

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

**Issue 2016\_1, January 2016 (Newsletter of IFAC TC 4.5 available on: <http://tc.ifac-control.org/4/5/newsletter>)**

Happy new year and best wishes for 2016 hoping to see all colleagues from the human-machine systems communities at the 13<sup>th</sup> IFAC/IFIP/IFORS/IEA symposium on Design, Analysis, and Evaluation of Human-Machine Systems, Kyoto, August 30 to September 2, 2016! The paper and session submission site is still open: so do not hesitate to submit your sessions and papers on [http://www.syn.me.kyoto-u.ac.jp/IFACHMS2016/!](http://www.syn.me.kyoto-u.ac.jp/IFACHMS2016/)

This first 2016 newsletter contains:

1. Call for papers and session for the 13<sup>th</sup> IFAC/IFIP/IFORS/IEA symposium on Design, Analysis, and Evaluation of Human-Machine Systems, Kyoto, 2016
2. LAWS (i.e. acronym for “Lethal Autonomous Weapon Systems” or “Killer robots”): the viewpoint of human-machine systems?
3. List of IFAC TC 4.5 members
4. Future for IFAC TC 4.5
5. Events related to human-machine systems

*(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. Call for papers and session for the 13<sup>th</sup> IFAC/IFIP/IFORS/IEA symposium on Design, Analysis, and Evaluation of Human-Machine Systems, Kyoto, 2016**

Relate to several requests, the deadline for submitting regular papers and thematic topic session proposals is postponed to the 15<sup>th</sup> of January 2016. Final papers for the proposed thematic topic session are required before the 26<sup>th</sup> of January 2016.

This 13<sup>th</sup> IFAC/IFIP/IFORS/IEA symposium on Design, Analysis and Evaluation of Human-Machine Systems will be held at Kyoto from August 30 to September 2, 2016.

The symposium, held every triennium, continued on the success of the previous meetings, started since 1982: Kyoto (Japan, 2016), Las Vegas (USA, 2013), Valenciennes (France, 2010), Seoul (Korea in 2007), Atlanta (USA, 2004), Kassel (Germany, 2001), Kyoto (Japan, 1998), Boston (USA, 1995), The Hague (Netherlands, 1992), Xi'an (China, 1989), Oulu (Finland, 1988), Varese (Italy, 1985) and Baden-Baden (Germany, 1982).

The objective of the symposium was to provide an international forum for the exchange and sharing of the latest scientific and technological developments in human-machine systems research. The symposium highlighted the transformative impacts in research, theory, and application that are the result of recent technological advances. Domains of application included military; process control; medical; and other large, complex, and dynamic systems.

More information about this symposium is available on: <http://www.syn.me.kyoto-u.ac.jp/IFACHMS2016/>. Paper and session submission have to be done on: <https://ifac.papercept.net/conferences/scripts/start.pl>.

For corresponding with the symposium organizers, please send an email to: [sec-ifachms2016@me.kyoto-u.ac.jp](mailto:sec-ifachms2016@me.kyoto-u.ac.jp).

## 2. LAWS (Acronym for “Lethal Autonomous Weapon Systems” or “Killer robots”): the viewpoint of human-machine systems?

F. Vanderhaegen was invited to an informal meeting of experts to discuss on Lethal Autonomous Weapons Systems (LAWS). This meeting was held within the framework of the Convention on Certain Conventional Weapons (CCW) from 13 to 17 April 2015 at the United Nations in Geneva, Switzerland. It aimed at providing national delegations with a general state of the art about autonomy in both civil and military applications.

Of course the F. Vanderhaegen’s presentation as an expert on human-machine systems and system autonomy focused on concepts such as “Human in the Loop”, of “Technology for Human”, “Dissonance against Autonomy” or “Resilience of Human-Machine Systems”.

