IFAC International Federation of Automatic Control

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Newsletter

Contents:

IFAC PapersOnLine

Since the announcement and endorsement of IFAC PapersOnLine at the last Council meeting in Toulouse, France, a lot of activities have been going on to implement the new and future-oriented system of online paper publication.
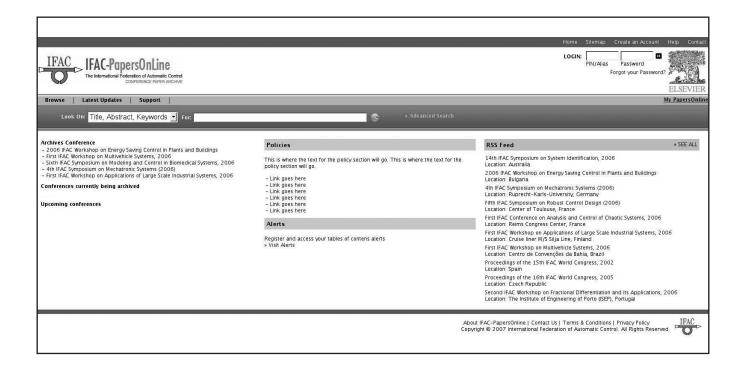
If it takes a bit longer than expected, this is due to the fact that the new product must be practically perfect and usable when it goes online website.

As you can imagine, it is quite an arduous task to collect and to compile all the papers coming in from past and current Symposia. Since all papers must be citable, it is important that all metadata are available and correctly compiled.

Also organizers must be alerted in time what the new publications requirements are so that they, in turn, can inform the authors. (see description on page 2) For this purpose, also various documents (IFAC event organizers' guide, copyright stipulation, etc.) must be amended to conform to the new requirements.

Once the system is fully operative, you will be able to download a certain number of papers per month for free (this applies to individual users).

To give you a first glimpse of what the IFAC PapersOnLine will look like, see below a screenshot of a fairly early version.

Meetings Publications

Preprints

Preprints are the collection of accepted papers produced prior to a meeting for distribution at the meeting (note that not all Workshops produce preprints). Preprints are provided solely for the meeting participants, normally as part of the registration fee. They may be available for sale, but they must not carry an ISBN, Bar Code, cataloguing details or the words „published by..." Preprints are not a publication and should not have any mark that enables them to be cited as such.

Proceedings

Proceedings are the final collection of papers from an IFAC meeting. They are typically produced after the meeting such that „no-show" papers are deleted. Proceedings are the only way in which papers from IFAC meetings are published.

Proceedings from IFAC meetings are published by IFAC, in cooperation with the IFAC Publisher, on the IFAC PapersOnLine site and will be citable via an ISSN and a DOI (Digital Object Identifier), a unique industry-standard identifier assigned to every paper.

Writing papers for IFAC meetings

This information has been provided to assist authors submitting papers to IFAC meetings. Using this information you will be able to prepare your paper in the appropriate form for inclusion in the meeting Proceedings.

Proceedings of IFAC meetings are published electronically on the IFAC-PapersOnLine.net site. In order to ensure that your paper can be easily located and read anywhere in the world, it is necessary that the paper file complies with all the format requirements which are detailed in the next sections.

Please note that the size of the paper must not exceed:

- 6 pages for regular papers (lecture or paper presentations);
- 12 pages for plenary papers;
- 18 pages for keynote papers.

You should assume that your paper is a regular paper unless you have been told otherwise. In addition to the page limit, there is a limit to the size of the paper file, which is currently set to 2 MB. Check the home page of the meeting for particular page length of file size restrictions.

In order to be published in the meeting Proceedings, you must transfer the copyright of your paper to IFAC using a Copyright Transfer Form. The form has to be filed at the time of submitting the final version of the paper.

The material submitted for presentation at IFAC meetings must be original, not published or being considered for publication elsewhere. Full responsibility for the paper rests with the author, who must have taken the necessary steps to obtain permission to use any material that might be protected by copyright.

Speakers also receive a document, providing advice on the presentation of papers at technical events.

<div align="right">

Juan A. de la Puente, Editor-in-Chief
IFAC PapersOnLine
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WHO IS WHO IN IFAC

The people behind the new publication scheme

The first step after the decision to convert to fully electronic publications was to find the suitable persons to be in charge of the implementation of the new scheme. Luckily, IFAC can count on many knowledgeable persons who are able and willing to take on such a tremendous task and workload. We are therefore very happy indeed that Prof. Juan A. de la Puente agreed to serve as Editor-in-Chief of the new website, coordinating the new publications requirements and communicating them to the IFAC community. Prof. de la Puente has long been active in IFAC in the most varied functions and knows IFAC and the publications world very well.

