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Automatica

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

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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>

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## Council- and Related Meetings London, UK, 24 - 26 June, 2009

The first Council- and Related Meetings since the last IFAC World Congress in Seoul, Korea, was held in London, upon invitation of the United Kingdom Automatic Control Council - UKACC, the UK NMO of IFAC, and in conjunction with, and the support of, the organizers of the IFAC Conference Analysis and Control of Chaotic Systems - CHAOS 2009.

The Council meeting as such, was preceded by meetings of the various Boards and Committees, including, among others, the Technical Board and the Executive Board, the Executive Committees and the first meeting of the International Program Committee for the next IFAC World Congress in Milan, Italy.

At the Council meeting various developments were discussed. Below we shall inform about some of the most important items.

### The Development of IFAC PapersOnLine

The IFAC President could report that the website now contains proceedings of 41 meetings, including the last three Congresses. A total of about 10.500 papers have been archived. For the 2005 – 2008 triennium, the website now archives papers of 20 Symposia, 5 Conferences and 11 Workshops. There are currently 5000 registered users. So far 28.000 papers have been downloaded since the launch of PapersOnLine. If you want to look at the IFAC PapersOnLine website, go to <http://www.ifac-papersonline.net>

It is important to note for all authors that IFAC PapersOnLine will be indexed by SCOPUS starting mid-August, with papers going back to January 2009 and there are plans to have IFAC papers and events also included into the Engineering Index and in other indices of most prestigious scientific conferences.

Apart from providing high-quality papers, authors have the duty to follow the guidelines for authors in the production of their pdf files. Organizers of events must provide the means for the authors to

submit their paper files in a convenient way, e.g. by setting up a web site. In order to ensure that the paper files, stored in the IFAC PapersOnLine site, can be read with the highest quality on all computer platforms, and that IFAC papers can be efficiently searched, pdf files containing papers submitted to IFAC meetings and their metadata are required to comply with a set of specifications where paper files can be uploaded.

If you want to know more about the instructions to authors to help them produce papers which can be easily included into IFAC PapersOnLine, go to <http://www.ifac-control.org/about/new-instructions-for-ifac-authors>

### Congress Reports

The IFAC Congress sites and Presidents until 2014 have been selected already some time ago. The next one will take place in Milan, Italy, from 28 August - 2 September, 2011. You can see the current developments on the Milan website at <http://www.ifac2011.org/>. Also the 2014 Congress is in the first stages of preparation. It will take place in Cape Town in South Africa end of August 2014 - the first time ever that an IFAC World Congress will be held in Africa. The future President, Professor Ian Craig reported and stressed that there will be efforts to involve other African countries in the planning and organization of the 19th World Congress.

### Congress Bids 2017

Although it is still eight years away, a Call for Congress Bids 2017 was already issued. IFAC is very proud indeed that seven National Member Organizations have responded to that first Call, expressing their interest in hosting the 2017 Congress. Basing on a short presentation given by each of the bidding NMOs a secret vote in Closed Council was then taken, basing on the criteria, the NMOs had been informed of. This first ballot aims at narrowing down the number of bidders from seven to a maximum of three. Although all presentations were excellent and all candidates showed excellent venues and President candi-

## Congress Applications Paper Prize 2008

dates, a choice had to be made for next year's presentation and decision on the President and Congress location in 2017. The shortlist now consists of three NMOs which will be invited to make their presentations at next year's Council meeting in Baltimore, USA. This Council meeting will be held at the beginning of July, 2010, upon invitation of the US NMO and in conjunction with the American Control Conference.

### The International Economic Crisis and IFAC Finances

A question frequently asked is: How does IFAC finance its activities. IFAC does not shy away from answering this question frankly. In view of the international financial and economic situation, it is good to hear that IFAC finances, though slightly affected, continue to be stable. This is not least due to the careful management of funds by the current IFAC Treasurer, Professor Lino Guzzella, and the Treasurers preceding him. In the near future, the Treasurer, together with the Administration- and Finance Committee will undertake a careful evaluation of IFAC PapersOnLine, which is and will be completely free-of-charge for persons downloading papers. There are of course costs associated with such a platform and, depending on the outcome of the evaluation, there may be slight costs to organizers in the future.

