



# Newsletter

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**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

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## Beijing Just around the Corner!

### XIVth IFAC World Congress

5 - 9 July, 1999

With the IFAC World Congress in Beijing being only a few months away, interest in the structure of the technical meetings at the Congress is mounting. If you have not yet decided to go, here is an excerpt of what will be offered at the Congress.

#### Plenary Lectures

1. Optimization - A Many-splendored Thing (Yu-Chi Ho, USA)
2. Automotive Vehicle Control Challenges in the 21<sup>st</sup> Century (W. Powers, USA)
3. Some Recent Advances of Automatic Control in China (Lei Guo, China, P.R.)
4. Constructive Nonlinear Control: Progress in the 90's (P. Kokotovic, USA)
5. Systems - Governing Principles and Multi-media (T. Vamos, H)

#### Panel Discussions

1. The Control Challenge in the 21<sup>st</sup> Century (P. Groumpos, P. Albertos, P. Antsaklis)
2. Genetic Algorithms in Power System Optimizations: Current Application and Future Trends (Furong Li)
3. Open Electricity Market (Shuti Fu, Farrokh Albuyeh, David Sun, Xiaomin Bai)
4. Air Traffic Control Issues in the Western Pacific Region (S. Kahne)
5. Perspectives on Control (J. Doyle)
6. Neural Networks Applied to Diagnostics Estimation, Virtual Sensors and Classification (K. Marko, T. McAvoy)
7. Failure of Intelligent Control Systems and Lessons Learnt (Ming Rao)

#### Program Structure

The technical program of the Congress has been organized according to the Technical Committee structure of IFAC. 45 Technical Areas have been defined, reflecting the same number of Technical Committees. These have been clustered into 9 Congress Tracks, following the Coordinating Committee structure of IFAC. All Congress papers have been reviewed and arranged into 268 sessions by the IPC. Some of the sessions contain invited papers while the others are formed of contributed regular papers.

#### Poster Papers

About 20% of the 1999 IFAC Congress papers will be presented as Poster Papers. The Poster Papers, adhere to the same quality standards as the Lecture Papers. Authors will display their results on posters mounted on boards. Authors are expected to be at the site of their posters throughout the duration of their session to answer any questions. Poster paper manuscripts will appear in full in the Congress Proceedings.

#### Program Subjects

The sessions have been arranged into 17 subjects of roughly equal size. Each subject contains a set of sessions from the same or close Technical Areas. The lecture sessions will take place sequentially at the Congress, in the same room throughout the Congress. Most subjects have a number of associated poster sessions as well.

The 17 subjects are:

- A. Manufacturing, Social Effects, Scheduling and Planning
- B. Robotics, Automation
- C. Control Design
- D. Linear Systems, Robust Control I
- E. Robust Control II
- F. Nonlinear System I
- G. Nonlinear System II, Optimal Control
- H. Modeling, Identification, Signal Processing I
- I. Modeling, Identification, Signal Processing II, Adaptive Control
- J. Discrete Event Systems, Stochastic Systems, Fuzzy and Neural Systems I
- K. Fuzzy and Neural Systems II, Control in Agricultural Processes
- L. Biomedical and Environmental Systems, Systems Engineering
- M. Management, Global and Educational Issues
- N. Chemical Process Control, Mineral and Metal Processing
- O. Power Systems, Biotechnological Processes, Fault Detection I
- P. Fault Detection II, Aerospace, Marine Systems
- Q. Transportation Systems, Computer Control

#### Tutorial Workshops

Tutorial Workshops will be presented prior to the World Congress. On Sunday, July 4, 1999 there will be seven introductory/advanced workshops and one application workshop. The workshops provide background material on control techniques/methods/tools that have been developed during the last few years. Most of them involve certain fairly advanced developments. The application workshop introduces the applications of control theory in industries.

The participants will be control engineers, students with general, but perhaps not specialized knowledge about the topic of the workshop.

