2009

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International Federation of Automatic Control

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Newsletter

IFAC Structure

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IFAC Journals

The Tables of Contents of the IFAC Journals can be found at

Automatica

http://www.elsevier.com/locate/automatica

Control Engineering Practice

http://www.elsevier.com/locate/conengprac

Engineering Applications of Artificial Intelligence

http://www.elsevier.com/locate/engappai

Journal of Process Control

http://www.elsevier.com/locate/jprocont

Annual Reviews in Control

http://www.elsevier.com/locate/arcontrol

Journal on Mechatronics

http://www.elsevier.com/locate/mechatronics

In the last issue of the IFAC Newsletter, an overview was given of the Executive Board of the Federation. As announced then, this issue will give a description of the Technical Board

Technical Board

At its core, IFAC is run by a small army of volunteers all over the world. They collaborate under the auspices of IFAC. Their activities are coordinated, and subject to quality control, through Technical Committees and IFAC's Technical Board, all of them ably assisted by the Secretariat. It is the work of these volunteers that makes IFAC what it is, and it is the quality of their work that provides IFAC with its reputation.

Today in research, and funding agencies more particularly, interdisciplinary research is in vogue, and attracts the most attention. By its very nature, our field of systems and control is one that is very attractive for interdisciplinary research, and we may look forward to a very bright future indeed. New fields like systems biology (well not so new, but very much in full swing), or new problems like sustainability, are at their very core systems engineering problems. Our field can make and will make substantial contributions (through collaboration with others). We can see this already in the development of our conferences and many of the IFAC technical activities.

Within this context of change, it is natural to

question if the old(er) structures, such as the Technical Board and its subcommittees, that were created when disciplines progressed as islands, serve us well. Indeed does the TB serve IFAC well? I would like to pose this question to our members, and seek their input. All inputs are welcome, and you can reach me on i.mareels@unimelb.edu.au with your point of view.

At first sight, and thinking back to our volunteers, the flexibility of the TB and its subcommittees are the main asset we have in this changing environment. As long as we coordinate the activities of the volunteers well, whilst ensuring that they have sufficient freedom to propose technical activities that serve our members, IFAC has nothing to fear. The technical activities will grow and wane with the scientific community supporting them as they are the true reflection of the living organism, which we call the IFAC family. In this sense I believe that the present quality control structure is serving us well, and I look forward to helping to maintain and build the reputation of IFAC as a key provider of quality technical activities that serve our community.

Iven Mareels, TB Chair

Below you can find an outline of the current TB structure, giving also an overview of the persons who are heading the various groups.

Apart from the Chair of the Technical Board who is, at the same time, one of the two Vice-Presidents of IFAC, the TB has a Vice-Chair and 14 ordinary members. Of these, some have specific tasks, such as advisory functions with respect to the next World Congress or liason tasks to the publications sector. We shall introduce them in greater detail in one of the next issues of the IFAC Newsletter.

With 40 Technical Committees, coordination is a major issue to avoid any overlaps, duplication of efforts, redundancies, etc. Thus, the 40 Committees are grouped into three areas:

Area 1: Theory
Area 2: Technology
Area 3: Applications

These areas are then, again, subdivided into **9 Coordinating Committees**, each of which is headed by a Coordinating Committee Chair, who is at the same time one of the 14 TB members. Each Coordinating Committee is in charge of up to five Technical Committees.

Area 1 - THEORY

Coordinating Committee (CC) 1: Systems and Signals CC Chair: Xi-Ren Cao

TC 1.1. Modelling, Identification and Signal Processing Hakan Hjalmarsson TC 1.2. Adaptive and Learning Systems Alexander Fradkov TC 1.3. Discrete Event and Hybrid Systems Alessandro Giua

TC 1.4. Stochastic Systems Charalambos Charalambous TC 1.5. Networked Systems Karl Henrik Johansson

Coordinating Committee (CC 2): **Design Methods** Patrizio Colaneri CC Chair:

TC 2.1. Control Design Alessandro Astolfi TC 2.2. Linear Control Systems Luc Dugard TC 2.3. Non-Linear Control Systems Xiaohua Xia TC 2.4. Optimal Control A.M. Tarasyev TC 2.5. Robust Control Faryar Jabbari

Area 2 - TECHNOLOGY

Coordinating Committee (CC) 3: Computers, Cognition and Communication CC Chair: Matjaz Colnaric

TC 3.1. Computers for Control Marek Wegrzyn TC 3.2. Cognition and Control Antonio Barros Ruano TC 3.3. Computers, Communication and Telematics Klaus Schilling

Coordinating Committee (CC) 4: Mechatronics, Robotics and Components CC Chair: **Detlef Zuehlke**

TC 4.1. Components and Technologies for Control Roberto Horowitz TC 4.2. Mechatronic Systems Masavoshi Tomizuka TC 4.3. Robotics Hideki Hashimoto TC 4.4. Cost Oriented Automation Mireille Bayart TC 4.5. Human Machine Systems Wan Chul Yoon

Area 3 - APPLICATIONS

Coordinating Committee (CC) 5: **Manufacturing and Logistics Systems** Laszlo Monostori CC Chair:

TC 5.1. Manufacturing Plant Control Carlos Eduardo Pereira TC 5.2. Manufacturing Modelling for Management and Control Jose Ceroni

TC 5.3. Enterprise Integration and Networking Herve Panetto TC 5.4. Large Scale Complex Systems Mietek A. Brdys

Coordinating Committee (CC) 6: **Power and Process Systems** CC Chair: Sigurd Skogestad

TC 6.1. Chemical Process Control Francis J. Doyle III Kazuya Asano TC 6.2. Mining, Mineral and Metal Processing TC 6.3. Power Plants and Power Systems Istvan Erlich TC 6.4. Fault Detection, Supervision & Safety of Techn. Processes Jakob Stoustrup

Coordinating Committee (CC) 7: Transportation and Vehicle Systems CC Chair: Lars Nielsen

TC 7.1. Automotive Control Gianfranco Rizzo TC 7.2. Marine Systems Antonio Pascoal TC 7.3. Aerospace Houria B. Siguerdidjane TC 7.4. Transportation Systems Anastasios Chassiakos TC 7.5. Intelligent Autonomous Vehicles Michel Devy

Coordinating Committee (CC) 8: **Bio- and Ecological Systems** CC Chair: Fan-Lun Xiong

TC 8.1. Control in Agriculture Noboru Noguchi TC 8.2. Biological and Medical Systems Steen Andreassen TC 8.3. Modelling and Control of Environmental Systems Andrea Castelletti TC 8.4. Biosystems and Bioprocesses Jaime Moreno Perez

Coordinating Committee (CC) 9: Social Systems Gheorghi Dimirovski CC Chair:

Fei-Yue Wang TC 9.1. Economic and Business Systems Frederique Mayer TC 9.2. Social Impact of Automation TC 9.3. Developing Countries Ibrahim Eksin Bozenna Pasik-DuncanS TC 9.4. Control Education

TC 9.5. Supplemental Ways of Improving International Stability Peter Kopacek

Iven Mareels Vice President **Technical Board Chair**



Iven Mareels was born in Aalst Belgium on 11 August 1959. He obtained the (ir) Masters degree of Electromechanical Engineering from Gent University, Belgium in 1982 and the PhD in Systems Engineering from the Australian National University, Canberra, Australia in 1987. Since 1996, he has been a Chair Professor of Electrical and Electronic Engineering in the Department of Electrical and Electronic Engineering, the University of Melbourne. In June 2007, he became Dean of the School of Engineering.

Previously he was a Reader at the Australian National University (1990-1996), a lecturer at the University of Newcastle (1988-1990) and the University of Gent (1986-1988).

University of Gent (1986-1988).