On the income side, IFAC gets its funds from membership fees of its National Member Organizations. These membership fees have remained unchanged now for more than 10 years. Again, there will be an evaluation in which the membership fees are compared to the inflation rates in various countries.

The other source of income is royalties from Journal publications. For several decades, IFAC has had a publications agreement with Elsevier (formerly Pergamon Press). This agreement has always been of mutual benefit, with the group of IFAC Journals growing from originally one (Automatica) to now five IFAC Journals (see list of IFAC Journals on page 1). The decrease of income from publications is thus not due to lower sales, but to less favourable rates of exchange between the British Pound and the Euro.

Most of the expenditure incurred, goes into the administration of the Federation, i.e. the IFAC Secretariat, which is now staffed by three persons. Other than that, all services to IFAC are voluntary and unpaid. A question that is frequently asked is: Does IFAC benefit financially from the events it organizes? The answer is: IFAC does not benefit financially. All the profit that is made from an event is the profit of the organizer of the event and/or the National Member Organization. What IFAC does is to provide its knowhow, its top standards with respect to peer reviewing of papers and the certainty that, having presented a paper in an IFAC sponsored or co-sponsored event assures top quality and being cited in prestigious indices.

Kurt Schlacher

In the last issue of the IFAC Newsletter, we presented last year's winners of the Young Author Prize at the Seoul World Congress. In this issue, we present the winners of the Applications Paper Prize at the Congress.

The prize is given for outstanding technical contributions at an IFAC Congress in the area of control applications. This includes, but is not limited to, case studies, design and implementation of control systems and optimization of operations in a process, but generally excludes work of a simulation or laboratory scale nature that does not embrace work on an actual full-scale process.

Five papers were selected as finalists by a selection committee and the winning paper was then determined directly at the Congress, using also the presentation as an additional yardstick to determine the winner.

The winning paper was:

### Vibration Damping of a Flexible Car Body Structure Using Piezo-Stack Actuators

by Dr. Martin Kozek, Dr. Christian Benatzky, DI Alexander Schirrer, Dr. Anton Stribersky

#### Abstract

In this work piezo-stack actuators mounted in consoles are utilized to actively dampen vibrations of a flexible car body structure by introducing bending moments. Using an example of a heavy metro vehicle the complete design for the active vibration damping system is presented. Both analytical modeling and a system identification of the vehicle are described, issues of modal representation and model reduction are covered, and a robust controller design is motivated and explained. The excellent performance of the proposed method is documented by both experimental results from a scaled model and an extensive co-simulation of the overall system.



Ao.Univ.Prof. DI Dr. **Martin Kozek** has been Deputy Head of the Department for Control and Process-Automation at the Institute for Mechanics and Mechatronics, Faculty of Mechanical and Industrial Engineering, Vienna University of Technology, since 2003. His main research interests are theoretical and experimental modeling, active vibration control, and predictive concepts in process control.



DI Dr. **Christian Benatzky** finished his PhD-thesis „Theoretical and experimental investigation of an active vibration damping concept for metro vehicles“ in 2006. His thesis was part of the work he performed as research assistant at the Department for Control and Process-Automation at the TU Vienna. He is currently affiliated with Magna Steyr ECS, where he is responsible for modelling, simulation and experimental analysis of automa-tive drive-trains.



DI **Alexander Schirrer** is University Assistant at the Department for Control and Process-Automation at the TU Vienna. His research interests cover robust control of structural vibrations and optimization of control systems (optimal I/O-placement, parameter tuning). He has studied mechanical engineering as well as industrial engineering in informatics at the TU Vienna, for one year he was Erasmus-student at the KTH Stockholm, Sweden.



