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The Tables of Contents of the IFAC Journals can be found respectively 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>

Correction:

page 2 of issue 1/2009 of the IFAC Newsletter, list of Coordinating Committees, mistakenly gave identical names for CCs 6, 7, 8 and 9.

The correct names are:

CC6 - Power and Process Systems

CC7 - Transportation and Vehicle Systems

CC8 - Bio- and Ecological Systems

CC9 - Social Systems

We apologize for this mistake

The Power, Beauty and Excitement of the Cross-Boundaries Nature of Control Education Workshop Seoul, Korea, 6 July, 2008

Already at the World Congress in Prague, an initiative was started, aiming at young engineering students and high-school teachers, by organizing a Workshop for them. The initiative proved to be very successful and so the organizers of the World Congress in Seoul decided to continue this practice. Thus, a one-day Workshop was organized on the day preceding the Congress. It was held at the Convention and Exhibition Center (COEX) in Samsung-dong, Gangnam-gu, Seoul, Korea. The Workshop organizers were the Technical Committee on Control Education (TC 9.4) of the International Federation of Automatic Control (IFAC), the Technical Committee on Education of the Control Systems Society, the Institute of Electrical and Electronics Engineers (IEEE), the Korean Institute of Control, Robotics and Systems (ICROS), and the Robot HRD Center supported by the Korean “Ministry Knowledge Economy”.

The Workshop aimed to inspire interest from youth towards studies in Automatic Control and to assist high school teachers in promoting the discipline of Automatic Control among their students.

The Workshop was composed of five short but effective presentations on various problems from the real world that have been solved by using control engineering methods, techniques and technologies. The attractiveness and excitement of choosing a career in control engineering was also addressed. Live interaction between the presenters and the audience was an important feature of the Workshop.

The Workshop started at 10:00 a.m. with opening remarks by the organizers. Then the technical program followed.

Embedded Control Systems Professor S. B. Moon, Sejong University, Korea

The talk focused on the review of embedded hardware and operating systems so that one is equipped with the knowledge to make appropriate decisions on hardware and software in the initial stages. Control algorithms for robotic control, strategies for service robot planning, and human-robot interactions were also reviewed.

Basic concepts such as forward and inverse kinematics, and path planning were covered for industrial manipulators. Mobile navigation concepts including localization, mapping, and the required sensor technologies were summarized. As service robotic applications are emerging, HRI (Human Robot Interaction) technologies, such as face and gesture recognition, and speech processing in an

embedded module were reviewed too.

Joys and Perils of Automation: Controlling Elevators to Serve You Smart and Fast Professor Christos G. Cassandras, Department of Manufacturing Engineering and Center for Information and System Engineering (CISE), Boston University, USA

One of the definitions of the word “control” is “to govern or direct according to rule” (Merriam-Webster dictionary). In science and engineering, these “rules” have traditionally been dictated by the laws of nature - such as gravity or conservation of mass. Computer technology, however, has enabled us to build complex systems that have become essential to our daily life, from automated factories to computer networks. The “rules” that these systems must obey are as arbitrary as human imagination can make them. While this is exciting, it is also dangerous. The presentation contrasted those two kinds of systems and then

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discussed, as an example of the latter “human made” systems, the case of controlling elevators. The basic elevator dispatching control problem, where elevators are assigned to floors so as to minimize the amount of time people wait, was described. It was shown how simple ideas from control engineering can make elevators serve you smart and fast.

Network-Based Sensing and Control for Industrial Systems

Professor J. I. Moon, Hoseo University, Korea

The integration of intelligent devices, communication networks, and software into industrial systems can deliver fast diagnostics and warnings for system reliability, real-time control, system flexibility, and simplified wiring. That talk addressed industrial network solutions based on either wireless or wired network for sensing and control of industrial devices such as robot and vehicle systems. Among industrial wireless and wired network, wireless LAN and Zigbee based application examples were given. In addition, CAN (Controller Area Network) based examples were introduced.