The subjects of the workshops and their presenters are:

1. Discrete Event Dynamic Systems: The State of the Art and New Directions (C. Cassandras, X. Xiao, Y. Ho)
2. Intelligent Control in Robotics and Automation (T.J. Tarn, N. Xi, S. Sastry, T. Fukuda, M. Spong, K. Kosuge, F. Nicolò)
3. Passivity-based Control of Lagrangian and Hamiltonian Systems: Application to Mechanical, Electrical, and Electro-mechanical Systems (R. Ortega, A. van den Schaft, B. Maschke)
4. Fault-tolerant Control Systems (R. Patton, J. Chen, N. Wu, B. Walker, T. Healey, M. Blanke, M. Bodson, D. Sauter)
5. Digital Signal Processors for Motor Control (I. Panahi, M. Ehsani, N. Matsui, Y-Y. Tzou)



6. Modeling and Identification with Orthogonal Basis Functions (J. Bokor, P. Heuberger, B. Ninness, T. Oliveira e Silva, P. van den Hof, B. Wahlberg)
7. Advanced Process Control and Optimization and its Industrial Applications (S. Qin, M. Arzenheimer, C. Cutler, J. Hind, M. Ogawa)
8. Intelligence and Automation for Agricultural Industry (F.-L. Xiong, T. Morimoro and Y. Hashimoto, P. Reffye, N. Sigrimis, H. Lemmon, R. Plant)

For more details and registration, please turn to the Congress homepage at <http://www.cicst.org.cn/ifac99> or contact:

**Registration Co-ordinator for Other Countries and Regions:**  
CICCST/IFAC99, No 86 Xueyuan Nan Road, Beijing 100081, China  
Phone: (86-10)62180144  
Fax: (86-10)62180142  
e-mail: sywu@public3.bta.net.cn

**Registration Co-ordinator within Chinese Mainland:**  
IFAC99, NOC Secretariat, Chinese Association of Automation, Beijing 100080  
Phone: (86-10)62544415  
Fax: (86-10)62620908  
e-mail ifac99@sunserver.ia.ac.cn

## Motion Control IFAC Workshop Grenoble, France, September, 21-23, 1998

This IFAC Workshop on Motion Control was organized by the Laboratoire d'Automatique de Grenoble, ENSIEG, INPG-CNRS, France. It was sponsored by the TC on Components and Instruments. The 75 participants had the possibility to listen to 3 plenary sessions, 3 Invited Sessions (15 papers) as well as 56 contributions (arranged in 12 regular sessions) selected by the International Programme Committee from 73 submitted papers coming from 21 countries. Three plenary talks covered different aspects of Motion Control. More precisely, R. Horowitz presented the Plenary Talk 1: "Control of Self-Optimizing Exercise Machines" a joint work by Horowitz Roberto, LI Perry Y. and Shields Joel, University of California, Berkeley (USA). The Plenary talk 2: "Motion Control Problems in Automotive Control" a joint work by Rousseau Christian, Garnier Christophe, Renault, Direction de la Recherche, Paris, (France) was delivered by Ch. Rousseau. The Plenary talk 3: "Control for Simulated Human and Animal Motion" was given by M. Van de Panne from the University of Toronto, Department of Computer Science, (Canada). The 3 invited sessions were devoted to the 3 following topics:

Non Holonomic Motion Control  
Hybrid Control of Mechanical Systems  
Intelligent Motion Control.

And the regular sessions covered the following interesting domains:  
Friction and Backlash  
High Precision Motion Control  
Actuators and Sensors  
Mobile Robots and Non Holonomic Systems  
Automotive Control  
Rigid Robot Control  
Flexible Structures  
Walking Robots  
High Precision Motion Control  
Motion Control  
AC Motor Drives  
Intelligent Motion Control

The Workshop provided an opportunity for fruitful scientific exchanges during the sessions and the breaks.