DI Dr. techn. **Anton Stribersky** has been Sub-Project Manager Systems Engineering for the Tram-Train Avanto Mulhouse at Siemens Transportation Systems GmbH & Co KG, Vienna, since 2007. His main research interests are vehicle systems dynamics, computational mechanics, and novel vehicle concepts.

## Jens G. Balchen (1926-2009)



Professor Jens Balchen died in Trondheim, Norway on 12 April 2009. With this one of the founders of automatic control has passed away. He was one of the 30 people to sign the resolution in Heidelberg on 27 September, 1956, that initiated IFAC. The IFAC family was very happy to welcome him again in Heidelberg in September 2006, when the Federation celebrated its 50th anniversary.

As a scientist and engineer he focused on applications, many of which have led to successful industrial products. One large success was the development of dynamic positioning systems for marine vessels using active thrusters in 1974, which developed into a global leader, Kongsberg Albatross, with about 300 people and about 90% of the world market for such systems. Other innovative applications include fisheries, aquaculture and ultra sound. He developed a fully automated computer controlled plant for production of small lobsters, and he became probably the world's leading expert in lobster farming!

Jens Balchen was a great man. With his charismatic personality he stood out in the control community. He had strong opinions, but was at the same time friendly and supportive. In particular, in the process control community he was always a strong supporter and pusher for model-based control, and his views were proved to be right with the current success of model predictive control.

## Antti Niemi (1928-2009)



Antti Niemi died in Helsinki, Finland, on 7 April, 2009. A. Niemi's research concerned both academic and industrially oriented projects on modelling and control of e.g. time-variant, continuous-flow processes, acidity (pH) of industrial liquids and properties of materials in metallurgical and cellulose pulp processes. In Finland he started the research on using machine vision in robotics, a topic which remained as one of his key interests through his career. He published a total of 300 scientific and technological papers and had several patents on applications of machine vision for processes of papermaking and mineral flotation.

After retirement in 1994 Antti Niemi continued his research work within scientific, technological and cultural fields. Besides technology, he was a classicist and Latinist, deeply devoted to studies of history and classical languages. He continued his research and academic studies in Helsinki University of Technology until the last weeks of his life.

Antti Niemi was the "Grand Old Man" of Control Engineering in Finland, and will be missed by his family, his friends and colleagues inside and outside IFAC and old students from five decades.