The program, the presentations and/or the texts of this meeting are available on: [http://www.unog.ch/80256EE600585943/\(httpPages\)/6CE049BE22EC75A2C1257C8D00513E26](http://www.unog.ch/80256EE600585943/(httpPages)/6CE049BE22EC75A2C1257C8D00513E26)

This meeting is a nice opportunity to open an interesting discussion in our IFAC TC 4.5 and/or in our IFAC federation, and debate on the autonomy of robots and the human role for validating possible dangerous decisions.

## 3. List of IFAC TC 4.5 members

Find enclosed the final list of our TC 4.5 members. Please, do not hesitate to inform F. Vanderhaegen if some information is wrong, or if new members have to be included.

Chair:

Prof. Frédéric Vanderhaegen, Human-machine systems, University of Valenciennes, France

Co-chairs:

- Prof. Sundaram Narayanan, Department of Biomedical, Industrial and Human Factors Engineering, Wright State University, USA
- Prof. Tetsuo Sawaragi, Department of Mechanical Engineering and Science, Kyoto University, Japan
- Dir. Laurent Bourrouilhou, UReason International BV, Delft, Netherlands

List of the IFAC TC members with their affiliation and email:

Dr. Götz Botterweck, Lero - The Irish Software Engineering Research Centre, University of Limerick	Ireland	goetz.botterweck@lero.ie
Dir. Laurent Bourrouilhou, UReason International BV, Delft	The Netherlands	lbourrou@ureason.com
Prof. Dr. Guy A. Boy, FIT (Florida Institute for Technology) - Human-Centered Design Institute	USA	gboy@fit.edu
Prof. Dr. Galip Cansever, Yildiz Technical University, Department of Control and Automation Engineering, Davutpasa Campus	TURKEY	agalipcanserver@gmail.com
Prof. Jose Roberto Castillo Piqueira, Federal Univ. of Rio Grande do Sul	Brazil	jose.piqueira@poli.usp.br
Prof. Pablo Castells, Escuela Técnica Superior de Ingeniería Informática. Universidad Autónoma de Madrid	Spain	pablo.castells@uam.es
Prof. Myung Jin Chung, KAIST	Korea	mjchung@ee.kaist.ac.kr
Dr. Yun Hyung Chung, Korea Institute of Nuclear Safety	Korea	yhchung@kns.re.kr
Prof. Dr. Giovanni De Poli, Center of Computational Sonology, Dept. of Electronics and Informatics	Italy	Giovanni.DePoli@dei.unipd.it
Prof. Tadeusz Dobrowiecki, Budapest Univ. of Technology & Economics, Dept. of Measurement & Information Systems	Hungary	dobrowiecki@mit.bme.hu