The technical side of the new website is managed by Dr. Pradeep Misra who will see to it that the IFAC publications website is easy to handle and can thus become a widely used instrument in the international control community.

Both of them are supported by a group of persons to all of whom IFAC would like to express its gratitude and thanks.

Find below the biographies and the photographs of Profs. de la Puente and. Misra so that you know who the persons are behind the scenes.

Juan A. De La Puente

Juan Antonio de la Puente is a Professor in the Department of Telematics (DIT) at the School of Telecommunication Engineering (ETSIT) of the Technical University of Madrid (UPM), where he leads a Research Group on Real-Time Systems and Telematic Services Architecture. He has held teaching and research positions at the Technical Universities of Madrid and Valencia (UPV). His research interests are in real-time systems design and implementation, including design methods, software architectures, and real-time operating systems and languages, as well as real-time control systems. He has participated in a great variety of research projects funded by the EU, the Spanish government, and both local and European industrial companies.

Prof. de la Puente has authored or co-authored more than 60 technical papers and reports, and has edited several conference proceeding volumes, most of them in the fields of real-time control systems. He has taught courses on Operating Systems, Real-Time Systems, and Automatic Control Systems at both the undergraduate and graduate levels.

Prof. de la Puente has been a member of CEA, the Spanish IFAC NMO, since 1976, and he has served on the CEA board on several occasions. He has been a member of the IFAC Technical Committee on Computers / Real-Time Programming since 1986, and he chaired the IFAC Co-ordinating Committee on Computers from 1996 to 1999. He served as Programme Co-Chair for the IFAC 2002 World Congress, where he led the team that developed an electronic paper submission and review system for the first time in IFAC. He was appointed an IFAC Fellow in June 2005. In March 2007 he was appointed to be the Editor in Chief of the new IFAC-PapersOnLine initiative.

Prof. de la Puente is also a member of IEEE, ACM, and Ada-Spain. He is an Associate Editor of the IFAC-affiliated Real-Time Systems Journal.

Pradeep Misra

Dr. Misra received his B.Tech. (Hons.) degree in Electrical Engineering from the Indian Institute of Technology, Kharagpur, India, in 1983 and his Ph.D. degree from Concordia University, Montreal, Canada, in 1987. He joined the Wright State University faculty in December 1987 where he is currently an associate professor of electrical engineering. His research interests are in analysis and design of multivariable control theory, applied numerical analysis, and computational techniques in controls, communications, and electromagnetics. He has published several papers in those areas and many of his algorithms have been incorporated in control design software packages. He has served in various capacities in the IEEE Control Society and is currently a member of the IFAC Policy Committee.

*Season's Greetings
to all Newsletter readers*

Nonlinear Control Systems – NOLCOS
IFAC Symposium (7th)
Pretoria, South Africa
21 – 24 August, 2007

The seventh IFAC symposium on nonlinear control systems (NOLCOS) was recently held at the CSIR International Convention Centre in Pretoria, South Africa, from 22 to 24 August, 2007. Previous symposia of the same series were held in Capri (1988), Bordeaux (1992), Lake Tahoe (1995), Enschede (1998), Saint-Petersburg (2001) and Stuttgart (2004).

Acknowledged as the major international gathering of leading experts in industry and academia in the field of nonlinear control, NOLCOS aims at strengthening contacts between academia and industry to build up new networks and cultivate existing relations. High-level speakers present the global spectrum of nonlinear control systems, state-of-the-art applications and developing directions.

The symposium was organised by the South African Council of Automation and Computation (SACAC) on behalf of the International Federation of Automatic Control (IFAC). SACAC is the national member organization of IFAC and consists of 50 institutional and corporate members. Prof. Xiaohua Xia and Prof. Fernando Camisani, both of the University of Pretoria, were responsible for the technical programme and local organization of the symposium, respectively.

The symposium was opened by Prof. CWI Pistorius, vice-chancellor and principal of the University of Pretoria. Four plenary presentations were made during the symposium. Willie Theron from PBMR Pty Ltd South Africa presented an overview of systems engineering in the pebble bed modular reactor. Vincent Andrieu, jointly with and on behalf of Larent Praly (Ecole des Mines de Paris), presented the second plenary on recent advances in output feedback control. The third plenary, presented as a video at the symposium, was made by Prof. Claire Tomlin from (jointly) the Universities of California at Stanford and Berkeley. She covered the latest applications of nonlinear modelling techniques in biological cell networks. The last plenary was presented by Wei Lin, Case Western Reserve University, also on the topic of output feedback control, but from a different perspective.