## FORTHCOMING EVENTS

2009  
No. 4  
August

Title	2009	Place	Further Information
IFAC Symposium Modelling and Control in Biological and Medical Systems – MCBMS 09	August 12 – 14	Aalborg Denmark	<a href="http://www.mcbms09.hst.aau.dk/">http://www.mcbms09.hst.aau.dk/</a> e-mail: <a href="mailto:mcbms09@hst.aau.dk">mcbms09@hst.aau.dk</a>
14th Intl. IEEE/IFAC Conference Methods and Models in Automation and Robotics – MMAR-09	August 19 – 21	Miedzyzdroje Poland	<a href="http://mmar.edu.pl">http://mmar.edu.pl</a> e-mail: <a href="mailto:mmar@ps.pl">mmar@ps.pl</a>
European Control Conference - in cooperation with IFAC -	August 23 – 26	Budapest Hungary	<a href="http://www.conferences.hu/ecc09/">http://www.conferences.hu/ecc09/</a> e-mail: <a href="mailto:ecc09@conferences.hu">ecc09@conferences.hu</a>
IFAC Workshop Time Delay Systems (8th)	September 01 – 03	Sinaia Romania	<a href="http://www.automation.ucv.ro/tds2009/">http://www.automation.ucv.ro/tds2009/</a> e-mail: <a href="mailto:vrasvan@automation.ucv.ro">vrasvan@automation.ucv.ro</a>
IFAC Symposium Control in Transportation Systems - CTS 2009	September 02 – 04	Redondo Beach CA, USA	<a href="http://ee.usc.edu/CTS09/">http://ee.usc.edu/CTS09/</a> e-mail: <a href="mailto:ioannou@usc.edu">ioannou@usc.edu</a>
IFAC Workshop Information Technology and Intelligent Control for Bioproduction System - BioRob	September 10 – 11	Champaign IL, USA	<a href="http://www.conferences.uiuc.edu/bioroboticsIV/">http://www.conferences.uiuc.edu/bioroboticsIV/</a> e-mail: <a href="mailto:kcting@illinois.edu">kcting@illinois.edu</a>
IFAC Symposium Robot Control. – SYROCO 2009	September 10 – 12	Gifu Japan	<a href="http://www.syroco2009.org/">http://www.syroco2009.org/</a> e-mail: <a href="mailto:syroco2009_office@syroco2009.org">syroco2009_office@syroco2009.org</a>
EWICS/IFAC Intl. Conference Computer Safety, Reliability and Security – SAFECOMP	September 15 – 19	Hamburg Germany	<a href="http://www.safecomp.org">http://www.safecomp.org</a> e-mail: <a href="mailto:safecomp2009@informatik.haw-hamburg.de">safecomp2009@informatik.haw-hamburg.de</a>
IFAC Conference Analysis and Design of Hybrid Systems - ADHS 09	September 16 – 19	Zaragosa Spain	<a href="http://diisconf.cps.unizar.es/adhs09/web/">http://diisconf.cps.unizar.es/adhs09/web/</a> e-mail: <a href="mailto:adhs09@unizar.es">adhs09@unizar.es</a>
IFAC Conference Manoeuvring and Control of Marine Craft (MCMC'2009)	September 16 – 18	Guaruja Brazil	<a href="http://www.mecanica-poliusp.org.br/07even/cont/mcmc/home.html">http://www.mecanica-poliusp.org.br/07even/cont/mcmc/home.html</a> e-mail: <a href="mailto:mcmc2009@poli.usp.br">mcmc2009@poli.usp.br</a>
IFAC Conference 2nd Intelligent Control Systems and Signal Processing – ICONS '09	September 21 – 23	Istanbul Turkey	<a href="http://www.icons2009.org">http://www.icons2009.org</a> e-mail: <a href="mailto:icons09@boun.edu.tr">icons09@boun.edu.tr</a>

## IFAC received "Seoul Tourism Awards 2009"

IFAC received the "Seoul Tourism Awards 2009" from Seoul City at a ceremony held at Shilla Hotel in Seoul on June 4, 2009.

The "Seoul Tourism Awards 2009" were awarded in 8 categories, one of which is "The Best Convention Host". "Seoul Tourism Awards 2009 - Best Convention Host" is given to the host of the best convention among all the conventions held in Seoul in 2008.

The IFAC World Congress 2008 was selected as the best convention by the Seoul Metropolitan Government for about 3800 paper submissions, about 2400 foreign scientists' registrations, excellent programs, and efficient operation.

At the ceremony, Prof. Wook Hyun Kwon, IFAC President 2005-2008, received the award on behalf of IFAC. The Seoul Tourism Award has so far been held twice and The Best Convention Host was awarded for the first time this year, which means that the IFAC World Congress 2008 is the first „Best Convention“ ever selected by the Seoul Metropolitan Government.



