



2004
No. 5
October

International Federation of Automatic Control

Secretariat: Schlossplatz 12, A-2361 Laxenburg, Austria

Phone (+43 2236) 71 4 47, Fax (+43 2236) 72 8 59, E-mail: secre@ifac.co.at – URL: <http://www.ifac-control.org>

Newsletter

Contents:

Power Plants and Power Systems Control IFAC Symposium, Korea, September 2003	*
Technical Board Plans - Milestone Reports	*
Intelligent Assembly and Disassembly - IAD03 IFAC Workshop, Romania, October 2003	*
Telematics Application in Automation and Robotics IFAC Symposium, Finland, June 2004	*
Forthcoming Events	*
Who is Who in IFAC	*
Advances in Automotive Control IFAC Symposium, Italy, April 2004	*

IFAC Journals

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

Automatica

<http://www.elsevier.com/wps/find/journaldescription.lib librarians/270/description>

Control Engineering Practice

<http://www.elsevier.com/wps/find/journaldescription.lib librarians/123/description>

Engineering Applications of Artificial Intelligence

<http://www.elsevier.com/wps/find/journaldescription.lib librarians/975/description>

Journal of Process Control

<http://www.elsevier.com/wps/find/journaldescription.lib librarians/30445/description>

Annual Reviews in Control

<http://www.elsevier.com/wps/find/journaldescription.lib librarians/429/description>

Power Plants and Power Systems Control

IFAC Symposium, Seoul, Korea

September 15-19, 2003

The IFAC Symposium on Power Plants and Power Systems Control has been held at regular intervals for at least 20 years. The last symposium in this series, held in Seoul, Korea, was by far the most successful one so far with the largest attendance - over 400 participants from 26 countries. It provided an excellent opportunity for investigators from Korea, who were the majority, to take part in and present their work before an international audience. This Symposium is sponsored by the IFAC Technical Committee on Power Plants and Power Systems Control. The 2003 Symposium was organized by the Korean Institute of Electrical Engineers on behalf of ICASE, the Korean NMO of IFAC. It was co-sponsored by CIGRE and IEEE Power Engineering Society, and supported by a number of electrical utilities, power research institutes and other industries in Korea.

The technical program consisted of 3 plenary sessions, 3 panel sessions, 32 regular paper sessions, one poster session and one tutorial. In addition to the plenary and regular sessions, a full day technical excursion was arranged to the Shin-Ansung 765 kV Substation on the day following the last technical session.

The plenary lectures on:

- Evolution of the Power Market Structures and Practical Issues on Power Restructuring in Korea
- Amalgamation of Adaptive and AI Techniques: Application to Generator Excitation Control
- Approaching Wide-Area Stability Controls

were given by well-known experts in these fields from Korea, Canada and the USA.

The 32 regular paper sessions each with 4-5 oral presentations and the poster session covered every aspect of modeling, simulation, control and planning of power plants and power systems. The topics were arranged in four categories and the papers were well distributed in all areas. With the electric utilities being deregulated in various countries, the topic of Deregulated Power Markets was included for the first time in this symposium. Control can play a crucial role in efficient operation and in maintaining the stability of the power systems. Fragmented and ineffective regulation of electric utilities may compromise the electric system reliability. It is important to look into the development of suitable control strategies for the newly developing structure of the power systems.

The topics of:

- Concepts and Technologies for Suppliers in a Competitive Electricity Market Environment
 - Strategies to Mitigate Voltage Collapse in Practical Power Systems
 - Emerging Control Scheme and Systems for Practical Use of Distributed Generators
- were discussed in the three panels. Panel

presentations were followed by a lively discussion from the floor.

A free four hour tutorial on "Evolutionary Computation Techniques for Power System Optimization" was given for those interested. Control plays an extremely important role in the efficient and reliable operation of power systems. The big blackout of August 14 in North America, about four weeks before the symposium, had created a lot of excitement. The Local Organizing Committee was able to arrange, at very short notice, an extra lunch hour presentation on this blackout by one of the plenary speakers who had some information relating to this blackout. It was very enthusiastically received by the attendees.

The Korean Institute of Electrical Engineers arranged a technical exhibition in parallel with the symposium. All participants got the opportunity to familiarize themselves with the technical characteristics of the power plant and power system control technologies on display.