<b>Prof. Peter F. Elzer</b> , Retirement	Germany	elzer.home@t-online.de
<b>Prof. Cesare Fantuzzi</b> , Department of Science and Engineering Methods, University of Modena and Reggio Emilia	Italy	cesare.fantuzzi@unimore.it
<b>Prof. Dr. Florin-Gheorghe Filip</b> , Romanian Academy, INCE	Romania	ffilip@acad.ro
<b>Dr. Robert Genser</b> , Institute for Handling Devices and Robotics	Austria	rgenser@aon.at
<b>Dr.-Ing. Dipl.-Inf. Daniel Görlich</b> , SRH, Germany	Germany	daniel.goerlich@hochschule-heidelberg.de
<b>Dr. Dong-Han Ham</b> , School of Computing Science, Middlesex University	United Kingdom	d.ham@mdx.ac.uk
<b>Dr. Peter G. Higgins</b> , Faculty of Engineering and Industrial Science, Swinburne University of Technology	Australia	phiggins@swin.edu.au
<b>Prof. Erik Hollnagel</b> , CSELAB, Department of Computer and Information Science, University of Linköping	Sweden	Erik.Hollnagel@gmail.com
<b>Prof. Baosheng Hu</b> , Systems Engineering Institute, Xi'an Jiaotong University	China	bshu@xjtu.edu.cn
<b>Prof. Dr. Koichi Inoue</b> , Department of Mechanical Engineering, Graduate School of Engineering, Osaka Sangyo University	Japan	inoue@entre.osaka-sandai.ac.jp
<b>Dr. Meike Jipp</b> , German Aerospace Centre – DLR, Institute of Transportation Systems	Germany	meike.jipp@dlr.de
<b>Prof. Dr.-Ing. Gunnar Johannsen</b> , Systems Engineering and Human-Machine Systems, University of Kassel	Germany	G.Johannsen@Uni-Kassel.de
<b>Dr. Andrzej Kasinski</b> , Inst. of Control & Information Engg. Poznan TU	Poland	Andrzej.Kasinski@put.poznan.pl
<b>Dr. Kensuke Kawai</b> , Toshiba Corporation (retired)	Japan	
<b>Dr. So Young Kim</b> , Human-Systems Interaction Lab	USA	SYKim@ge.com
<b>Prof. Alex Kirlik</b> , Institute of Aviation, University of Illinois at Urbana-Champaign	USA	kirlik@uiuc.edu
<b>Dr. Naoyuki Kubota</b> , Tokyo Metropolitan University, Graduate School of System Design	Japan	kubota@tmu.ac.jp
<b>Dr. Alar Kuusik</b> , EE ELIKO Technology Competence Centre Akadeemia tee 23A	Estonia	alar.kuusik@ttu.ee
<b>Dipl.-Inf. Sandro Leuchter</b> , Professorship for Distributed Systems, Faculty of Communication and Environment, Rhine-Waal University of Applied Sciences, Kamp-Lintfort	Germany	sandro.leuchter@ieeeg.org
<b>Prof. Dr. Alexander H. Levis</b> , George Mason University	USA	alevis@gmu.edu
<b>Prof. Dr. Morten Lind</b> , DTU Electrical Engineering	Denmark	mli@elektro.dtu.dk
<b>Dr. Franck Mars</b> , Head of the PsyCoTec group (Psychology, Cognition, Technology), IRCyN - Nantes	France	franck.mars@ircyn.ec-nantes.fr
<b>Dr. Lena Mårtensson</b> , Department of Industrial Economics and Management, Royal Institute of Technology	Sweden	lena.martensson@index.kth.se
<b>Prof. Dr. Patrick Millot</b> , Laboratoire d'Automatique et de Mécanique Industrielles et Humaines (LAMIH), University of Valenciennes	France	patrick.millot@univ-valenciennes.fr
<b>Prof. Daihwan Min</b> , MIS Department, Korea University at Jochiwon	Korea	mismdh@korea.ac.kr
<b>Prof. Mirolyub Mladenov</b> , University of Ruse "A. Kanchev", Department of Automatics, information and control engineering, Faculty of "Electrical and Electronic Engineering and Automation"	Bulgaria	mladenov@uni-ruse.bg
<b>Dr. Roberto Montanari</b> , Università degli studi di Parma, Department of industrial engineering	Italy	roberto.montanari@unipr.it
<b>Prof. Dr. Ir. Max Mulder</b> , TU Delft, Faculty of Aerospace Engineering, Control and Simulation	Netherlands	m.mulder@tudelft.nl