A lunch break was taken from 11:30 until 1:00 with the presenters and attendees mingling in informal chats. **Professor Jong Hyeong Kim** of Seoul National University gave an exciting demonstration of a mobile robot system developed by his research group.

From the Brain to the Stock Market **Dominique Duncan, PhD student, Yale University, USA**

Two of the most complex systems disturbed by noise are the brain and the stock market. The presentation focused on showing how researchers model a noise in the brain as well as in the stock market. The similarities in the analysis of brain waves and of stock market behavior were discussed. The success of using mathematics and control engineering in predicting neurological disorders, such as epileptic seizures was reported, and then it was discussed that, at least in theory, one dollar can be turned into billions. It was

demonstrated that one can move from the brain to the stock market with powerful stochastic theory and control showing that the partnership between mathematics and control engineering, as well as a collaborative effort in research are necessary for success in solving complex problems of the modern world.

Cooperative Driverless Vehicles **Professor Ljubo Vlacic, Griffith University, Australia**

The idea of intelligent vehicles has brought with it promises of heightened safety, reliability and efficiency. No longer would the onus of responsible driving be placed on fallible humans, in fact, the very idea of a car crashing, or causing damage to someone would be completely alien and unthinkable. Congestion would entirely evaporate as computers took control of vehicles and decided the optimal route for greatest efficiency. While this seems extremely idealistic, there is an element of truth to these benefits that intelligent vehicle technologies can provide. Thanks to the most recent development of decision and control algorithms intelligent vehicles are now even capable of undertaking driving manoeuvres in cooperation with each other. That talk addressed intelligent vehicle technologies and gave examples of cooperative driverless vehicles for cities.

The presentations of the morning were followed by a stimulating and inspiring **panel discussion** moderated by **Professor Jong Hyeong Kim, Seoul National University**. In this panel there was a lot of interaction with the participating audience.

The discussion was then followed by a wrap-up of the workshop by **Professor Bozenna Pasik-Duncan**, the chair of the IEEE Control Systems Society Technical Committee on Control Education and **Professor Ljubo Vlacic**, the chair of the IFAC Technical Committee on Control Education.

This Workshop was one of the most important outreach program activity in connection with the Congress. It was an excellent service to the local community and, at the same time, a successful and memorable event. The feedback from the students and teachers was very positive. The comments

included statements such as: “It increased my interest in engineering. Good lunch, nice speakers, well prepared power point presentations. I learned about new technology and mathematics that we use everyday or in other people’s lives”.

Big thanks go to the organizers of the 17th IFAC World Congress led by Professors Wook Hyun Kwon, the IFAC President, and Hyungsuck Cho, the General Chair of the Congress, for their recognition of the importance of the Workshop and for their enthusiastic and highly appreciated support.



Bozenna Pasik-Duncan and Ljubo Vlacic
IFAC Technical Committee on Control Education



at the Workshop

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FORTHCOMING EVENTS

2009
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April

Title	2009	Place	Further Information
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://www.mcbms09.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: vasvan@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 Workshop Information Technology and Intelligent Control for Bioproduction System - BioRob	September 10 – 11	Champaign IL, USA	http:// to be announced e-mail: to be announced
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

FORTHCOMING EVENTS (ctd.)

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
IFAC Conference Manoeuvring and Control of Marine Craft (MCMC'2009)	September 16 – 18	Guaruja Brazil	http://www.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 & Control of Networked Systems	September 24 – 26	Venice Italy	http://www.necsys.org e-mail: zampi@dei.unipd.it
IFAC Workshop Knowledge and Technology Transfer in Developing Countries	September 26 – 29	Ohrid Macedonia, FYR	http://to be announced e-mail: to be announced
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 Supplemental Ways for Improving International Stability – SWIIS	October 28 – 30	Bucharest Romania	http://to be announced 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://www.vdi.de/aac2010 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 Analysis, Design, and Evaluation of Human-Machine Systems- HMS	August 31 - Sept. 03	Valenciennes France	http://www.univ-valenciennes.fr/IFACHMS2010/ e-mail: contact-ifachms2010@univ-valenciennes.fr
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