The entire paper submission, review, acceptance and final submission process was handled completely electronically. The International Program Committee accepted a total of 213 papers of which 100 were by authors from the host country. The percentage of papers presented was very high with just a few authors being unable to attend and present the papers. The organizers had received in advance power point presentations of all papers and the room monitors were always ready with the next presentation as soon as the previous presentation finished. A total of 200 papers have been recommended for publication in the Proceedings of the symposium to be published by Elsevier.

The symposium was extremely successful, the credit for which goes to the Local Organizing Committee. This was despite the fact that the symposium had to be postponed from the initial dates of June 9-12, 2003, due to the SARS scare.

The social side of the symposium was just as pleasant. In addition to the welcome reception, all delegates were invited to a banquet accompanied by a non-verbal performance of reckless rhythms that dramatized customary Korean percussion in a strikingly comedian stage show. In addition, the Local Organizing Committee arranged a tour for the accompanying persons, optional tours during the symposium and post symposium tours. It thus had a full technical and social program.

The Technical Committee has decided to hold the next symposium in 2006 in Calgary, Canada. For further information contact: Dr. Om Malik, maliko@ucalgary.ca.

Om Malik, IPC Chair
In-Seok Koh, IPC Co-chair

Technical Board Plans Milestone Reports

The IFAC Technical Board is preparing a series of Milestone Reports to assess the current state of the Control and Automation technology field. The reports will describe recent accomplishments, identify developing trends & challenges, and forecast anticipated future directions. Each of the nine IFAC Coordinating Committees will prepare a report so that the entire field of IFAC interest is covered; topics will include "theoretical" methodologies as well as the major "applications" of control technology. The Milestone Reports will be published as a part of the Proceedings for the upcoming Prague IFAC 2005 World Congress. There will also be special Milestone Panel Sessions held at the World Congress where each of the Milestone Reports will be presented in a panel session format which enables Congress registrants to participate in the discussions.

Intelligent Assembly and Disassembly - IAD03 IFAC Workshop Bucharest, Romania 9 – 11 October, 2003

Rapid development observed in modern production is firmly connected with the development of new assembly and disassembly systems. Fast changes of products and short development times of new products are demanded, development of reliable, fast adaptable and self teaching assembly systems can be observed. Important fields of product development such as product design, development of planning systems, simulation and modelling, logistics, mechatronics, and sensors, development of new assembly system components as well as collecting and processing of knowledge are essential for the development of new intelligent assembly systems (IAS).

The aim of the IFAC Workshop Intelligent Assembly and Disassembly (IAD'03) held in Bucharest on October 9-11, 2003 was to highlight the issues, show the actual results of the research and development work, set the direction of future development and analyse the possibility of introducing IAD into production processes.

Topics included, being not limited to, the following areas: (i) Design for assembly and disassembly; (ii) Planning systems and methods; (iii) Robotized assembly and disassembly; (iv) Logistics; (v) Applications (with special emphasis on SMEs); (vi) Deproduction problems; (vi) Virtual reality for assembly and disassembly; (vii) Internet-based assembly and disassembly.

From 48 received papers, 36 have been accepted for oral presentation. Three plenary papers were presented by: Guenther Schmidt from the Technical University of Munich, Marco Ceccarelli from the University of Cassino, Dragica Noe from the University of Ljubljana and Peter Kopacek from the Vienna Technical University. The geographic distribution of accepted papers is: PR China 2, USA 1, Romania 18, France 7, Spain 3, Japan 1, Germany 1, Austria 2, Italy 2, and Slovenia 2.

Regular papers were presented in seven Technical Sessions:

Disassembling Planning and Optimization

Agile Manufacturing and Integrated Logistic Systems

Robotics Solutions for Assembly and Disassembly

Non-Destructive Disassembly for Demanufacturing, Manufacturing Control Applications

Vision Systems in Assembling Processes
High Accuracy, Robotized Assembly
Multi-Agent Assembling Systems.
Educational Systems in Manufacturing Assembly

The quality of the papers was good, they highlighted issues in research and implementing, revealed the trends in assembly and disassembly techniques, and analysed the possibilities of future introduction of intelligent assembly techniques, mainly based on advanced information technologies, into flexible manufacturing. A significant number of papers were strongly related to manufacturing practice and developments, being of real relevance for industry.

