

Newsletter

of the IFAC Technical Committee on Human-Machine-Systems

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Pervasive Computing: a new challenge for Human-Machine Interaction

In home and office automation, we are currently moving very quickly into a new relationship between the user and the technical equipment. All devices are becoming smaller and smarter, which means, they offer more sophisticated functions, often using knowledge about the tasks and the user environment. Furthermore all devices will be communicating among each other via wireless networks. And the steady advances in microelectronics make clear that we will follow that route to a new era of computing that was described by Mark Weiser years ago: the **ubiquitous computing** era (Weiser, 1991). Other often heard keywords with a similar meaning are **Pervasive Computing** or **Ambient Intelligence**.

Whatever we call it, the developments behind all this are the same. The computers will in future become smaller and smaller, more and more powerful and embedded in many devices. Thus, the computer will become invisible to the user. These multi-computer systems will be linked by wireless networks like WLAN, BLUETOOTH, UMTS offering mobility to the people which has never been available before. And this mobility will lead to new forms of working and living. First applications came up already in the field of consumer or office applications. Smart Homes or smart office buildings seem to be the first test beds for these technologies.

But when using these technologies in industrial environments, a lot of different requirements must be fulfilled before a widespread use is accepted. I believe that it is time to take a closer look on the developing technologies and discuss the challenges, problems and advantages in industrial applications. Key problems will surely be found in:

- Security and safety issues
- Design of human-machine-interaction
- Modeling and developing complex systems
- New system architectures
- Social effects of these technologies

During the Atlanta Symposium, a special session will address the described scope. I would appreciate if many of you will contribute to the beginning discussion and help to solve the problems for the benefit of the users.

Detlef Zuehlke

Chairman TC 4.5 HMS

Announcing the next TC 4.5 Meeting during the HMS-2004 Symposium in Atlanta

The IFAC Technical Committee on Human-Machine-Systems (TC 4.5) will conduct its annual meeting this year during the HMS-2004 Symposium in Atlanta. Proposed are the first or the second day of the symposium, i.e. Tuesday, September 7, or Wednesday, September 8, 2004. Agendas for this meeting include:

- A review of the TC 4.5 activities
- Planning the next activities
- HMI topics and sessions for the IFAC World Congress 2005
- Introducing new members

All interested participants are invited to join us in Atlanta.

Hope to see you there!!!

Detlef Zuehlke

Chairman TC 4.5 HMS

Call for Contributions on the 16th IFAC World Congress in Prague

As you surely already know, the **16th IFAC World Congress** will be held in **Prague, Czech Republic**, from **July 4 to July 8, 2005**. The Congress will be a good opportunity for new results and directions of Automatic Control theory, technology and applications. As such, it mainly will concentrate on the following key points:

- Emphasis on invited lectures including plenaries, surveys and tutorials
- Industry participation promotion
- Attract young people to study and work in the field

This is another chance for the TC 4.5 to contribute especially in its field of Human-Machine Systems. Activities include: Plenary sessions, Technical sessions, Panel sessions, Tutorials and Workshops.

I would like to motivate you all to contribute. If you have plans for special sessions or specific topics I would appreciate to receive this information.

Please send your suggestions to zuehlke@mv.uni-kl.de not later than **July 31, 2004**, so that we can meet the submission deadline, which is **September 8, 2004**.

And here are the important dates for the congress:

- June 1, 2004 - submission site for contributions opens.
- **September 8, 2004 - submission of full draft papers and invited sessions**
- **October 15, 2004 - submission of tutorials, workshops and panel session proposals**
- December 15, 2004 - notification of the acceptance/rejection of submitted contributions,
 - preliminary program announcement
- March 1, 2005 - delivery of final papers
- April 1, 2005 - final program announcement
- July 2-3, 2005 - pre-Congress program: Tutorials & workshops
- July 4-8, 2005 - Congress program

You can visit the congress website located at <http://ifacplaza.certicon.cz/index.php> for more information.

Thanks for cooperating.

Detlef Zuehlke

Chairman TC 4.5 HMS

Why is the conference business becoming harder? Tell us your opinion!

Over the past years, many conferences have been facing problems in attracting enough participants. There are many reasons discussed to make conferences as attractive as possible. But most of these have not brought the expected success. Therefore, we would like to learn more about the reasons pro and contra a specific international event.

We have prepared an online questionnaire located at <http://www.uni-kl.de/pak/ifac/ifacconferenceq.html> for this purpose.

Please visit the website, complete and submit the form before **July 31, 2004**.

Alternatively, you can use the form attached to this email.

Thanks for cooperating.

Detlef Zuehlke

Chairman TC 4.5 HMS

Forthcoming events

- [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>
- [16th IFAC World Congress](#)
July 4-8, 2005, Prague, Czech Republic
<http://ifacplaza.certicon.cz/index.php>

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Kizito Ssamula Mukasa

IFAC TC 4.5 Editorial

EDITORIALS

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