## FORTHCOMING EVENTS (ctd.)

IFAC Workshop Estimation and Control of Networked Systems	September 24 – 26	Vencie Italy	<a href="http://www.necsys.org">http://www.necsys.org</a> e-mail: <a href="mailto:zampi@dei.unipd.it">zampi@dei.unipd.it</a>
IFAC Workshop Knowledge and Technology Transfer in Developing Countries	September 26 – 29	Ohrid Macedonia, FYROM	<a href="http://decom09.feit.ukim.edu.mk/">http://decom09.feit.ukim.edu.mk/</a> e-mail: <a href="mailto:gdimirovski@dogus.edu.tr">gdimirovski@dogus.edu.tr</a>
IFAC Workshop Discrete Event System Design – DesDes'09	October 06 – 08	Gandia, Valencia Spain	<a href="http://www.desdes.uz.zgora.pl">http://www.desdes.uz.zgora.pl</a> e-mail: <a href="mailto:DESDes@iie.uz.zgora.pl">DESDes@iie.uz.zgora.pl</a>
IFAC/(IEEE) Workshop Networked Robotics	October 06 – 08	Golden CO, USA	<a href="http://control.mines.edu/netrob09/">http://control.mines.edu/netrob09/</a> e-mail: <a href="mailto:kmoore@mines.edu">kmoore@mines.edu</a>
IFAC/IFIP/IEEE Workshop Real Time Programming (30th) Jointly organized with IFAC Workshop Real Time Software (4th)	October 12 – 14	Mragowo Poland	<a href="http://wrtp-rts.imcsit.org/">http://wrtp-rts.imcsit.org/</a> e-mail: <a href="mailto:wrtp-rts2009@imcsit.org">wrtp-rts2009@imcsit.org</a>
IFAC Workshop Mining, Mineral and Metal Industry	October 14 - 16	Viña del Mar Chile	<a href="http://www.ifacmmm2009.com/">http://www.ifacmmm2009.com/</a> e-mail: <a href="mailto:info@ifacmmm2009.com">info@ifacmmm2009.com</a>
IFAC Symposium Advances in Control Education	October 21 – 23	Kumamoto Japan	<a href="http://www.ace2009.cs.kumamoto-u.ac.jp">www.ace2009.cs.kumamoto-u.ac.jp</a> e-mail: to be announced
IFAC Workshop Supplemental Ways for Improving International Stability – SWIIS	October 28 – 30	Bucharest Romania	<a href="http://swiis09.srait.ro/">http://swiis09.srait.ro/</a> e-mail: <a href="mailto:noc@swiis09.srait.ro">noc@swiis09.srait.ro</a>
IFAC Workshop Engine and Powertrain Control and Modeling (E-COSM'09)	November 30 - December 2	Rueil-Malmaison, Paris France	<a href="http://events.ifp.fr/ECOSM09">http://events.ifp.fr/ECOSM09</a> e-mail: <a href="mailto:clanglois@le-public-systeme.fr">clanglois@le-public-systeme.fr</a>
<b>Title</b>	<b>2010</b>	<b>Place</b>	<b>Further Information</b>
IFAC Conference Control Methodologies and Technology for Energy Efficiency (IFAC CMTEE 2010)	March 29 – 31	Vilamoura Portugal	<a href="http://www.cmtee.org/">http://www.cmtee.org/</a> e-mail: <a href="mailto:info@cmtee.org">info@cmtee.org</a>
IFAC Workshop Time Delay Systems – TDS 2010	June 07 – 09	Prague Czech Rep.	<a href="http://www.tds2010.fs.cvut.cz/">http://www.tds2010.fs.cvut.cz/</a> e-mail: <a href="mailto:tds2010@fs.cvut.cz">tds2010@fs.cvut.cz</a>
IEEE/IFAC Workshop Variable Structure Systems – VSS 2010	June 26 – 28	Mexico City Mexico	<a href="http://www.vss2010.unam.mx/">http://www.vss2010.unam.mx/</a> e-mail: <a href="mailto:gchair@unam.mx">gchair@unam.mx</a>
American Control Conference - in cooperation with IFAC -	June 30 July 02	Baltimore MD, USA	<a href="http://www.a2c2.org/conferences/acc2010/">http://www.a2c2.org/conferences/acc2010/</a> e-mail: to be announced
IFAC Workshop Intelligent Manufacturing Systems – IMS	July 01 – 02	Lisbon Portugal	<a href="http://www.ims10.ipb.pt/">http://www.ims10.ipb.pt/</a> e-mail: <a href="mailto:ims2010@uninova.pt">ims2010@uninova.pt</a>