<b>Dr. Anja Naumann</b> , DLR, Germany	Germany	Anja.Naumann@dlr.de
<b>Dr. S. Narayanan</b> , Department of Biomedical, Industrial, and Human Factors Engineering, Wright State University	USA	s.narayanan@wright.edu
<b>Dr. Sven Norm</b> , Tallinn University of Technology, Department of Computer Science, Akadeemia tee 15a, Tallinn, 12618, Estonia	Estonia	sven.norm@ttu.ee
<b>Dr. Janet M. Noyes</b> , Department of Experimental Psychology, University of Bristol	UK	J.Noyes@bristol.ac.uk
<b>Mr. Holger Oortmann</b> , Siemens AG, CT IC 7	Germany	holger.oortmann@siemens.com
<b>Dr. Carl A. Pickering</b> , Jaguar and Land Rover Res. Jaguars Cars Ltd, Engg. Centre	United Kingdom	cpicker6@jaguarlandrover.com
<b>Prof. Amy Pritchett</b> , Georgia Institute of Technology	USA	amy.pritchett@isye.gatech.edu
<b>Dr. Daniel Repperger</b> , U.S.A Air Force, AFRL/HECP	USA	daniel.repperger@wpafb.af.mil
<b>Prof. Bernard Riera</b> , CReSTIC, UFR Sciences Exactes et Naturelles	France	bernard.riera@univ-reims.fr
<b>Dr. Ling Rothrock</b> , Pennsylvania State University, USA	USA	lrx28@enr.psu.edu
<b>Prof. Dr.-Ing. Matthias Rötting</b> , Human-Machine Systems, Institute of Psychology and Ergonomics, Technical University of Berlin	Germany	roetting@mms.tu-berlin.de
<b>Prof. Jose Luis Pons Rovira</b> , Cajal Institute, Spanish National Research Council (CSIC)	Spain	jose.pons@csic.es
<b>Prof. Dr. Eng. Tetsuo Sawaragi</b> , Department of Mechanical Engineering and Science, Graduate School of Engineering, Kyoto University	Japan	sawaragi@me.kyoto-u.ac.jp
<b>Prof. Dr.-Ing. Ludger Schmidt</b> , Human-Machine Systems Engineering, University of Kassel	Germany	L.Schmidt@uni-kassel.de
<b>Prof. Marcin Sikorski</b> , Faculty of Management and Economics Gdansk UT	Poland	Marcin.Sikorski@zie.pg.gda.pl
<b>Dr. Francisc Sisak</b> , Universitatea "Transilvania" Brasov	Romania	sisak@marconi.unitbv.ro
<b>Dr. Charlotte Skourup</b> , ABB AS, Corporate Research Center	Norway	charlotte.skourup@no.abb.com
<b>Prof. Johan Stahre</b> , Division of Production Systems, Chalmers University of Technology	Sweden	johan.stahre@chalmers.se
<b>Prof. D. Sc. Vadim L. Stefanuk</b> , Institute for Information Transmission Problems	Russia	stefanukv@iitp.ru
<b>Prof. Tan Kay Chuan</b> , Department of Industrial and Systems Engineering, National University of Singapore	Singapore	isetank@nus.edu.sg
<b>Prof. Tibor Vámos</b> , Computer And Automation Institute, Hungarian Academy	Hungary	vamos@sztaki.hu
<b>Prof. Frederic Vanderhaegen</b> , CNRS, LAMIH-University of Valenciennes	France	vanderhaegen@univ-valenciennes.fr
<b>Prof. Kim J. Vicente</b> , Cognitive Engineering Laboratory, Dept. of Mechanical & Industrial Engineering, University of Toronto	Canada	vicente@mie.utoronto.ca
<b>Prof. Peter Wieringa</b> , Man-Machine Systems Group, Delft University of Technology	Netherlands	p.a.wieringa@tudelft.nl
<b>Prof. Wan Chul Yoon</b> , KAIST	Korea	wcyoon@kaist.ac.kr
<b>Prof. Dr.-Ing. Jianhua Zhang</b> , School of Information Sciences and Engineering, East China University of Science and Technology	P. R. China	zhangjh@ecust.edu.cn
<b>Dr. Zhicheng Zhang</b> , AREVA NP, Electrical and I&C Division, Tour Areva - 1 Place Jean Millier, 92084 Paris - La Defense	France	zhicheng.zhang@areva.com
<b>Prof. Dr.-Ing. Detlef Zühlke</b> , Center for Human-Machine Interaction, German Research Center for Artificial Intelligence	Germany	zuehlke@mv.uni-kl.de