The organisers of the IAD'03 event have planned the workshop such that the participants met in a panel of significant scientific and technical discussions, renewed professional contacts, and strengthened their technical expertise. The social and cultural events were chosen to give the authors the opportunity to exchange ideas in beautiful historical and cultural sites of Romania like the Royal Palace of Cotroceni – Bucharest or the King's Castle of Peles – Sinaia.

The National Organizing Committee has worked hard to put together an outstanding workshop program, for which we are grateful. We extend our gratitude to the distinguished plenary speakers, and thank all authors and attendees for their support and participation. We believe that IAD'03 was an important event for future development of assembly/disassembly technologies.

The IPC Chairs



Th. Borangiu,



P. Kopacek

Telematics Applications in Automation and Robotics IFAC Symposium

Espoo, Finland
June 21 – 23, 2004

This conference on Telematics Applications in Automation and Robotics was the second event in the series started in Weingarten in 2001. There is no doubt that modern telecommunications and information processing technologies provide tremendously increasing new activity possibilities and R&D challenges in the area of remote services, both in traditional industrial automation and non-industrial applications, like mobile machines and robots, traffic systems, constructed infrastructures, buildings and homes. The symposium series has been created to boost up these activities within the IFAC community together with other scientific communities active in the field.

Telematics is still a controversial issue in engineering sciences. What it covers or should cover is somewhat fuzzy in peoples' minds. One aim of the symposium was to further survey and take up those applications of telematics, which have essential meaning in automation and control. In this symposium methodologies, technologies and special application topics related to the area were considered. The topics varied from communication technology oriented studies to various applications fields, like navigation, tele-operation, tele-education, and space and military. Also an industrial session was organized. Several companies had their statements and an interesting visit was organized to an energy company performance centre, where telematics is in everyday use. The program was not massive - it was run mainly in one track - and participation was limited to about 60 people. However, the quality of presentations and interesting discussions among the participants compensated the high number of presentations.

IPC Chair



Arne Halme

This Newsletter may be reproduced in whole or in part. We encourage reprinting in national and local automatic control periodicals. Acknowledgement to IFAC would be appreciated.

Impressum:

Medieninhaber und Herausgeber:
International Federation of Automatic Control (IFAC),
Zurich
Schlossplatz 12, A-2361 Laxenburg, Austria

Verlagsort und Redaktion:
Dipl. Ing. Dr. Gusztáv Hencsey
Schlossplatz 12, A-2361 Laxenburg