L. Dugard & C. Canudas  
NOC Chairman, IPC Chairman

### Control Engineering Practice Volume 7, No 1, January 1999

#### Preview

Advanced Control of Superheater Steam Temperatures - An Evaluation Based on Practical Applications (T. Moelbak)  
Validation of Drum Boiler Models Through Complete Dynamic Tests (A. Leva, C. Maffezzoni and G. Benelli)  
Dynamic Interactions Between Power Plants and Power Systems (E. Welfonder)  
Active Suspension of Passenger Cars Using Linear and Fuzzy-logic Controls (T. Yoshimura, K. Nakaminami, M. Kurimoto and J. Hino)  
Sensor Fault Diagnosis in a Chemical Process via RBF Neural Networks (D.L. Yu, J.B. Gomm and D. Williams)  
Dedicated Sensor and Classifier of Rail Head Defects (L. Oukhellou, P. Aknin and J.-P. Perrin)  
 $L_1$  norm Optimal Control of N-removal in an Activated Sludge Process (L.J.S. Lukasse, K.J. Keesman and G. van Straten)  
Robust Identification of First-order Plus Dead-time Model from Step Response (Q. Bi, W.-J. Cai, E.-L. Lee, Q.-G. Wang, C.-C. Hang and Y. Zhang)  
**Preface to the Special Section on Intelligent Components and Instruments for Control Applications** (L. Foulloy)  
Fieldbuses and Interoperability (J.P. Thomesse)  
Actuator-sensor-interface Interconnectivity (M. Sveda and R. Vrba)  
Using a Planning Scheduler to Improve the Flexibility of Real-time Fieldbus Networks (L. Almeida, R. Pasadas, J.A. Fonseca)  
Specification and Modelling of Time-window-mechanisms for the FIP Fieldbus (P. Lorenz)  
Neural Networks and Stochastic Search Methods Applied to Industrial Capacitive Tomography (J. Tapson)  
Techniques for Reducing False Alarms in Infrared Forest-fire Automatic Detection Systems (A. Ollero, B.C. Arrue, J.R. Martinez and J.J. Murillo)  
**IFAC Meeting Papers - Keyword Listing**  
Intelligent Autonomous Vehicles, Madrid, Spain, March 1998  
Index of IFAC Meeting Papers  
Book Reviews  
Conference Calendar

### Control Engineering Practice Volume 7, No 2, February 1999

#### Preview

A Genetic Algorithm-based Approach to the Generation of Robotic Assembly Sequences (D.S. Hong and H.S. Cho)  
Reconstructing Cardiovascular Dynamics (A. Stefanovska and M. Bracic)  
Air Operators and Pilots in Control of Complex Systems? (L. Martensson)  
Probabilistic Design of Power-system Special Stability Controls (L. Wehenkel, C. Lebrevelec, M. Trotignon and J. Batut)  
The Auto-disturbances Rejection Control of TCSC (C. Zhang and X. Zhou)  
**Preface to the Papers from the 3rd IFAC Symposium SAFEPROCESS '97**  
Engine Misfire Detection (U. Kiencke)  
Diagnosis of an Automotive Emission Control System Using Fuzzy Inference (A. Soliman, G. Rizzoni and Y.W. Kim)  
Sensor Fault-tolerant Control of a Rail Traction Drive (S.M. Bennett, R.J. Patton and S. Daley)  
A Ship Propulsion System as a Benchmark for Fault Tolerant Control (R. Izadi-Zamanabadi and M. Blanke)  
An Intelligent Supervisory System for Ion Implantation in IC Fabrication Processes (L.-C. Shen and P.-L. Hsu)  
The Self-validating Actuator (J.C. Yang and D.W. Clarke)  
Fuzzy-model-based Parity Equations for Fault Isolation (P. Ballè)  
An Example of Fault Diagnosis by Means of Probabilistic Logic Reasoning (J. Lunze and F. Schiller)  
**IFAC Meeting Papers - Keyword Listing**  
Real-time Programming, Shantou, China, June 1998  
Index of IFAC Meeting Papers  
Conference Calendar

