

# **Newsletter** of the IFAC Technical Committee on Human-Machine-Systems

Issue 2012\_1, March 2012 (Newsletter of IFAC TC 4.5 available on :<http://tc.ifac-control.org/4/5/newsletter>)

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(To publish your TC4.5 related information to the next newsletter: send your proposal by email to Frédéric Vanderhaegen: [frederic.vanderhaegen@univ-valenciennes.fr](mailto:frederic.vanderhaegen@univ-valenciennes.fr))

## **1. TC 4.5 Chair and Co-chairs 2011-2013.**

The chairing of the TC 4.5 has changed since september 2011 and is now validated.

The chair IFAC TC 4.5 is Professor Frédéric Vanderhaegen from the Human-Machine system Research Group of the University of Valenciennes, France.

The co-chairs are the organisers of the next symposia on Analysis, Design, and Evaluation of Human-Machine systems: Professor Sundaram Narayanan from the Wright State University, USA and Professor Tetsuo Sawaragi from Kyoto University, Japan.



Co-chair: Tetsuo Sawaragi



Chair: Frédéric Vanderhaegen



Co-chair: Sundaram Narayanan

This team will do their best to involve researchers to our Human-Machine Systems community and to animate interesting scientific discussions and exchanges between researchers of this community.

As required during our last TC meeting in Milano, our TC needs another co-chair from industry. If you are interested or if you know someone interested for being our co-chair from industry, please inform Frédéric Vanderhaegen by email at [frederic.vanderhaegen@univ-valenciennes.fr](mailto:frederic.vanderhaegen@univ-valenciennes.fr).

## **2. List of the IFAC TC 4.5 members**

Welcome to the incoming members. If there is any omission or mistake on this list, please send an email to Frédéric Vanderhaegen.

**Dr. Götz Botterweck, Ireland**, Lero - The Irish Software Engineering Research Centre , University of Limerick

**Professor Dr. Guy A. Boy, USA**, FIT (Florida Institute for Technology) - Human-Centered Design Institute

**Prof. Jose Roberto Castilho Piqueira, Brazil**, Federal Univ. of Rio Grande do Sul

**Prof. Pablo Castells, Spain**, Escuela Técnica Superior de Ingeniería Informática. Universidad Autónoma de Madrid

**Professor Myung Jin Chung, Korea**, KAIST

**Dr. Yun Hyung Chung, Korea**, Korea Institute of Nuclear Safety

**Professor Dr. Giovanni De Poli, Italy**, Center of Computational Sonology, Dept. of Electronics and Informatics

**Prof. Tadeusz Dobrowiecki, Hungary**, Budapest Univ. of Technology & Economics , Dept. of Measurement & Information Systems

Dr. Frauke Driewer, Germany, University of wuerzburg

**Professor Peter F. Elzer, Germany**, IPP, TU Clausthal

**Professor Cesare Fantuzzi, Italy**, Department of Science and Engineering Methods, University of Modena and Reggio Emilia

**Professor Dr. Florin-Gheorghe Filip, Romania**, Romanian Academy, INCE

**Dr. Robert Genser, Austria**, Institute for Handling Devices and Robotics

**Dr.-Ing. Dipl.-Inf. Daniel Görlich, Germany**, Frounhofer Institute for Experimental Software Engineering

**Dr. Dong-Han Ham, United Kingdom**, School of Computing Science, Middlesex University

**Dr. Peter G. Higgins, Australia**, Faculty of Engineering and Industrial Science, Swinburne University of Technology

**Professor Erik Hollnagel, Sweden**, CSELAB, Department of Computer and Information Science, University of Linköing

**Professor Baosheng Hu, China**, Systems Engineering Institute, Xi'an Jiaotong University

**Professor Dr. Koichi Inoue, Japan**, Department of Mechanical Engineering, Graduate School of Engineering, Osaka Sangyo University

**Dr. Meike Jipp, Germany**, Automation Laboratory, Institute of Computer Engineering, University of Heidelberg

**Professor Dr.-Ing. Gunnar Johannsen, Germany**, Systems Engineering and Human-Machine Systems , University of Kassel

**Dr. Andrzej Kasinski, Poland**, Inst. of Control & Information Engg. Poznan TU

**Dr. Kensuke Kawai, Japan**, Toshiba Corporation (retired)

**Professor Alex Kirlik, USA**, Institute of Aviation, University of Illinois at Urbana-Champaign

**Dr. Naoyuki Kubota, Japan**, Tokyo Metropolitan University, Graduate School of System Design

**Dr. Alar Kuusik, Estonia**, EE ELIKO Technology Competence Centre Akadeemia tee 23A

**Dipl.-Inf. Sandro Leuchter, Germany**, Fraunhofer Institute for Information und Data Processing (IITB), Dept. Interoperability and Support Systems

**Professor Dr. Alexander H. Levis, USA**, George Mason University

**Professor Dr. Morten Lind, Denmark**  
DTU Electrical Engineering

**Dr. Lena Mårtensson, Sweden**, Department of Industrial Economics and Management, Royal Institute of Technology

**Professor Dr. Patrick Millot, France**, Laboratoire d'Automatique et de Mécanique Industrielles et Humaines (LAMIH), University of Valenciennes