Note: our colleague Professor Dr. Andrew P. Sage was removed from our list of IFAC TC members. See the message below of Gunnar Johannsen.

"Your email reminded me to check the List of Members in the TC 4.5. Human-Machine Systems Newsletter. There, Professor Dr. Andrew P. Sage is still listed, without mentioning a sad fact: Professor Dr. Andrew P. Sage died on Oct. 31, 2014, at his home. He was 81. He was Professor of Information Technology and Engineering at George Mason University and the first dean of the School of Information Technology and Engineering. He was one of the great promoters of our TC (e.g., Editor of the Automatica Special Issue on Control Frontiers in Knowledge Based and Man-Machine Systems), Vol. 19 (1983), Issue 6 (Nov), pp. 593-786, <http://www.sciencedirect.com/science/journal/00051098/19/6> - a wonderful start with the first event of our MMS/HMS conference series). And he was also a noble mentor for many of us. Here, several URLs follow honoring Andy Sage:

- <http://www.ieeesmc.org/publications/enewsletter/192-in-memorial-andrew-p-sage-jr-an-smc-pioneer>
- <https://newsdesk.gmu.edu/2014/11/memorial-andrew-p-sage-founding-dean-engineering-school/>
- [http://volgenau.gmu.edu/de/home/-/asset\\_publisher/HNSOWRmBcc5U/content/in-memorial-andrew-p-sage-school-of-engineering-s-founding-dean](http://volgenau.gmu.edu/de/home/-/asset_publisher/HNSOWRmBcc5U/content/in-memorial-andrew-p-sage-school-of-engineering-s-founding-dean)
- <http://www.legacy.com/obituaries/washingtonpost/obituary.aspx?pid=173026208>
- <http://obits.dignitymemorial.com/dignity-memorial/obituary.aspx?n=Andrew-Sage&lc=9741&pid=173009251&uuid=d72b3e8c-5e10-445d-91c6-15f78f504152&Affiliate=washingtonpost&PersonID=173026208&FHID=2195>
- <http://newsdesk.gmu.edu/wp-content/uploads/2014/11/Sage3-cropped-2.jpeg>
- <http://seor.gmu.edu/faculty/sage.html>

The last issue of the journal "Information Knowledge Systems Management" (editors A.P. Sage and W.B. Rouse), <http://www.iospress.nl/journal/information-knowledge-systems-management/>, published by IOS Press of Amsterdam in The Netherlands, edited by Bill Rouse, appeared on 16 April 2015 and was dedicated to Andy Sage: <http://content.iospress.com/journals/information-knowledge-systems-management/12/3,4>"

G. Johansen, November 19, 2015

#### **4. Future for IFAC TC 4.5**

2016 will be the opportunity to determine the location of our next symposia and to propose a new candidate for chairing our TC. A TC meeting will be organized during our 13<sup>th</sup> IFAC/IFIP/IFORS/IEA symposium in Kyoto in order to discuss on these proposals and validate them.

A proposal for our symposium of 2019 was done by Institute of Computer Science of Tallinn University of Technology, Estonia. The corresponding IFAC TC member for organizing this event is Sven Nõmm.

Other proposals are required for organizing our symposia in 2022 and in 2025.

A TC chair can have maximum two mandates and Frédéric Vanderhaegen did them. Please send to Frédéric Vanderhaegen your proposals for the next symposia organization and for potential future candidates to chair our TC.

#### **5. Events related to human-machine systems**

All IFAC events are listed on: [http://www.ifac-control.org/events/@@events\\_view](http://www.ifac-control.org/events/@@events_view)

Some events directly related to our IFAC TC 4.5:

12th IFAC Workshop on Intelligent Manufacturing Systems, IMS 2016, December 5-7 2016, Austin, TX, USA.

1<sup>st</sup> IFAC IEEE, EECI, NSF Conference on Cyber-Physical & Human-Systems - CPHS 2016, December 7-9 2016, Florianopolis, BRAZIL.

IFAC World Congress 2017, July 9-14 2017, Toulouse, FRANCE: <http://www.ifac2017.org/>