### Control Engineering Practice Volume 7, No 3, March 1999

#### Preview

Fuzzy Guidance of the Shuttle Orbiter during Atmospheric Reentry (M. Bikkash, K. Sartor and A. Hornaifer)  
Robust Control of a Laboratory Aircraft Model via Fast Output Sampling (H. Werner and T. Meister)  
Iterative Learning Feedback Control of Human Limbs via Functional Electrical Stimulation (H. Dou, K.K. Tan, T.H. Lee and Z.H. Zhou)  
Development of a New Hydraulic Servo Cylinder with Mechanical Feedback (J.G. Lee and O.H. Kim)  
Active Vibration Control of a Flexible Beam, Based on Flow Source Control (C.H. Choi, J. Ryu and K.H. Park)  
A Methodology for Designing Controllers for Industrial Systems Based on Nonlinear Separation Model and Control (M. Nakamura, S. Goto and T. Sugi)  
Fault Detection of Actuator Faults in Unmanned Underwater Vehicles (A. Alessandri, M. Caccia and G. Veruggio)  
Tracking Control of a Two-wheeled Mobile Robot Using Input-output Linearization (D.-H. Kim and J.-H. Oh)  
New Trends and Requirements for Dynamic Security Assessment (B. Meyer and G. Nativel)  
**Preface to the Special Section on Robot Control (W. Khalil)**  
6 DOF Dynamic Localization of an Outdoor Mobile Robot (Ph. Bonnifait and G. Garcia)  
Coordinating Mobility and Manipulation using Nonholonomic Mobile Manipulators (G. Foulon, J.-Y. Fourquet and M. Renaud)  
Biped Robots: Correlations between Technological Design and Dynamic Behaviour (P. Sardain, M. Rostami, E. Thomas and G. Bessonnet)  
Internal Forces and Stability in Multi-finger Grasps (M.M. Svinin, M. Kaneiko and T. Tsuji)  
Adaptive Calibration and Control of 2D Monocular Visual Servo Systems (B.E. Bishop and M.W. Spong)  
**IFAC Meeting Papers - Keyword Listing**  
Algorithms and Architectures for Real-time Control, Cancun, Mexico, April 1998  
Book Reviews  
Conference Calendar





Title	2000	Place	Deadline	Further Information
IMACS/IFAC Symposium 3 <sup>rd</sup> Mathematical Modelling – MATHMOD 2000	Feb. 2 – 4	Vienna Austria	15 May 1999	Prof. Inge Troch Vienna University of Technology Wiedner Hauptstrasse 8 - 10 A-1040 Vienna, Austria e-mail: inge.troch@tuwien.ac.at FAX: +43/1/586 29 59 <a href="http://simtech.tuwien.ac.at/3rdMATHMOD">http://simtech.tuwien.ac.at/3rdMATHMOD</a>
IFAC Workshop Lagrangian and Hamiltonian Methods for Nonlinear Control	March 16 – 18	Princeton NJ, USA	15 Sept. 1999	Prof. Naomi E. Leonard Princeton University, MAE Dept. Equad. Rm. D209 A Princeton, NJ, 08544 USA e-mail: naomi@princeton.edu FAX: +1/609/258 6109 <a href="http://graham.princeton.edu/~auvlab/workshop.html">http://graham.princeton.edu/~auvlab/workshop.html</a>
IFAC/(IMEKO) Symposium Modelling and Control in Biomedical Systems – BIOMED 2000	March 30 – April 1	Karlsburg Germany	1 June 1999	IFACBiomedical Symposium Secretariat Institute of Diabetes "G. Katsch" Karlsburg e.V. Greifswalder Str. 11 e D-17495 Karlsburg, Germany FAX: +49 38355 68444 e-mail: diab@rz.uni-greifswald.de <a href="http://www.diabetes-karlsburg.de">http://www.diabetes-karlsburg.de</a>
IFAC/CIGRE Symposium Power Plants and Power Systems	April 26 – 29	Brussels Belgium	31 May 1999	IBRA/BIRA Federation Attn. Mr. F. Desclefs - General Secretary Ravensteinstreet 3, B-1000 Brussels, Belgium FAX: +32 /2 /511 7004 e-mail: ifac2000@skynet.be <a href="http://www.fpm.ac.be/~ibra/">http://www.fpm.ac.be/~ibra/</a>
IFAC Symposium (9 <sup>th</sup> ) Control in Transportation Systems 2000	June 13 – 15	Braunschweig Germany	17 Sept. 1999	Prof. E. Schnieder Inst. f. Regelungs- und Automatisierungs- technik, Langer Kamp 8 D-38106 Braunschweig, Germany Fax: +49/531/391 5197 e-mail: transp-system2000@tu-bs.de <a href="http://www.ifra.ing.tu-bs.de/ifac/">http://www.ifra.ing.tu-bs.de/ifac/</a>
IFAC Symposium Fault Detection, Supervision and Safety for Technical Processes – SAFEPROCESS 2000	June 14 – 16	Budapest Hungary	15 Oct. 1999	Prof. Andras Edelmayer Computer and Automation Institute, H A S Kende u. 13 – 17 H-1111 Budapest, Hungary FAX: +361/166 7503 e-mail: edelmayer@sztaki.hu
IFAC Symposium Advanced Control of Chemical Processes – ADCHEM 2000	June 14 – 16	Pisa Italy	6 Sept. 1999	Prof. A. Brambilla Dip. di Ingegneria Chimica University of Pisa Via Diotisalvi, 2, I-56026 Pisa, Italy FAX: +39/50 511266 e-mail: adchem2000@ing.unipi.it <a href="http://adchem-2000.cheme.cmu.edu">http://adchem-2000.cheme.cmu.edu</a>
IFAC Symposium (7 <sup>th</sup> ) Automated Systems Based on Human Skill - Joint Design of Technology and Organization	June 15 – 17	Aachen Germany	1 Jan. 2000	VDI/VDE -GMA IFAC-NMO Secretariat POB 10 11 39 D-40002 Düsseldorf, Germany FAX: +49/211/6214 161 e-mail: rosenzweig@vdi.de
IFAC Conference Control System Design	June 18 – 20	Bratislava Slovak Rep.	31 July 1999	Prof. Stefan Kozak, Ilkovicova 3 SK-81219 Bratislava, Slovak Rep. FAX: 42/7/65429734 e-mail: kozak@kasr.elf.stuba.sk
IFAC Symposium Robust Control Design – ROCOND 2000	June 21 – 23	Prague Czech Rep.	Sept. 1999	Dr. Michael Sebek Institute of Information Theory and Automation CZ-18208 Prague, Czech Rep. FAX: +420/2/6884554 e-mail: msebek@utia.cas.cz
IFAC Symposium 12 <sup>th</sup> System Identification – SYSID 2000	June 21 – 23	Santa Barbara CA, USA	1 Sept. 1999	SYSID 2000 Secretariat Dept. of EL& Comp. Engineering University of California Santa Barbara, CA, 93106, USA FAX: +1/805/893 3262 e-mail: sysid2000@ece.ucsb.edu <a href="http://www.ece.ucsb.edu/ceec/SYSID2000">http://www.ece.ucsb.edu/ceec/SYSID2000</a>



