Newsletter

of the IFAC Technical Committee on Human-Machine-Systems

Issue 2003_2, October ´03

In this issue

The IFAC TC 4.5 goes online

The IFAC TC 4.5 will be present online since October 2003.

The goal is to provide members as well as non-members a site where they can get information on different issues concerning Human-Machine Systems. It will also be possible to do activities like subscribing for membership or newsletter. In this way, the IFAC TC 4.5 hopes to be able to reach a wide range of interested people. Please visit the home page at http://www.uni-kl.de/pak/ifac/ for more information.

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Kizito Ssamula Mukasa

IFAC TC 4.5 Editorial

Results of the 8th IFAC Symposium on Automated Systems based on Human Skill and Knowledge

From 22 to 24 Sept. the 8th IFAC Symposium on Automated Systems based on Human Skill and Knowledge took place in Goteborg Sweden. In 14 technical sessions 40 papers were presented by speakers from 13 countries. Technical visits to Volvo and a local hospital were also offered to the participants. The social program was highlighted by a boat-cruise to a nearby island in the North Sea, where the participants had a great evening with traditional Swedish seafood and entertainment. The conference proceedings will be available soon via Elsevier Science Ltd., Oxford UK. The organizing team around Prof. Johan Stahre from Chalmers University Goteborg and Lena Martensson from the Royal Institute of Technology in Stockholm did a wonderful job and organized an interesting conference. Besides the official program the IFAC TC´s 4.5 and 9.2 held official meetings.

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Detlef Zuehlke

Chairman TC 4.5 HMS

A Report of the IFAC TC 4.5 meeting in Goteborg

On 22 Sept. a TC 4.5 meeting was organized during the IFAC-Symposium in Goteborg. The Chairman Prof. Zuehlke and the Co-Chairman Prof. Wieringa were present plus another 6 participants.

The chairman gave a short introduction to the work of the last year. He introduced the new TC 4.5 newsletter and explained the web-presentation of the TC which is actually under construction. All members and interested persons are invited to contribute to the TC´s activities and their presentations.

The Co-Chairman gave a short overview over the topics of the Technical Board meeting in Aug. 03 in Rotterdam. A discussion was held concerning the pro´s and con´s of future multitrack conferences versus the traditional singletrack events like that in Goteburg or Atlanta. The Co-Chairman will report on this.

The chairman presented the preliminary Call-for-papers for the TC´s main event: the 9th IFAC/IFIP/IFORS/IEA Symposium on Analysis, Design, and Evaluation of Human-Machine Systems (IFAC-HMS 2004) to be held in Atlanta in Sept. 2004. Due to various organizational reasons the preparations for this event are already late. But the final version of the Call is due to be released these days. (Enclosed you will find the final draft of the Call as an pdf-attachment) Everyone is asked to circulate this Call to as many people as possible in short time in order to meet the deadline. Especially for researchers and industrial people with background in production engineering the Atlanta symposium may be combined with a visit of the IMTS (international machine tool show) in Chicago/IL (Sept. 8-15, 2004) , which is one of the most important international trade shows in the field of manufacturing equipment and control systems. It was felt by the participants that in Atlanta new forms of human-machine-systems like pervasive/ubiquitous sytems based on embedded and mobile / wearable computer technolgy should be addressed. The chairman will organize at least a paper session plus a panel discussion on emerging technologies. All interested people are kindly asked to submit papers in this direction.

Finally, the next IFAC world congress 2005 in Prague is not too far from today and the TC 4.5 is responsible for organizing tracks for this event. All interested people should be aware of the important dates. If anyone has suggestions for papers or panels he is kindly asked to contact the chairman.

The next TC 4.5 meeting will be held during the Symposium in Atlanta.

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Detlef Zuehlke

Chairman TC 4.5 HMS

Forthcoming events

- 11th IFAC Symposium on Information Control problems in manufacturing (INCOM'2004)
  Salvador/BA Brazil, April 5-7 2004.
  http://www.eletro.ufrgs.br/incom2004

- 7th IFAC Symposium on Cost Oriented Automation (COA 2004)
  Gatineau/Ottawa, Canada, June 7-9, 2004.
  http://www.uqo.ca/blum/ifac

- 9th Symposium on Analysis, Design, and Evaluation of Human-Machine Systems
  September 7-9, 2004, Atlanta, USA
  http://www.isye.gatech.edu/IFAC-HMS2004

Human-Machine Systems (HMS) influence human life everywhere – at work, on the move and at home. Human-Machine Interactions (HMI) with dynamic technical processes and Human-Computer Interactions (HCI) with software applications are strongly interrelated and will both be covered in this symposium. Automatic and smart behaviors as well as knowledge access are embedded in human interfaces and in decision support systems. Human-centered designs and human-centered automation are driving forces towards realizing the symbiosis among human, society, nature, and artifact and, thus, necessary for achieving higher efficiency, safety, performance, and satisfaction.

A firm theoretical and practical design methodology has to be established, applicable for all human-machine (computer) systems. Technological developments will increasingly be successful, and economical, only if end-user acceptance and improvements in joint human-machine system performance are guaranteed early on in the systems life cycle. Multi-modality and multimedia based interaction styles have to be more creative and flexible.

Cross-disciplinary experience, e.g., from the entertainment sectors such as the performing arts and music, should be exploited for the industrial, transportation, home, and service domains such as financial services.

Cultural differences are to be considered. Humans want to be in charge, mastering computers and machines in a task-oriented way, and be encouraged to use them in a friendly environment.

Persons with scientific and/or practical experience in the field of Human-Machine Systems are invited to submit papers in the topics:
- Analysis, Design, and Evaluation of Human-Machine Systems: Human-centered design and automation.
- Application Domains of Human-Machine Systems: e.g. advanced cooperation of humans and machines in various fields, such as material processing, production, quality control, and development.
- Human/Humane Aspects of Human-Machine Systems: e.g. Human mastering of machines, humanization. Human roles in different countries, cultures, and stages of automation.

Papers can be formal representation or interactive presentation (poster). Extended ABSTRACTS of each paper should be in English (1000-2000 words) with Figures and Tables. The cover page should contain: title of paper, name(s) of author(s), affiliation, address, phone, fax number, and email address of each author, as well as 5-10 keywords.

The abstracts should be received (by email) not later than **December 1, 2003**.

One author of each paper should pay registration fee as soon as the full paper is accepted.

For more information visit, please visit http://www.isye.gatech.edu/IFAC-HMS2004

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Kizito Ssamula Mukasa

IFAC TC 4.5 Editorial

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