He has received several awards in recognition of his research and teaching. He was a recipient of a 2008 Clunies Ross Award, Academy of Technological Sciences and Engineering for his work on Smart Irrigation Systems, work that was also featured at the 2005 IFAC World Congress in Prague at a semi-plenary. In 2007 he received the inaugural Vice-Chancellor's Knowledge Transfer Excellence Award from the University of Transfer Excellence Award from the University of Melbourne, for his work in large scale irrigation systems with Rubicon Systems Australia. In 2005, he was named IEEE CSS Distinguished Lecturer, and in 1994 received the Vice-Chancellor's Award for Excellence in Teaching from the Australian National University. He was a co-editor in chief of Systems & Control Letters till December 2007. He has received several awards for his publications

He is Fellow of the Academy of Technological Sciences and Engineering, Australia, a Fellow of the Institute of Electrical and Electronics Engineers (USA), a member of the Society for Industrial and Applied Mathematics, a Fellow of the Institute of Engineers Australia, Vice-Chair and founding member of the Asian Control Association, and a member of the organising commitation, and a member of the organising commit-tee for the Asian Control Conference and for the Mathematical Theory in Networks and Systems conference. Over the period Jan 2003-Dec 2005 he was a member of the Board of Governors of the Control Systems Society IEEE. He is regis-tered with the Institute of Engineers Australia as a professional engineer. He is Chair of the Natio-ral Committee for Automatica. nal Committee for Automation, Control and Instrumentation and is now Chair of the Technical Board of the International Federation of Automa-

Board of the International Federation of Automatic Control for the triennium 2008-2011.

He has extensive experience in consulting for both industry and government. He has strong interests in education. He has taught a broad range of subjects in both mechanical and electrical engineering curricula. He was one of the developers of the Bachelor of Engineering at the Australian National University and one of the architects of the new 3+2 Master of Engineering education at the new 3+2 Master of Engineering education at Melbourne. His research interests are in adaptive and learning systems, nonlinear control and modelling. At present he has strong research interests in modelling and controlling of large scale systems, both engineered as well as natural systems, with a particular interest in modelling and control of epilepsy.

Iven Mareels has published widely, 3 research

monographs, in excess of 100 journal publications and 150 conference publications. He holds 3 international patents. He has supervised to completion 25 PhD students and is currently supervising 9 PhD students.