# FORTHCOMING EVENTS (ctd.)

Title	2000	Place	Deadline	Further Information
American Control Conference ACC2000 (in cooperation with IFAC)	June 28 - 30	Chicago, IL USA		Prof. A. Haddad, AACC Secretariat Dept. of ECE, North Western Univ. 2145 Sheridan Road Evanston, IL 60208-3118, USA FAX: +1/647/491 4456 e-mail: acc00@ece.nwu.edu http://che.vill.edu/acc.2000/acc.html
IFAC Workshop Control Application of Optimization	July 3 - 6	St. Petersburg Russia	1 Jan. 2000	CAO 2000 Organizing Committee St. Petersburg State University Fac. of Applied Maths and Control Processes Bibliotechnaya pl. 2, Petrodvorets St. Petersburg 198904, Russia FAX: +7/812/428 7189 e-mail: cao2000@apmath.spbu.ru http://www.apmath.spbu.ru/cao2000
IFAC Conference Technology Transfer in Developing Countries Automation in Infrastructure Creation	July 5 - 7	Pretoria South Africa	1 Sept. 1999	Prof. Ian K. Craig Dept. of Electrical and Electronic Engg. University of Pretoria, Pretoria, South Africa FAX: +27/12/362 5000 e-mail: icraig@postino.up.ac.za http://www.ee.up.ac.za/decom/
IFAC Conference Modelling and Control in Agriculture, Horticulture and Post-Harvest Processing - AGRICONTROL 2000	July 10 - 12	Wageningen NL	1 Dec. 1999	Wageningen Agricultural University t.a.v. Congressbureau, Costerweg 50 NL-6701 BH Wageningen, Netherlands FAX: +31/317/483 331 e-mail: gerrit.vanstraten@user.aenf.wau.nl http://www.aenf.wau.nl/conf2000
IFAC Conference Manufacturing Modelling, Management and Control - MIM 2000	July 12 - 14	Patras Greece	15 Oct. 1999	Prof. Peter Groumpos, El. & Computer Engg. Lab. for Automation & Robotics GR-26500 Rion Patras, Greece FAX: +30/61/997309 e-mail: groumpos@ee.upatras.gr
IFAC Conference (5 <sup>th</sup> ) Manoeuvring and Control of Marine Craft - MCMC 2000	August 24 - 27	Aalborg DK	20 Jan. 2000	Prof. Mogens Blanke Dept. of Control Engineering Aalborg University, Fredrik Bajers Vej 7C DK-9220 Aalborg, Denmark FAX: +45/98/151739 e-mail: blanke@control.auc.dk http://www.control.auc.dk/MCMC2000
IFAC Symposium (8 <sup>th</sup> ) Computer Aided Control Systems Design - CACSD 2000	Sept. 11 - 13	Salford UK	1 April 1999	Prof. John Gray Dept. of Electronic & Electrical Engg. University of Salford, Salford M5 4WT, UK FAX: +44/0161/295 5975 e-mail: j.o.gray@eee.salford.ac.uk
IFAC Symposium (4 <sup>th</sup> ) Intelligent Components and Instruments for Control Application - SICICA 2000	Sept. 13 - 15	Buenos Aires Argentina	July 1999	AADECA, Av. Callao 220 1o B 1022 Buenos Aires, Argentina FAX: +54/1/372-3780 e-mail: system@aaedca.satlink.net http://www.aaedca.org
IFAC Conference Mechatronic Systems	Sept. 18 - 20	Darmstadt Germany	15 Nov. 1999	VDI/VDE-GMA Mechatronics 2000 POB 10 11 39, D-40002 Düsseldorf, Germany FAX: +49/211/6214-161 e-mail: rosenzweig@vdi.de http://www.vdi.de/gma/ifac-mechatronic