Hersteller:
Artur Scheffczyk & Sohn
August-Reuss-Gasse, A-1130 Wien

Editor: Gusztáv Hencsey
Layout: Ernestine Rudas
published bimonthly



FORTHCOMING EVENTS

2004
No. 5
Oct.

Title	2004	Place	Further Information
IFAC Conference Manufacturing Modelling, Management and Control	October 21 – 22	Athens Greece	http://www.lms.mech.upatras.gr/IFAC-MIM04/ e-mail: angela@lms.mech.upatras.gr
SCS/IFAC Conference Advances in Vehicle Control and Safety - AVCS	October 28 – 31	Genova Italy	http://www.liophant.org/i_m_scs/i3m2004/avcs/ e-mail: rachid@u-picardie.fr
IFAC Conference Management and Control of Production and Logistics – MCPL-2004	November 2 – 5	Santiago Chile	http://www.uamericas.net/MCPL2004 e-mail: mcpl@uamericas.cl
IFAC Workshop Programmable Devices and Systems PDS-2004	November 18 – 19	Cracow Poland	http://pds2004.iel.polsl.gliwice.pl e-mail: pds2004@iel.polsl.gliwice.pl
IFAC Workshop Intelligent Assembly and Disassembly - I A D'2004 /CANCELLED119	November 18 – 20	Vienna Austria	http://www.ihr.tuwien.ac.at/iad04/ e-mail : han@ihr.tuwien.ac.at
IFAC Symposium System Structure and Control	December 8 – 10	Oaxaca Mexico	http://www.sssc04.cinvestav.mx e-mail: jtorres@cinvestav.mx
Title	2005	Place	Further Information
IFAC Workshop Advanced Control Circuits and Systems - ACCS	March 6 - 10	Cairo Egypt	http://www.eri.sci.eg/accs05 e-mail: accs05@eri.sci.eg
EDS/IEEE/IFAC Conference 13th Solid-State Sensor and Actuators - Transducers05	June 5 – 9	Seoul Korea	e-mail: info@transducers05.org http://www.transducers05.org
American Control Conference - in co-operation with IFAC -	June 8 – 10	Portland OR, USA	http://www.ee.washington.edu/conf/acc2005/ e-mail: SJayasuriya@mengr.tamu.edu
16TH IFAC WORLD CONGRESS	JULY 4 – 8	PRAGUE CZ	http://www.ifac.cz
Title	2006	Place	Further Information
IFAC Symposium Mathematical Modelling – 5 th MATHMOD	February 08 – 10	Vienna Austria	http://simtech.tuwien.ac.at/MATHMOD/ email: inge.troch@tuwien.ac.at
IFAC Symposium System Identification – SYSID 2006	April 19 - 21	Newcastle Australia	http:// not yet available e-mail: not yet available
IFAC Conference 6th Analysis and Design of Hybrid Systems - ADHS'06	June 07 – 09	Alghero Italy	http://www.diee.unica.it/adhs06/ e-mail: adhs06@diee.unica.it
IFAC Symposium 7th Advances in Control Education –ACE 06	June 21 - 23	Madrid Spain	http:// not yet available e-mail: not yet available
IFAC Conference Analysis and Control of Chaotic Systems	June 28 – 30	Reims France	http://www.univ-reims.fr/chaos06 e-mail: not yet available
IFAC Symposium 5 th Robust Control – ROCOND	July 05 – 07	Toulouse France	http:// not yet available e-mail: arzelier@laas.fr
IFAC Symposium Fault Detection, Supervision and Safety of Technical Processes – SAFEPROCESS	August 30 - September 1	Beijing China	http://www.au.tsinghua.edu.cn/safe/safeprocess2006/ e-mail: safeprocess2006@mail.tsinghua.edu.cn
IFAC Symposium 8 th Robot Control – SYROCO	September 6 - 8	Bologna Italy	http://www-lar.deis.unibo.it/syroco2006/ e-mail not yet available
IFAC Symposium Mechatronics Systems	September 12 – 14	Wiesloch Germany	http:// not yet available e-mail: not yet available

FORTHCOMING EVENTS (ctd.)

Title	2006	Place	Further Information
IFAC 50th Anniversary Celebration Present and Future of Automatic Control	September 15	Heidelberg Germany	
IFAC Symposium 6th Modelling and Control of Biomedical Systems	September 20 – 22	Reims France	http:// not yet available e-mail: not yet available
Title	2007	Place	Further Information
IFAC Symposium Nonlinear Control Systems	August 22 – 24	Pretoria South Africa	http:// www.nolcos2007.org.za e-mail: noc@nolcos2007.org.za
Title	2008	Place	Further Information
17th IFAC WORLD CONGRESS	July 6 - 11	Seoul Korea	http://www.ifac2008.org e-mail: Secretariat@ifac2008.org

WHO IS WHO IN IFAC



A. Talha Dinibütin, TB Member

A. Talha Dinibütin received both his M.Sc. and Ph.D. Degrees from the Mechanical Engineering Faculty of Istanbul Technical University (ITU), Istanbul, Turkey in 1960 and 1969, respectively. He worked as a Research Assistant (1961-1969) and Lecturer (1969-1974) at the ITU.

From 1972 to 1974, he was Visiting Fellow at the Engineering Department, University of Leicester, UK, during which time he also worked on a Control Research Project with the collaboration of ICI Billingham Division.

In 1974, he became Associate Professor in Control Engineering at the ITU. He held the position of Chairman at the Automatic Control Department of ITU between 1974-1979, where in 1980 he became Full Professor.

From 1980 to 1982, he was Visiting Professor at the Mechanical Engineering Department, Gannon University, Pennsylvania, USA, where he taught Mechanisms, Machine Design, Systems and Systems Laboratory, and at the same time was an advisor of an industrial project at the Skinner Engine Co. Erie, PA.

He was Vice-Dean of the Mechanical Engineering Faculty (1982-1985), Director of the Graduate School (1988-1991) and Dean of the Mechanical Engineering Faculty (1991-1994) at the ITU.

