International Federation of Automatic Control Secretariat: Schlossplatz 12, A-2361 Laxenburg, Austria Phone (+43 2236) 71 447, Fax (+43 2236) 72 8 59, E-mail: secr@ifac.co.at - URL: http://www.ifac-control.org 2004 No. 2 April International Federation of Automatic Control Secretariat: Schlossplatz 12, A-2361 Laxenburg, Austria Phone (+43 2236) 71 447, Fax (+43 2236) 72 8 59, E-mail: secr@ifac.co.at - URL: http://www.ifac-control.org

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Modelling and Control in Biomedical Systems (including Biological Systems) 5th IFAC Symposium Melbourne, Australia, 21 – 23 August, 2003

The 5th IFAC Symposium on Modelling and Control in Biomedical Systems (including Biological Systems) was held in Hilton on the Park, Melbourne, Australia, from 21–23 August 2003. The Symposium was sponsored by IFAC TC on Modelling and Control of Biomedical Systems (BIOMED) and co-sponsored by the International Union of Physical and Engineering Sciences in Medicine (IUPESM), the Institute of Electrical and Electronic Engineers, Engineering in Medicine and Biology Society (IEEE-EMBS), the International Measurement Confederation (IMEKO), Engineers Australia (IEAust), the University of Sydney, and the Hong Kong Polytechnic University.

Previous Symposia on this prominent theme took place in Venice, Italy in 1988, Galveston, USA in 1994, Warwick, UK in 1997 and Karlsburg/Greifswald, Germany in 2000. A precursor to this series of events was a Conference on "Regulation & Control in Physiological Systems" sponsored by IFAC (Systems Committee), American Physiological Society and the International Union of Physiological Sciences that was held at the University of Rochester, USA in 1973.

The aim of the 5th IFAC BIOMED Symposium was to act as an international forum for researchers and practitioners, both in academia and industry, to present their latest research and ideas in the field of biomedical system control and modelling, including but not limiting to:

- Biomedical Functional Imaging and Data Modelling
- Biomedical Kinetic Modelling and System Control
- Biomedical Systems and Signal Processing
- Cellular and Molecular Systems, and Bioinformatics
- Circulatory and Respiratory Systems
- Critical Care and Decision Support Systems
- Endocrine and Metabolic Systems
- Neurosystems and Musculoskeletal Systems

Being multi- and interdisciplinary in nature, 101 papers representing 24 countries (28 countries if co-authors' home countries are also included) were carefully reviewed and selected for presentation in the Symposium by the International Programme Committee consisting of 95 members, who are prominent researchers in various disciplines of biomedical system modelling and control. In order to accommodate the large number of high quality papers presented in the single-track sessions of the Symposium over the tight two day schedule, short oral presentations at the platform plus 1.5-hour poster presentation and discussion with the attendees before the posters were the main means used during this Symposium for attendees to exchange ideas. Such a combination of short oral presentations at the platform (in a single-track session) and discussions with attendees before the well displayed posters had proven to be the most effective way to exchange ideas in a number of the most prestigious conferences recently, including our own previous IFAC symposia. In addition, 25 papers, in most cases one paper per country, were selected for oral presentations. Both groups of papers possess the same high quality in spite of their difference in modes of presentation. In the light of a vote of the IPC members and session chairs at a meeting held right after the Symposium was closed, 13 application-oriented papers and 3 theoretical papers were selected and their extended versions will be recommended for possible inclusion in Control Engineering Practice and Automatica, respectively.

The programme of the Symposium included eight sessions, with four oral presentation sessions and three poster sessions, as well as a plenary session in which two invited keynote presentations were given by internationally prominent and wellrecognised research leaders. One is in the area of clinical research and was given by Dr. Geoffrey Parkin, Founding Director of the Intensive Care Unit at the Monash Medical Centre in Melbourne. The other was in the IT-related and high-tech research area given by Dr. Wesley W. Chu, Professor and Former Head, Department of Computer Science, University of California at Los Angeles.

The TC meeting was held on the first day of the event and a number of issues were discussed, including the scope of the TC, membership development and enhancement, summary report from the Chairman, plans for future activities, and possible research collaborations.

The Symposium attracted over 100 participants from 24/28 countries. It was the also the first IFAC event that a Proceedings volume instead of a Preprints volume was available to delegates at the Symposium. This kind of publication arrangement was discussed during the 15th Triennial World Congress in Barcelona with Elesevier. The Symposium was a success, and the TC on BIOMED decided that the 6th IFAC BIOMED Symposium will be held in Reims, France in September, 2006.