IFAC Workshop Bio-Robotics, Information Technology and Intelligent Control for Bio-production Systems - BIO-ROBOTICS II	Nov. 25 - 26	Osaka area Japan	1 February 2000	Prof. Naoshi Kondo, Faculty of Agriculture Okayama University, 1-1-1, Tsushima-Naka Okayama 700-8530, Japan FAX: +81/86/251-8351 e-mail: nkondo@cc.okayama-u.ac.jp
IFAC/IEEE Symposium (5 <sup>th</sup> ) Advances in Control Education ACE - 2000	Dec. 17 - 19	Gold Coast Australia	January 2000	Dr. Ljubo Vlacic School of Microelectronic Engg., Griffith Univ. Nathan, Qld. 4111, Australia FAX: +61/7/3875 5384 e-mail: ace2000@me.gu.edu.au http://www.gu.edu.au/centre/icsl/ace2000/
IFAC/(CIGR) Workshop Artificial Intelligence in Agriculture	June 4 - 6	Budapest Hungary	15 Nov. 2000	Prof. I. Farkas Dept. of Physics and Process Control Univ. of Agricultural Sciences Pater K. 1, H-2100 Gödöllő, Hungary e-mail: ifarkas@fft.gau.hu



Title	2001	Place	Deadline	Further Information
IFAC Symposium Nonlinear Control Systems – NOLCOS 2001	July 4 – 6	St. Petersburg Russia	15 Nov. 2000	Prof. A. L. Fradkov Institute for Problems of ME Russian Academy of Sciences 61, Bolshoy, V.O. 199178 St. Petersburg, Russia FAX: +7/812/321 4771 e-mail: nolcos@ccs.ipme.ru
IFAC Conference Control Applications in Marine Systems – CAMS 2001	July 17 – 20	Glasgow UK	January 2001	Prof. M.J. Grimble Industrial Control Centre University of Strathclyde, Graham Hills Bldg. 50, George Street Glasgow G1 1QE, Scotland, UK FAX: +44/141 548 4203 e-mail: system@icu.strath.ac.uk
IFAC Workshop Intelligent Control for Agriculture Applications	August 22 – 24	Bali Indonesia	1 Nov. 2000	Dr. Kundang B. Seminar Dept. of Agriculture Engineering FATETA-IPB, POB 220 Bogor 16002, Indonesia FAX: +62/251/623026/622202 e-mail: kseminar@indo.net.id
IFAC/(IFIP/IFORS/IEA) Symposium Analysis, Design and Evaluation of Man-Machine Systems MMS'2001	Sept. 18 – 20	Kassel Germany	1. January 2001	Dr. B. Borys, University of Kassel Lab. Systems Engineering & Human Machine Systems Mönchebergstr. 7, D-34109 Kassel, Germany FAX: +49/561/804 3542 e-mail: borys@imat.maschinenbau.uni-kassel.de
IFAC/(IFIP/IFORS/IFR) Symposium Information Control Problems in Manufacturing Technologies – INCOM 2001	Sept. 20 – 22	Vienna Austria	31 January 2001	Dr. Robert Probst Institute for Handling Devices and Robotics (E318), Technical University Floragasse 7 a, A-1040 Vienna, Austria FAX: 43/1/50418359 e-mail: e318@ihrtl.ihrt.tuwien.ac.at
IFAC Workshop Control Applications in Post-harvest and Processing Technology	Oct. 3 – 5	Tokyo area Japan	31 March 2001	Prof. Dr. Yasuhisa Seo Graduate School of Agricultural and Life Sciences, The University of Tokyo Yayoi 1-1-1, Bunkyo-ku Tokyo 113-8657, Japan FAX: +81/3/5689-8095 e-mail: aseoo@hongo.ecc.u-tokyo.ac.jp