Furthermore, ten semi-plenaries, 37 invited papers in 7 sessions, 102 regular papers in 18 sessions as well as 44 posters were presented. These ranged in topics from modelling, optimization, stabilization, observer design, controller design, application and process control of nonlinear systems.

Apart from the traditional topics on output feedback control and stability of nonlinear systems, specific interest was shown in nonlinear model predictive control and the control of distributed parameter systems. The application of nonlinear control to biological and biomedical systems were also themes of the symposium.

Around 150 delegates from abroad attended the symposium (75%), with 50 local attendees (25%).

The IFAC technical committee on nonlinear control also had a meeting during the symposium. A number of items were discussed at the meeting, including, election of a candidate for TC chair for 2008-2011; activities for and involvement in the IFAC World Congress of 2008; reports on upcoming conferences sponsored by the TC, and the establishment of a certificate of achievement that the TC bestows upon a distinguished colleague from the nonlinear systems and control field. This certificate will be awarded every three years at the occasion of the Nolcos symposium. It was decided at the meeting that Alberto Isidori was to be the first recipient of the certificate, and it was presented to him at the NOLCOS 2007 banquet on the Thursday evening.

Prof. Alberto Isidori receiving nonlinear control systems achievement award from Prof. Frank Allgöwer

Technical tours to the PBMR facility at Pelindaba outside Pretoria, as well as the SASOL Polymer Facility at Sasolburg were also available to delegates. Nonlinear control is being practised at these sites.

The next symposium on nonlinear control will be held in Bologna, Italy in 2010. For further information on Nolcos 2007, please visit www.nolcos2007.org.za

Xiaohua Xia (IPC Chair: NOLCOS 2007)

Automation in Mining, Mineral and Metal Processing – MMM07
IFAC Symposium
Quebec City, Canada
21 – 24 August, 2007

The 12th IFAC Symposium on Automation in Mining, Mineral and Metal Processing (IFAC MMM'07) took place in Québec City, Canada, from 21 to 24 of August 2007. It was held in North America for the first time since 1980, the year of the 3rd IFAC MMM Symposium in Montréal, Québec, Canada. 75 papers were selected by the IPC, of which 68 were presented by authors coming from 22 different countries, including 24 papers from Canada. Half the papers were industrial papers, i.e. manuscripts written by at least one author working in an industrial setting. Three outstanding plenary talks were delivered. G. Goodwin reviewed modern applied constrained optimization; J. MacGregor gave an overview of multivariate methods for learning and process monitoring from large data bases; finally, P. Thwaites gave the industrial point of view on the specific control problems in mineral processing and extractive metallurgy. The 16 sessions of the Symposium presented a wide spectrum of topics (see below) including modelling, optimization and automatic control in the fields of mining, mineral processing, pyrometallurgy, electrometallurgy and metal rolling processes.

Topics:
- measurement and instrumentation,
- identification and modelling,
- process observation and parameter estimation,
- data mining and multivariate statistics,
- fault diagnosis and fault tolerant control,
- advanced process control,
- robotics,
- monitoring of product quality and control performance,
- process optimisation,
- maintenance scheduling and production planning,
- AI methods: expert systems, neural networks, fuzzy control.

Applications:
- mining, blasting, ventilation, transportation,
- mineral processing,
- grinding, flotation, mineral separation and dewatering,
- hydro-, electro- and pyro-metallurgy,
- iron and steel making, and continuous casting,
- forming of metals and metallic materials,
- hot/cold rolling,
- light metals (Al, Mg, Ti, etc.), refractory metals, ferroalloys,
- base metals (Cu, Pb, Zn, etc.) and precious metals (Au, Ag, etc.),
- environment and recycling,
- waste water treatment.

The Symposium was organized by the multi-departmental research group LOOP (Process Observation and Optimization Lab.) of Laval University, and supported by "Diamond" sponsors, Xstrata Nickel, Algosys and Alcan (Rio-Tinto), "Gold" sponsors, Barrick and Outotec, and "Copper" sponsors, Dofasco (Arcelor-Mittal), Alcoa and Gecamin. The 103 Symposium participants enjoyed the 400 years of history, as well as the culinary pleasures, vibrant street life, and thriving cultural scenes offered by Québec City, in a largely French-speaking province, at the crossroads between European and North American cultures. The NOC, IPC, and MMM TC members as well as the session chairs, authors, editors and Laval University students are thanked for having contributed to the success of this IFAC event .