D. Feng, NOC Chair



A Journal of **IFAC** the International Federation of Automatic Control

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G. Herrmann, G. Guo

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Q. Chen, U. Kruger, A.T.Y. Leung High Performance Hybrid Mold Level Controller for Thin Slab Caster

D. Lee, Y. Kueon, S. Lee

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Compensating Signals

J. Shi, R. Zmood, L. Qin Design of Generalized Conceptual Guidance Law Using Aim Angle K.-S. Kim, Y. Kim

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U. Jeppsson, M.-N. Pons Simulation of Respirometry-based Detection and Mitigation of Activated Sludge Toxicity

J.B. Copp, H. Spanjers

Benchmarking Procedure for Full-scale Activated Sludge Plants A. Abusam, K.J. Keesman, H. Spanjers, G. van

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A. Stotsky, A. Forgo

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IFAC Symposium Cost Oriented Automation – COA04	June 7 – 9	Gatineau Canada	http://www.uqo.ca/blum/ifac/ e-mail: heinz.erbe@tu-berlin.de
IFAC Symposium Automatic Control in Aerospace	June 14 – 18	St. Petersburg Russia	http://aca2004.aanet.ru e-mail: aca2004@aanet.ru
IFAC Symposium Telematics Applications in Automation and Robotics – TA 2004	June 21 – 23	Helsinki Finland	http://www.automaatioseura.fi/TA04 e-mail: office@atu.fi
American Control Conference – in co-operation with IFAC –	June 30 – July 2	Boston MA, USA	http://www.mie.uiuc.edu/acc2004/ e-mail: speyer@seas.ucla.edu
IFAC Symposium Intelligent Autonomous Vehicles – IAV 2004	July 5 – 7	Lisbon Portugal	http://iav04.isr.ist.utl.pt e-mail: iav04@isr.ist.utl.pt
IFAC Symposium Dynamics and Control of Process Systems – DYCOPS-7	July 5 – 7	Cambridge MA, USA	http://www.dycops.org/ e-mail: craven@dycops.org