In 1999, he was elected Rector of Dogus University, Istanbul, Turkey, a position which he still holds. At this newly-established foundation university, he also held the positions of the Dean of the Engineering Faculty and Vice-Rector between 1997-1999.

A. Talha Dinibütin was the co-director of two research projects supported by NATO between 1970-1972 and 1976-1979. He was the NFP (National Focal Point) of UNDP/UNIDO's "Industrial Robotics Applications" regional project (1988-1991) and NPC (National Project Coordinator) of EUREKA (European Research Coordination Agency) between 1991-1993.

He has been President of the Turkish NMO of IFAC since 1990. He is one of the founders of the "Foundation of Automatic Control" in Turkey.

His main research interests are in the fields of dynamically loaded bearings, system dynamics, process control and robotics. He has supervised many M.Sc. and six Ph.D. students. He is the author/co-author of more than 40 publications.

A Talha Dinibütin was:

- NOC Chair of the IFAC Workshop on "Automatic Control for Quality and Productivity –ACQP'92, Istanbul, TR;
- NOC Chair, Steering Committee and IPC member of the 4th IFAC Symposium on "Advances in Control Education – ACE'97", Istanbul, TR;
- Advisory Committee and IPC member of the 5th IFAC Symposium on "Advances in Control Education – ACE' 2000", Gold Coast, AU;
- IPC member of the IFAC Conference on "Technology Transfer – DECOM – TT 2000" Pretoria, RSA;
- IPC member of the IFAC Workshop DECOM – TT 2001, Ohrid, MK;
- Advisory Committee and IPC member of the 6th IFAC Symposium on "Advances in Control Education – ACE'2003", Oulu, FI;
- IPC Co-Chair of the IFAC Workshop on "Automatic Systems for Building the Infrastructure in Developing Countries – DECOM-TT 2003", Istanbul, TR.

He was also the Vice-Chair of the IFAC TC on Developing Countries – DECOM for two terms between 1990-1993 and 1993-1996, and Chair of the IFAC TC DECOM for two terms between 1996-1999 and 1999-2002.

In 2002, he was elected Chair of the IFAC Coordinating Committee on Social Systems and member of IFAC's Technical Board.

Advances in Automotive Control IFAC Symposium

Salerno, Italy, April 19 - 23, 2004

The IFAC Technical Committee on Automotive Control recently sponsored the IFAC Symposium "Advances in Automotive Control" (www.ifac04.unisa.it).

It followed three previous meetings organized as IFAC Workshops in Ascona, Switzerland (1995), in the Mohican State Park in Ohio (1998), and in Karlsruhe, Germany (2001). The Symposium, also supported by the University of Salerno, Università del Sannio, AVL Italia, CRF, ELASIS, dSpace, SAE Naples Group and local institutions, focused on ten distinct subjects of interest to researchers and practitioners in the field of automotive control: Vehicle Dynamics, Engine Control, Engine Modeling, Driveline Modeling and Control, Subsystems, Design Chain for ACS, Exhaust Aftertreatment Systems, Fault Management, Hybrid and Electrical Vehicles, and Suspension Systems.

The chosen venue was the University of Salerno, in the South of Italy, a large and modern Campus hosting nine Faculties and 43000 students and descending from one of the oldest academic institutions in Europe, the "Schola Medica Salernitana".

The aim of the Symposium was to bring together leading specialists from industry and academia in an informal atmosphere to stimulate the open exchange of ideas. The upgrading of this meeting from an IFAC Workshop to an IFAC Symposium has proved to be well motivated, since the interest in the Automotive Control field has significantly grown in recent years, as evidenced by a remarkable increase in participation with respect to previous editions: more than 180 delegates from many countries and 5 continents have attended, with a total of 125 papers included in the Preprints of the Symposium Proceedings, two plenary lectures presented by renowned industry experts, and a stimulating Panel Discussion on the Automotive Open System Architecture.

As a general remark, this Symposium was characterized by a high level of multidisciplinary, with an increasing integration between researchers from mechanics, electronics and control and an evident enlargement of the community working in automotive control, both in universities and in industry.

In the opinion of many participants it was a very successful event both in terms of technical contents and of social aspects, with a very relaxed and friendly atmosphere contributing to stimulate discussions and to improve inter-personal relationships.

G. Rizzo