Daniel Hodouin, IPC Chair

The IFAC Foundation opens the call for applications

Created in Prague in 2005, at the XVI IFAC World Congress, the IFAC Foundation has among its aims:
– To promote the awareness and dissemination of the social relevance of automatic control.
– To improve communications of scientific results in the fields of interest of IFAC, particularly in developing countries.

The work of the Foundation has begun with two project areas. The first one is to help support young authors from developing countries to attend relevant Automatic Control technical meetings. The first meeting whose authors will be eligible to receive this support is the XVII IFAC World Congress in Seoul in July 2008. By this action, the IFAC Foundation tries to ensure that every good accepted paper submitted by young authors from developing countries can be presented and discussed in the Congress.

The second project, also focused to promote the scientific interest in the field, will consider financial support for the development of regional courses in developing countries.   These courses should deal with recent issues in the application of control technology in some areas of special local interest, providing the participants with an overview of current and relevant developments in control engineering principles and technologies.

Other than these projects, the IFAC Foundation plans to recognize and communicate information about the social contributions of Automatic Control for improving human life. Planning is underway and results will be announced in due time.

To fulfill its aims, the IFAC Foundation is also seeking potential donors willing to participate in this challenging activity.

For those interested in knowing more about the IFAC Foundation, please, go to:

http://foundation.ifac-control.org/

IFAC
FORTHCOMING EVENTS
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Title	2008	Place	Further Information
IFAC Workshop Navigation, Guidance & Control of Underwater Vehicles (NGCUV2008)	April 08 – 10	Killaloe, Co Lare Ireland	http://www.ngcuv08.com/ e-mail: ngcuv08@ul.ie
INSTICC/IFAC Conference Informatics in Control, Automation and Robotics – ICINCO 2008	May 11 – 15	Funchal Madeira Portugal	http://www.icinco.org e-mail: secretariat@icinco.org
10th Intl. Workshop Variable Structure Systems – VSS'08	June 08 – 10	Antalya Turkey	http://www.mecha.ee.boun.edu.tr/VSS2008/ e-mail: okyay.kaynak@boun.edu.tr
American Control Conference – in cooperation with IFAC	June 12 – 14	Seattle, WA USA	http://www.a2c2.org/conferences/acc2008/ e-mail: aanna@mit.edu
17th IFAC WORLD CONGRESS	July 06 – 11	Seoul Korea	http://www.ifac2008.org e-mail: Secretariat@ifac2008.org
4th IPME/IFAC Conference Structural Control	September 08 – 12	St. Petersburg Russia	http://www.ipme.ru/ipme/conf/4ecsc e-mail: 4ecsc@director.ipme.ru
EWICS/IFAC Conference Computer Safety, Reliability and Security – SAFECOMP 2008	September 22 – 25	Newcastle upon Tyne UK	http://safecomp2008.org/ e-mail: M-A.Sujan@warwick.ac.uk
IFAC Workshop 9th Intelligent Manufacturing Systems – IMS 2008	October 09 – 10	Szczecin Poland	http://ims08.ps.pl e-mail: ims08@ps.pl
IFAC Workshop 3rd Fractional Differentiation and its Applications – FDA'08	November 05 – 07	Ankara Turkey	http://www.cankaya.edu.tr/fda08 e-mail: fda08@cankaya.edu.tr
Title	2009	Place	Further Information
IFAC Symposium Fault Detection, Supervision and Safety for Technical Processes – SAFEPROCESS	June 30 – July 3	Barcelona Spain	http://www-esaiiterrassa.upc.es/safeprocess2009/ e-mail: joseba.quevedo@upc.edu
IFAC Symposium Identification and System Parameter Estimation – SYSID'09	July 06 – 08	St. Malo France	http://www.sysid2009.org/ e-mail: secretariat@sysid.com
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 Symposium Robot Control – SYROCO 2009	September 10 – 12	Gifu Japan	http://www.syroco.org e-mail: syroco2009_office@syroco2009.org
Title	2010	Place	Further Information
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 Nonlinear Control Systems – NOLCOS 2010	September 01 – 03	Bologna Italy	http://www.nolcos2010.unibo.it/ e-mail: lmarconi@deis.unibo.it