## Regional Control Conferences in 1999

IFAC has contracts with regional conferences, such as the American Control Conference, the Asian Control Conference, the European Control Conference and the Latin American Control Conference.

For 1999 the following Regional Control Conferences are planned  
18th American Control Conference, June 2 – 4, 1999, San Diego, CA, USA

5th European Control Conference, 31 August – 1 September, 1999, Karlsruhe, Germany

contact: <http://www.marquette.edu/acc1999/>

contact: <http://www.ecc99.uni-duisburg.de/>

### Confirmation of Affiliate Membership

By returning this questionnaire, your Affiliate Membership and thus all related benefits such as free subscription to the IFAC Newsletter will be confirmed.

We therefore ask you to fill in this form, complete with all your particulars, and either return it to

IFAC Secretariat  
Schlossplatz 12  
A-2361 Laxenburg, Austria

or send an e-mail with this information to: [secr@ifac.co.at](mailto:secr@ifac.co.at)

We will also appreciate if you mark the fields of interest overleaf.

**Non-reply by June 30, 1999 will be considered discontinuation of Affiliate Membership**

Please print

Title: \_\_\_\_\_ First Name: \_\_\_\_\_ Surname: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

e-mail: \_\_\_\_\_ http:// \_\_\_\_\_

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

### On Affiliate Membership

Once every three years we ask you to confirm your Affiliate Membership by returning the questionnaire on this page.

Affiliate membership is free of charge and entitles you to the following benefits:

- The IFAC Newsletter (6 times per year)
- The IFAC Information Brochure (published once every three years)
- A reduced personal subscription rate for the IFAC journals (forms available upon request)
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<http://www.ifac-control.org>

Gusztav Hencsey  
Newsletter Editor



## Editorial

Introduction to the Special Issue on Hybrid Systems (A.S. Morse, C.C. Pantelidis, S.S. Sastry, J.M. Schumacher)

## Special Section

Controllers for Reachability Specifications for Hybrid Systems (J. Lygeros, C. Tomlin, S. Sastry)  
Towards a Stability Theory of General Hybrid Dynamical Systems (A.N. Michel, B. Hu)  
Stabilization of Nonholonomic Integrators via Logic-based Switching (J.P. Hespanha, A.S. Morse)  
Deterministic Discrete-event Representations of Linear Continuous-variable Systems (J. Lunze, B. Nixdorf, J. Schröder)  
Control of Systems Integrating Logic, Dynamics, and Constraints (A. Bemporad, M. Morari)  
Robust L2-gain Control for Nonlinear Systems with Projection Dynamics and Input Constraints: An Example from Traffic Control (J.A. Ball, M.V. Day, T. Yu, P. Kachroo)  
A Hamiltonian Viewpoint in the Modeling of Switching Power Converters (G. Escobar, A.J. Van Der Schaft, R. Ortega)  
Adaptive Switching Control of LTI MIMO Systems Using a Family of Controllers Approach (M. Chang, E.J. Davison)  
Uniqueness of Solutions of Linear Relay Systems (Y.L. Lootsma, A.J. Van Der Schaft, M.K. Camlibel)  
Complexity of Stability and Controllability of Elementary Hybrid Systems (V.D. Blondel, J.N. Tsitsiklis)  
Bounded Amplitude Performance of Switched LPV Systems with Applications to Hybrid Systems (C.J. Bett, M.D. Lemmon)  
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