**Prof. Daihwan Min, Korea**, MIS Department, Korea University at Jochiwon

**Prof. Mirolyub Mladenov, Bulgaria**, University of Ruse "A. Kanchev, Department of Automatics, information

and control engineering

**Dr. Roberto Montanari, Italy**, Department of Science and Engineering Methods, University of Modena and Reggio Emilia

**Prof. Dr. Ir. Max Mulder, The Netherlands**, TU Delft, Faculty of Aerospace Engineering, Control and Simulation

**Dr. S. Narayanan, USA**, Department of Biomedical, Industrial, and Human Factors Engineering, Wright State University

**Dr. Sven Nomm, Estonia**, TUT, Control Systems Dept., Institute of Cybernetics

**Dr. Janet M. Noyes, United Kingdom**, Department of Experimental Psychology, University of Bristol

**Mr. Holger Oortmann, Germany**, Siemens AG, CT IC 7

**Professor Dr. Ron J. Patton, United Kingdom**, Department of Engineering

**Dr. Carl A. Pickering, United Kingdom**, Jaguar and Land Rover Res. Jaguars Cars Ltd, Engg. Centre

**Professor Amy Pritchett, USA**, Georgia Institute of Technology

**Dr. Daniel Repperger, USA**, U.S.A Air Force, AFRL/HECP

**Professor Bernard Riera, France**, CreSTIC, UFR Sciences Exactes et Naturelles

**Junior-Professor Dr.-Ing. Dipl.-Psych. Kerstin Roese, Germany**, User-centered Product Development, Center for Human-Machine-Interaction, University of Kaiserslautern

**Prof. Dr.-Ing. Matthias Rötting, Germany**, Human-Machine Systems, Institute of Psychology and Ergonomics, Technical University of Berlin

**Prof. Jose Luis Pons Rovira, Spain**, Grupo de Bioingenieria

**Professor Dr. Andrew P. Sage, USA**, Department of Systems Engineering and Operations Research

**Professor Dr. Eng. Tetsuo Sawaragi, Japan**, Department of Mechanical Engineering and Science, Graduate School of Engineering, Kyoto University

**Professor Dr.-Ing. Ludger Schmidt, Germany**, Human-Machine Systems Engineering, University of Kassel

**Prof. Marcin Sikorski, Poland**, Faculty of Management and Economics Gdansk UT

**Dr. Francisc Sisak, Romania**, Universitatea "Transilvania" Brasov

**Dr. Ahmad Skaf, France**

**Dr. Charlotte Skourup, Norway**, ABB AS, Corporate Research Center

**Professor Johan Stahre, Sweden**, Division of Production Systems, Chalmers University of Technology

**Professor D. Sc. Vadim L. Stefanuk, Russia**  
Institute for Information Transmission Problems

**Professor Tan Kay Chuan, Singapore**, Department of Industrial and Systems Engineering, National University of Singapore

**Professor Tibor Vámos, Hungary**, Computer And Automation Institute, Hungarian Academy

**Dr. Frederic Vanderhaegen, France**, CNRS, LAMIH-University of Valenciennes

**Professor Kim J. Vicente, Canada**, Cognitive Engineering Laboratory, Dept. of Mechanical & Industrial Engineering, University of Toronto

**Professor Peter Wieringa, The Netherlands**, Man-Machine Systems Group, Delft University of Technology

**Prof. Wan Chul Yoon, Korea**, KAIST

**Prof. Dr.-Ing. Jianhua Zhang, China**, School of Information Sciences and Engineering, East China University of Science and Technology

**Professor Dr.-Ing. Detlef Zühlke, Germany**, Center for Human-Machine Interaction, German Research Center for Artificial Intelligence

### 3. Proceedings of the 18th World Congress on Ergonomics (IEA congress)

Proceedings of the 18<sup>th</sup> World Congress on Ergonomics, February 12-16, 2012, in Recife, Brazil, are available on :<http://iospress.metapress.com/content/q66420837m77>

### 4. Programme of the workshop on Risks Taking in Life Critical Systems - Prevention and Crises management

The workshop on Risks Taking in Life Critical Systems - Prevention and Crises management, will be held in Melbourne, USA, March 14-16, 2012.

It is co-organized by the University of valenciennes, France and the Florida Institute of Technology, USA. For more detail, please contact: Prof. P. Millot ([Patrick.Millot@univ-valenciennes.fr](mailto:Patrick.Millot@univ-valenciennes.fr) or [pmillot@fit.edu](mailto:pmillot@fit.edu)) or Prof. G. Boy ([gboy@fit.edu](mailto:gboy@fit.edu)).