IFAC Symposium DYnamics and COntrol of Process Systems - DYCOPS	July 05 – 07	Leuven Belgium	<a href="http://www.dycops2010.org/">http://www.dycops2010.org/</a> e-mail: to be announced
IFAC/(EFB) Symposium Computer Applications in Biotechnology - CAB	July 07 – 09	Leuven Belgium	<a href="http://www.cab2010.org/">http://www.cab2010.org/</a> <a href="http://to be announced">http://to be announced</a>
IFAC Symposium Large Scale Systems: Theory and Applications – LSS 2010	July 11 – 14	Villeneuve d'Ascq France	<a href="http://lss2010.ulbsibiu.ro/">http://lss2010.ulbsibiu.ro/</a> e-mail: <a href="mailto:p.borne@ec-lille.fr">p.borne@ec-lille.fr</a>
IFAC Symposium Advances in Automotive Control - AAC	July 12 – 14	Munich Germany	<a href="http://www.vdi.de/aac2010">http://www.vdi.de/aac2010</a> e-mail: <a href="mailto:ringelmann@vdi.de">ringelmann@vdi.de</a>
IFAC Symposium Mining, Mineral and Metal Processing	August 02 – 04	Cape Town South Africa	<a href="http://www.ifacmmm2010.com">http://www.ifacmmm2010.com</a> e-mail: <a href="mailto:info@ifacmmm2010.com">info@ifacmmm2010.com</a>
IFAC Symposium Analysis, Design, and Evaluation of Human-Machine Systems- HMS	August 31 - Sept. 03	Valenciennes France	<a href="http://www.univ-valenciennes.fr/IFACHMS2010/">http://www.univ-valenciennes.fr/IFACHMS2010/</a> e-mail: <a href="mailto:contact-ifachms2010@univ-valenciennes.fr">contact-ifachms2010@univ-valenciennes.fr</a>
IFAC Symposium Nonlinear Control Systems - NOLCOS 2010	September 01 - 03	Bologna Italy	<a href="http://www.nolcos2010.unibo.it/">http://www.nolcos2010.unibo.it/</a> e-mail: <a href="mailto:imarconi@deis.unibo.it">imarconi@deis.unibo.it</a>
IFAC Symposium Cost Oriented Automation – COA 2010	September 01 – 03	Prague Czech Rep.	<a href="http://ifac.cz/coa/">http://ifac.cz/coa/</a> (not yet operative) e-mail: to be announced
IFAC Symposium Intelligent Autonomous Vehicles - IAV	September 06 - 08	Lecce Italy	<a href="http://iav2010.unile.it/">http://iav2010.unile.it/</a> e-mail: <a href="mailto:iav2010@unile.it">iav2010@unile.it</a>
IFAC Symposium Cost Oriented Automation	September 06 – 08	Prague Czech Rep.	<a href="http://ifac.cz/coa/">http://ifac.cz/coa/</a> not yet opened e-mail: to be announced
IFAC Symposium Automatic Control in Aerospace	September 06 – 10	Nara Japan	<a href="http://www.space.t.u-tokyo.ac.jp/aca2010">www.space.t.u-tokyo.ac.jp/aca2010</a> e-mail: <a href="mailto:ifac.office@space.t.u-tokyo.ac.jp">ifac.office@space.t.u-tokyo.ac.jp</a>
IFAC Conference Management and Control of Production and Logistics – MCPL-2010	September 08 – 10	Coimbra Portugal	<a href="http://www.MCPL2010.uc.pt">http://www.MCPL2010.uc.pt</a> e-mail: <a href="mailto:mcpl2010@dei.uc.pt">mcpl2010@dei.uc.pt</a>
IFAC Symposium Mechatronic Systems	September 13 – 15	Boston, MA USA	<a href="http://to be announced">http:// to be announced</a> e-mail: to be announced
IFAC Symposium System Structure and Control	September 15 – 17	Ancona Italy	<a href="http://leibniz.diiga.univpm.it/SSSC10/">http://leibniz.diiga.univpm.it/SSSC10/</a> e-mail: to be announced
IFAC Symposium Telematics Applications – TA'2010	October 05 – 08	Timisoara Romania	<a href="http://www.upt.ro/ta2010">http://www.upt.ro/ta2010</a> e-mail: <a href="mailto:office.ta2010@aut.upt.ro">office.ta2010@aut.upt.ro</a>