elected as an extraordinary member of the Swiss Society of Ophthalmology (SSO) in August 2012. The SSO has 875 members including 13 extraordinary members. Menozzi initially collaborated with the SSO in the mid-1980's on research and consultancy related to vision at work. As a member of the SSO, Menozzi will periodically contribute to various SSO scientific and education programs and promote visual ergonomics among medical specialists.

## Some recent VE publications

👁️ Jacobs K et al (2013). **An ergonomics training program for student notebook computer users: Preliminary outcomes of a six-year cohort study.** *Work*, Jan 1;44(2):221-30.

This study describes the anthropometric measurements and typing proficiency of a cohort of 7<sup>th</sup> and 8<sup>th</sup> grade students who were provided with a notebook computer for use at school and home. It also investigated the impact of participatory ergonomics education and the use of peripheral notebook accessories on reported musculoskeletal and visual discomfort. The authors conclude that ergonomics training and the use of external devices may have significant health benefits.

👁️ Ostrovsky A, et al (2012). **Effects of job-related stress and burnout on asthenopia among high-tech workers.** *Ergonomics*. 2012;55(8):854-62

This paper measured eye- and vision-related symptoms among 42 high-tech workers and 64 bank employees who use computers. There were significant between-group differences in the intensity of asthenopia, but no difference in its frequency. Burnout appeared to be a significant contributing factor to the intensity and frequency of asthenopia.

👁️ Rudin-Brown CM et al (2013). **Driver distraction in an unusual environment: Effects of text-messaging in tunnels.** *Accident Analysis and Prevention*, Jan; 50:122-9.

24 participants drove in a simulated highway and tunnel road environment. Not surprisingly, text messaging caused driver distraction. Driving was altered by changes in speed, decrements in lateral vehicle control, decreased visual scanning of the roadway ahead, and increased ratings of subjective workload. The speed reduction associated with text-messaging was more pronounced whilst driving in tunnels. The authors conclude that drivers should not text message or engage in other distracting behaviors when driving in tunnels.

👁️ A **visual ergonomics checklist** prepared by Hillevi Hemphälä is available in Swedish at <http://www.ergonomisallskapet.se/dokument.html> and in English at <http://www.ergonomisallskapet.se/dokument/SFF%20Visual%20Ergonomics%20checklist%202012.pdf>

## What is visual image safety?

Visually induced motion sickness, visual fatigue and photosensitive seizures were first recognized as major biomedical concerns at an ISO Workshop on Image Safety in Tokyo in December 2004. Since then ISO have been drafting standards in these areas and at a CIE meeting on image safety in Paris 2006, it was suggested that a regular symposium should be held on the topic of visual image safety. Since then there have been three symposiums: Hong Kong (2007), Netherlands (2009) and Las Vegas (2011). VIMS2013 will be held in England in September 2013. For more information see <http://imago.sym-online.com/VIMS2013/>

## Focus on research

Christina Zetterlund is a PhD student who works in a Low Vision Clinic in Örebro, Sweden. Building on her basic optometry training, Christina's research area is vision and health related phenomena related to visual strain and low vision, in particular discomfort in the neck scapular area. Neck complaints are a

common disorder with a prevalence of about 15% at age 45, increasing to about 70% at age 65. "Neck and visual complaints impact on balance, physical activity and quality of life", says Christina. "This is why I am investigating this area."



Christina is supervised by Associate Professor Hans Richter (Centre for Musculoskeletal Research, Gävle) and Associate Professor Lars Olov Lundqvist (Rehabilitation Research, Örebro).

**NEXT NEWSLETTER DEADLINE:  
30TH JUNE 2013  
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