FORTHCOMING EVENTS

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Title	2009	Place	Further Information
IFAC Workshop Programmable Devices and Embedded Systems – PDeS 2009	February 10 – 12	Roznov Czech Rep.	http://pdes2009.vsb.cz e-mail: zdenek.slanina@vsb.cz
IMACS/IFAC Conference Mathematical Modelling – MATHMOD 09	February 11 – 13	Vienna Austria	http://www.mathmod.at/ e-mail: inge.troch@stadtkirche.at
IFAC Workshop Control Applications of Optimization CAO	May 06 – 08	Jyväskylä Finland	http://www.automaatioseura.fi/CAO*09 e-mail: office@atu.fi
IFAC Conference Fieldbuses and Networks in Industrial and Embedded Systems – FeT 2009	May 20 – 22	Ansan Korea	http://www.fet2009.org e-mail: fet2009@hanyang.ac.kr
IEEE/IFAC Intl. Workshop Robot Motion and Control - RoMoCo'09	June 01 – 03	Czerniejewo Poland	http://romoco.put.poznan.pl/ e-mail: krzysztof.kozlowski@put.poznan.pl
IFAC Symposium Information Control Problems in Manufacturing - INCOM 2009	June 03 – 05	Moscow Russia	http://incom09.org/ e-mail: noc@incom09.org
IFAC Workshop 2nd Dependable Control of Discrete Systems - DCDS'09	June 10 – 12	Bari Italy	http://dcds09.poliba.it e-mail: dcds09@deemail.poliba.it
IFAC Symposium Robust Control Design – ROCOND	June 16 – 18	Haifa Israel	http://www.technion.ac.il/~rocond09 e-mail: rocond09@technion.ac.il
IFAC Conference Analysis and Control of Chaotic Systems - CHAOS 2009	June 22 – 24	London UK	http://www.elec.qmul.ac.uk/chaos09 e-mail: chaos09@qmul.ac.uk
IFAC Workshop Aerospace Guidance, Navigation and Flight Control Systems - AGNFCS	June 30 - July 2	Samara Russia	http://www.ssc.smr.ru/agnfcs09.html e-mail: agnfcs09@ssc.smr.ru
IFAC Symposium Fault Detection, Supervision and Safety for Technical Processes – SAFEPROCESS	June 30 - July 3	Barcelona Spain	http://safeprocess09.upc.es/ e-mail joseba.quevedo@upc.edu
IFAC/CIGRE Symposium Power Plants und Power Systems	July 05 - 08	Tampere Finland	http://pppsc09.automaatioseura.fi/ e-mail: office@atu.fi
IFAC Symposium Identification and System Parameter Estimation- SYSID'09	July 06 - 08	St. Malo France	http://www.sysid2009.org/ e-mail: secretariat@sysid2009.org
IFAC Symposium Advanced Control of Chemical Processes - ADCHEM 2009	July 12 - 15	Istanbul Turkey	http://www.adchem09.ku.edu.tr/ e-mail: dburak@ku.edu.tr
IFAC Workshop Control of Distributed Parameter Systems	July 20 – 24	Toulouse France	http: www.laas.fr/CDPS09 e-mail: to be announced
IFAC Symposium Modelling and Control in Biological and Medical Systems – -MCBMS 09)	August 12 – 14	Aalborg Denmark	http://wwwmcbms09.hst.aau.dk/e-mail: mcbms09@hst.aau.dk
14th Intl. IEEE/IFAC Conference Methods and Models in Automation and Robotics – MMAR-09	August 19 – 21	Miedzyzdroje Poland	http://mmar.edu.pl e-mail: mmar@ps.pl
European Control Conference - in cooperation with IFAC -	August 23 – 26	Budapest Hungary	http://www.conferences.hu/ecc09/ e-mail: ecc09@conferences.hu
IFAC Workshop Time Delay Systems (8th)	September 01 – 03	Sinaia Romania	http://www.automation.ucv.ro/tds2009/ e-mail: vrasvan@automation.ucv.ro
IFAC Symposium Control in Transportation Systems - CTS 2009	September 02 – 04	Redondo Beach CA, USA	http://ee.usc.edu/CTS09/ e-mail: ioannou@usc.edu
IFAC Symposium Robot Control. – SYROCO 2009	September 10 – 12	Gifu Japan	http://www.syroco2009.org/ e-mail: syroco2009_office@syroco2009.org
EWICS/IFAC Intl. Conference Computer Safety, Reliability and Security – SAFECOMP	September 15 – 19	Hamburg Germany	http://www.safecomp.org e-mail: safecomp2009@informatik.haw-hamburg.de
IFAC Conference Analysis and Design of Hybrid Systems -ADHS 09	September 16 – 19	Zaragosa Spain	http://diisconf.cps.unizar.es/adhs09/web/ e-mail: adhs09@unizar.es

FORTHCOMING EVENTS (ctd.)