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Cattor Lapplications in Marine Systems 7-9 Iuly e-mail: carmol46/junian.it FAC Workshop Fractional Differentiation and its Processing 19-20 Processing http://www.hg.u.be/ordeaux.fr/fdb/thome.html FAC Workshop Fractional Differentiation 20 - 23 Austatala http://www.agcc2004.com/ e-tail.it.soki/giver.it.mc.e.au TAC Sympositin Trace S	Title	2004	Place	Further Information
Fractional Differentiation and its 19 - 20 France e-mail: Addr{201p.u-bordeau.ff Asian Control Conference (5th) July Melbourne http://www.ascc2004.com/ Asian Control Conference (5th) July Addresser http://www.ascc2004.com/ TRAC Symposium 26 - 28 Japan e-mail: State-Staty wast include and possible and possi	IFAC Conference Control Applications in Marine Systems – CAMS 2004			
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Large Seale Systems: Theory and Applications 26 - 28 Japan e-mail: the-lss04@watt.thech.org.osska-u.ac.jp IFAC Symposium Modeling and Control of Ecotomic Systems July 28 - 31 Redlands http://newton.uoredu/fines.sme.2004/ e-mail: Sknet.thech.org.scska-u.ac.jp INSTECTIFAC INTO Control of Acoustics in Control, Automation and Robotics - ICINCO 2004 August 25 - 28 Setubal http://www.icinco.org IFAC Workshops on - Adaptation and Learning in Control and Systems - NOLCOS '04 August 30 - September 1 Yokohama Japan http://www.icinco.org IFAC Workshops on - Adaptation and Systems - NOLCOS '04 September 1 Statiggart Japan http://www.contra.dkcio.ac.jp IFAC Systems - NOLCOS '04 September 1 Statiggart Japan http://www.icinco.org IFAC Symposium 6 th Avacaced Control Systems - NOLCOS '04 September Statiggart July http://www.icinco.org IFAC Symposium 6 th Avacaced Control Fducation - Breace Japan September Vienna Australia http://www.icinco.ac.ip/ifacws04/main.htm IFAC Workshop Real Time Programming September 6 - 7 Greenoble France htm://www.icinco.ac.ip/ifacws04/main.htm IFAC Workshop Real Time Programming September 6 - 8 Greenoble France htm://www.icinco.ac.ip/ifacws04/main.htm	Asian Control Conference (5th) – in co-operation with IFAC –	July 20 – 23		
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Informatics in Control, Automation 25 - 28 Portugal e-mail: scerctariat(@fcinco.org IFAC Workshops on - Adaptation and Learning in Control and Signal Processing - ALCOSP - September 1 Japan Periodic Control Systems - PNOLCOS*04 September 1 Japan e-mail: katayama@amp.ikyoto-u.ac.jp IFAC Symposium 6 th Nonlinear Control Systems - NOLCOS*04 September 1 Stuttgart http://www.intrutwicin.ac.at/asco94/ e-mail: katayama@amp.ikyoto-u.ac.jp IFAC Multitack Conference Advanced Control Education - September 2 - 4 Vienna Austria http://www.intrutwicin.ac.at/asco94/ e-mail: katayama@amp.ikyoto-u.ac.jp IFAC Workshop Internet Based Control Education - September 6 - 7 Grenoble France http://www.intrutwicin.ac.at/asco94/ e-mail: kdisney@mail.newcastle.edu.au IFAC Workshop Real Time Programming IFAC Workshop 6 - 8 September 6 - 7 Grenoble France http://www.intrutwicin.ac.at/seco94/ e-mail: kdisney@mail.newcastle.edu.au IFAC Workshop 8 September 6 - 8 System http://www.intrutwicin.ac.at/seco94/ e-mail: kdisney@mail.newcastle.edu.au IFAC Workshop 8 September 7 - 9 Atlanta GA (USA http://www.intrutwicin.ac.at/seco94/ e-mail: kdisd@cs.kuleuven.ac.bd IFAC Workshop 8 September 7 - 9 Atlanta GA (USA http://www.intrutwicin.ac.at/seco94/ e-mail: kdisd@cs.kuleuven.ac.bd IFAC Workshop 116 September 8 Lucven http://www.intrutwici	IFAC Symposium Modeling and Control of Economic Systems			
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FAC Multitrack Conference Advanced Control Strategies for Social and Economic Systems September 2 - 4 Vienna Austria http://www.ihrt.tuwien.ac.at/acs04/ e-mail: kopacek@ihrt.tuwien.ac.at/acs04/ e-mail: kopacek@ihrt.tuwien.ac.at	IFAC Symposium 6 th	September	Stuttgart	http://www.nolcos2004.uni-stuttgart.de
FAC Workshop Internet Based Control Education – September 6 - 7 Grenoble France http://ibce.lag.ensieg.inpg.fr IFAC Symposium Mechatronic Systems September 6 - 8 Sydney Australia http://rumi.newcastle.edu.au/mech2004/ e-mail: kdinsey@mail.newcastle.edu.au IFAC Workshop Real Time Programming - WRTP 2004 September 6 - 8 Istanbul Turkey http://www.ence.um.deu/uss2004/ e-mail: Jose.Hurtado@umd.edu IFAC/URFIP/FORS/IEA) Symposium 9 th Analysis, Design, and Evaluation of Analysis, Design, and Evaluation of Prof. Systems September 8 - 10 Atlanta GA, USA http://www.isve.gatech.edu/IFAC-HMS2004 e-mail: sheila.devezin@isve.gatech.edu IFAC Symposium 11 th Actomation Systems September 8 - 10 Leuven Belgium http://www.era.uubp-naey.fr/ifac-mmm2004/ e-mail: db4@cs.kuleuven.ac.be/conference/tds04/ e-mail: db4@cs.kuleuven.ac.be/conference/tds04@cs04/ e-mail: db4@cs.kuleuven.ac.be/conferen	IFAC Multitrack Conference Advanced Control Strategies for	September	Vienna	http://www.ihrt.tuwien.ac.at/acs04/
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Real Time Programming - WRTP 2004 6 - 8 Turkey e-mail: Jose.Hurtado@umd.edu WRTP 2004 FAC/(FIP/IFORS/IEA) Symposium 9 th Analysis, Design, and Evaluation of T - 9 Atlanta GA, USA http://www.isye.gatech.edu/IFAC-HMS2004 Human-Machine Systems - HMS 04 September Leuven Belgium http://www.cs.kuleuven.ac.be/conference//ds04/ IFAC Workshop 5th Time Delay Systems September 8 - 10 Belgium http://www.cran.uhp-nancy.ft/fac-mmm2004/ Automation in Mining, Mineral and Metal Processing - MMM 2004 September 8 - 10 Nancy France http://www.eran.uhp-nancy.ft/fac-mmm2004/ IFAC Workshop 2 nd September 16 - 17 Oulu http://www.eran.uhp-nancy.ft/fac-mmm2004/ e-mail: mmm2004@cran.uhp-nancy.ft/fac-mmm2004/ IFAC Workshop 2 nd September 22 - 24 Reims 16 - 17 France e-mail: mom2004@cran.uhp-nancy.ft IFAC Workshop 5(ht) 16 - 17 September 22 - 24 Reims e-mail: mom2004@cran.uhp-nancy.ft e-mail: mom2004@cran.uhp-nancy.ft IFAC Workshop 2 ^{sel} September 22 - 24 Reims e-mail: mom2004@cran.uhp-nancy.ft e-mail: mom2004@cran.uhp-nancy.ft IFAC Workshop 3Chronol September 22 - 24 PereslavI-Zalessky kuu.if http://www.uhiv-reims.ft e-mail: wodes04@cniv-reims.ft IFAC Workshop 40 September 3 - 5 Desida	IFAC Symposium Mechatronic Systems			http://rumi.newcastle.edu.au/mech2004/ e-mail: kdisney@mail.newcastle.edu.au
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