The programme is as follow:

*Wednesday March 14th*

*Morning: Enhancing human-error tolerance*

9:00-10:30 Enhancing error-tolerance and error-resistance: a way for the management of risks in life-critical systems? Patrick Millot, PR, LAMIH-CNRS-University of Valenciennes, France, visiting Professor at HCDi-FIT

11:00-12:30 Human-Machine cooperation for Life-Critical System. Serge Debernard, PR., LAMIH-CNRS-University of Valenciennes, France

12:30-2:00 Lunch

*Afternoon: Enhancing human error-tolerance*

2:00-3:30 Human-Machine Cooperation Modelling for dynamic adaptation of Life Critical Systems Control. Marie-Pierre Pacaux-Lemoine, Research Engineer, LAMIH-CNRS-University of Valenciennes, F

4:00-5:30 Design of Interactions between Drivers and Driver Assistance Systems. Toshiyuki Inagaki, PR, University of Tsukuba, Japan

5:30-6:00 Open discussion

*Thursday March 15th*

*Morning: Security and Multi-agent systems*

8:00-9:30 Risk Management in Highly Autonomous Systems. Jeffrey M. Bradshaw, Senior Research Scientist, IHMC, Pensacola, USA

10:00-11:30 Title to announced on security. Marco M. Carvahlo, HCDi-FIT, Melbourne, USA

11:30-1:00 Lunch

*Afternoon: Enhancing human error-resistance*

1:00-2:30 Towards Model Based Automation. Morten Lind, PR, TU Denmark, Copenhagen, Denmark

3:00-4:30 Dissonance engineering for risk analysis: a theoretical framework. Frederic Vanderhaegen, PR, LAMIH-CNRS-University of Valenciennes, France

4:30-5:00 pm Open discussion

*Friday March 16th*

*Morning: Enhancing human error-resistance (continued)*

8:00-9:30 Cognitive simulation of drivers' decision making process based on Situational Awareness dynamic modelling. Thierry Bellet, Researcher IFSTTAR (LESCOT), Bron, France

10:00-11:30 Dealing with the unexpected and crisis management. Guy A. Boy, HCDi-FIT, Melbourne, USA

11:30-12:00 Wrap-up

More details are available on: <http://research.fit.edu/hcdi/announcements/971>

## 5. Forthcoming events.

Workshop on Risks Taking in Life Critical Systems - Prevention and Crises management, March 14-16, 2012, Melbourne, USA: <http://research.fit.edu/hcdi/announcements/971>.

1st IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control (CESCIT 2012), April 3-5, 2012, Würzburg, Germany: [www7.informatik.uni-wuerzburg.de/cescit](http://www7.informatik.uni-wuerzburg.de/cescit)

9th International Conference on Informatics in Control, Automation and Robotics (ICINCO), July 28-31 2012, Roma, Italy: <http://www.icinco.org>

30<sup>th</sup> European Annual Conference on Human Decision Making and Manual Control (EAM2012), September 11-12 2012, DLR Braunschweig, Germany: [www.eam2012.net](http://www.eam2012.net)

International Conference on Human-Computer Interaction in Aerospace (HCI-Aero 2012), September 12-14, 2012, Brussels, Belgium: <http://research.fit.edu/hci-aero/HCI-Aero2012/Home.html>

ERGO-IHM2012, Nouvelles interactions, créativité et usages (New Interactions, creativity and usages), October 16-19 2012, Biarritz, France: <http://www.ergoihm.estia.fr/>

12th IFAC/IFIP/IFORS/IEA Symposium on Analysis, Design, and Evaluation of Human-Machine Systems, August 11-15, 2013, Las Vegas, USA: <http://www.cs.wright.edu/ifac/>.

IFAC Symposium Mechatronic Systems, April 10 – 12, 2013, Hangzhou, China.

## 6. Announcement for a leadership chair in intelligent transport systems

Closing Date: 23 March 2012 - University of Leeds, UK

New technology is enabling radical changes to the way people travel, the transportation systems they use and the interface between the two. In a bid to increase safety, reduce congestion and energy consumption, the future of driving is likely to involve the deployment of highly automated, cooperative and unmanned vehicles, which will manoeuvre by communicating with each other and with the built environment through a rapidly developing array of in-vehicle- and infrastructure-based systems and sensors.

We seek a dynamic research leader who will complement ITS' existing skills in this area, further developing opportunities for research funded by the UK government and research councils, by the European Commission and by industry. The appointee will be part of and have a major role in the multidisciplinary Safety and Technology Group building on their world leading research in driver behaviour and new technologies and driving forwards new teaching initiatives with the Faculty of Engineering.

Applicants could come from a range of disciplinary backgrounds, including, but not limited to, automotive engineering, computer science, robotics and cognitive systems, wireless communications and protocols.

For further information: <http://www.universityofleedschairs.co.uk/intelligent-transport-systems.php>

Information enquiries to:

Dr Greg Marsden Director of the Institute for Transport Studies Telephone: +44(0)113 343 5358 E-mail: <a href="mailto:g.r.marsden@its.leeds.ac.uk">g.r.marsden@its.leeds.ac.uk</a>	Dr Natasha Merat Research Group Leader for Safety and Technology Telephone: +44(0)113 343 6614 E-mail: <a href="mailto:n.merat@its.leeds.ac.uk">n.merat@its.leeds.ac.uk</a>
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