IFAC Conference Manoeuvring and Control of Marine Craft (MCMC'2009)	September 16 – 18	Guaruja http://w Brazil	/ww.mecanica-poliusp.org.br/07even/cont/mcmc/home.html e-mail: mcmc2009@poli.usp.br
IFAC Conference 2nd Intelligent Control Systems and Signal Processing – ICONS '09	September 21 – 23	Istanbul Turkey	http://www.icons2009.org e-mail: icons09@boun.edu.tr
IFAC Workshop Estimation and Control of Networked Systems	September 24 – 26	Venice Italy	http://www.necsys.org e-mail: zampi@dei.unipd.it
IFAC Workshop Discrete Event System Design – DesDes'09	October 06 – 08	Gandia, Valencia Spain	http://www.desdes.uz.zgora.pl e-mail: DESDes@iie.uz.zgora.pl
IFAC/(IEEE) Workshop Networked Robotics	October 06 – 08	Golden CO, USA	http://control.mines.edu/netrob09/ e-mail: kmoore@mines.edu
IFAC Workshop Mining, Mineral and Metal Industry	October 14 - 16	Viña del Mar Chile	http://www.ifacmmm2009.com/ e-mail: info@ifacmmm2009.com
IFAC Symposium Advances in Control Education	October 21 – 23	Kumamoto Japan	www.ace2009.cs.kumamoto-u.ac.jp e-mail: to be announced
IFAC Workshop Engine and Powertrain Control and Modeling (E-COSM*09)	November 30 - December 2	Rueil-Malmaison, Paris France	http://events.ifp.fr/ECOSM09 e-mail: to be announced
Title	2010	Place	Further Information
American Control Conference - in cooperation with IFAC -	June 30 July 02	Baltimore MD, USA	http://www.a2c2.org/conferences/acc2010/ e-mail: to be announced
IFAC Symposium DYnamics and COntrol of Process Systems - DYCOPS	July 05 – 07	Leuven Belgium	http://to be announced e-mail: to be announced
IFAC/(EFB) Symposium Computer Applications in Biotechnology - CAB	July 07 – 09	Leuven Belgium	http://to be announced http://to be announced
IFAC Symposium Large Scale Systems: Theory and Applications – LSS 2010	July 11 – 14	Villeneuve d'Ascq France	http://lss2010.ulbsibiu.ro/ e-mail: p.borne@ec-lille.fr
IFAC Symposium Advances in Automotive Control	July 12 – 14	Munich Germany	http://to be announced http://to be announced
IFAC Symposium Mining, Mineral and Metal Processing	August 02 – 04	Cape Town South Africa	http:// to be announced e-mail: to be announced
IFAC Symposium Nonlinear Control Systems - NOLCOS 2010	September 01 - 03	Bologna Italy	http://www.nolcos2010.unibo.it/ e-mail: lmarconi@deis.unibo.it
IFAC Symposium Intelligent Autonomous Vehicles -IAV	September 06 - 08	Lecce Italy	http://iav2010.unile.it/ e-mail: iav2010@unile.it
IFAC Symposium Automatic Control in Aerospace	September 06 – 10	Nara Japan	www.space.t.u-tokyo.ac.jp/aca2010 e-mail: to be announced
IFAC Conference Management and Control of Production and Logistics – MCPL-2010	September 08 – 10	Coimbra Portugal	http://www.dei.uc.pt/MCPL2010 e-mail: to be announced
IFAC Symposium Mechatronic Systems	September 13 – 15	Boston, MA USA	http:// to be announced e-mail: to be announced
IFAC Symposium Telematics Applications – TA'2010	October 05 – 08	Timisoara Romania	http:// www.upt.ro/ta2010 e-mail: to be announced

Offenlegung:

Das Medienwerk 'IFAC Newsletter' wird als Organ der 'International Federation of Automatic Control' (IFAC) verlegt und ist Eigentum dieser Internationalen Föderation, deren Tätigkeit der Förderung von Wissenschaft und Technik automatischer Regelung und Steuerung dient. Die Föderation hat ihren Sitz in Zürich und ist nach Schweizer Recht als gemeinnütziger Verein angemeldet. Sie verfolgt weder wirtschaftliche noch praktische Ziele.

Das Sekretariat der IFAC befindet sich seit 1978 aufgrund eines Übereinkommens mit der

Das Sekretariat der IFAC befindet sich seit 1978 aufgrund eines Übereinkommens mit der Österreichischen Bundesregierung mit der Österreichischen Akademie der Wissenschaften in Laxenburg

Laxenburg. Der 'IFAC Newsletter' erscheint sechsmal jährlich in englischer Sprache unter der Redaktion des Generalsekretärs der IFAC, Univ.Professor Kurt Schlacher. Die Zeitschrift dient der Information über die Aktivitäten der IFAC. Sie wird kostenlos an Abonnenten in 50 Länder versandt. Die Kosten werden von der IFAC aus Beiträgen der derzeit 52 Mitgliedsländer getragen.

Mitgliedsländer getragen.
Präsident der IFAC für 2008-2011 ist Prof. Alberto Isidori (Italien), Vizepräsidenten sind Prof. Iven Mareels (Australien) und Prof. Roger Goodall (Grossbritannien). Alle Funktionen werden ehrenamtlich ausgeübt.

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