Contents:

Getting Ready for the Prague Congress
July 4 – 8, 2005

praha 2005
16TH IFAC WORLD CONGRESS

Although it might still seem a long time away, preparations for the next IFAC World Congress from 4 – 8 July 2005 are well under way.

The timetable for the Congress is as follows:

June 1, 2004 – submission site for contributions opens

September 8, 2004 – submission of Full Draft Papers and Invited Sessions

October 15, 2004 – submission of Tutorials, Workshops and Panel Sessions proposals

December 15, 2004 – notification of the acceptance/rejection of submitted contributions

– preliminary program announcement

March 1, 2005 – delivery of final papers

April 1, 2005 – final program announcement

July 2–3, 2005 – pre-Congress program: Tutorials & Workshops

July 4–8, 2005 – Congress program

The next meeting of the International Program Committee for the Prague Congress will take place in the framework of this year's Council- and Related Meetings in St. Petersburg, Russia on June 17, 2004.

In preparation of the Congress also, this issue of the IFAC Newsletter publishes Calls for Papers for IFAC Awards, which will be presented there. These awards are independent from the papers which will be given at the Congress. They are the Quazza Medal, the Nichols Medal, the Industrial Achievement Award and the Harold Chestnut Control Engineering Textbook Prize. Everybody in the IFAC community is invited to make nominations for these awards.

Call for Nominations

The Harold Chestnut
Control Engineering Textbook Prize

The Harold Chestnut Control Engineering Textbook Prize Selection Committee of the International Federation for Automatic Control (IFAC) calls for nominations for the Triennial Harold Chestnut Prize.

The Prize is awarded to the author(s) of a control engineering textbook that has contributed most to the education of control engineers. The Prize, consisting of a monetary award and a certificate, will be presented at the Closing Ceremony of the 16th IFAC World Congress that will be held in Prague in 2005.

Nominations must meet the submission criteria as follows:

1. book to be written in one of the official IFAC languages, preferably in English; and
2. book to be published between September 1, 1996 and July 31, 2002.

Nominations must include:
a) Nomination letter that states the full title, name(s) and address of the author(s), name of the textbook, date of publication, and name and address of the publisher;
b) Evidence of the contribution of the textbook to the education of control engineers; and
c) Any additional information that may support the Judging Process, such as a book review, a letter of support by the publisher, a list of universities that have adopted the for teaching purposes, etc.

It is important to note that only those book reviews that have been published by Automatica, Control Engineering Practice or another IFAC affiliated journal within the above mentioned publishing period will be taken into consideration.

If the Prize-winning textbook is written by more than one author, the monetary component of the Prize will be equally split among the authors with each author receiving a certificate.

Please send your nominations to:

Dr Ljubo Vlacic, Professor and Director
Intelligent Control Systems Laboratory
School of Microlelectronic Engineering
Griffith University, Nathan Campus
Brisbane Qld 4111 Australia
Phone: +61 7 3875 5024
Fax: +61 7 3875 5198
e-mail: L.Vlacic@griffith.edu.au
http://www.griffith.edu.au/centre/icsl/vlacic

To be considered, nominations must be received by close of business on

June 30, 2004.

The winner(s) will be notified well in advance to let them plan their attendance at the Award Ceremony in Prague, 2005.
Your cooperation is greatly appreciated.

Call for Nominations

Giorgio Quazza Medal
Nathaniel B. Nichols Medal
Industrial Achievement Award

According to the provisions as outlined for the Giorgio Quazza Medal, for the Nathaniel B. Nichols Medal and the Industrial Achievement Aweard, the IFAC NMOs and the IFAC Technical Committee Chairs as well as other individuals are invited to nominate a candidate respectively and to send these nominations to the IFAC Secretariat by e-mail (secr@ifac.co.at) until

March 15, 2004

The nominations should contain a curriculum vitae for the candidates, a summary of his/her major contributions and a proposed citation in addition to other material listed in the guidelines below.

Please note that it is possible to resubmit a nomination that was made in the past.

The Selection Committees, with Alberto Isidori (Quazza Medal), Jürgen Ackermann (Nichols Medal) and Lennart Ljung (Industrial Achievement Award) as Chairs will present short lists of potential candidates at the forthcoming Council meeting, to take place in St. Petersburg, Russia, on June 19, 2004. Winners will be selected by a vote of the Council no less than twelve months prior to the Prague Congress.

Guidelines

The guidelines used to conduct the selection procedure for the three awards were amended in 2003 and are given below:

QUAZZA MEDAL
(Created 1979)

This is an IFAC award to a distinguished control engineer as a memorial to the late **Giorgio Quazza,** a leading Italian electrical and control engineer who served IFAC in many capacities in a most distinguished manner. The medal is presented by the President at each IFAC Triennial Congress at the Opening Ceremony. A prize is presented to the recipient together with the medal. Financing is provided by IFAC.

Selection Committee
The medal is awarded by the IFAC Council on the recommendation of a Selection Committee of five to seven distinguished engineers appointed by the Council no later than 18 months and normally more than 24 months prior to the IFAC Congress at which the medal is to be presented.

Nomination Procedure
Not less than 18 months before the start of the Congress at which the medals are presented, the IFAC Secretary invites nominations from the NMOs and TCs. The call for nominations should also be issued to individuals through IFAC periodicals, the IFAC Newsletter and the IFAC Home Page. Nominations should contain:

- Summary of the contributions
- a Curriculum Vitae
- List of publications
- Supporting letters
- Suggested citation

The Secretariat should make sure that the nomination material is complete and request additional material if necessary. IFAC Officers are not eligible. The Selection Committee and the Council may add further suitable candidates for consideration. The list of candidates is considered by the Selection Committee which recommends a candidate and a runner up to the Council no less than 12 months prior to the Congress in Question.

Selection Criteria
The award is given in technical fields covered by IFAC. The contributions should be manifested in technical publications. A nominee should have served IFAC in some capacity, formally or informally. The selection is based on:

- Quality of publications
- Impact of publications
- Engineering significance
- Service to IFAC
- International recognition

Selection Procedure
The nominations are distributed to the committee members by the IFAC Secretariat. Each member makes an individual assessment of the candidates and sends his/her choice of the top five candidates to the Chair. A short list of two to five candidates is prepared possibly by dialog among the committee members. A selection of a winner is made after careful evaluation of candidates and by vote of the Council at least 12 months prior to the Congress in question.

Members of the Committee
Appointed by the President on behalf of the Council.

Comments
The Selection Committee has found it useful to establish a list of strong candidates that is kept and transferred to the next triennium. It has also been a good tradition that several of the Selection Committee members are former award winners, as well as that the members typically serve for a few three year periods.

NICHOLS MEDAL
(Created 1996)

This is an IFAC award that recognizes industrial leadership, outstanding contributions of an individual to design methods, software tools and instrumentation, or significant projects in major applications and advancement of control engineering. It is named after **Nathaniel B. Nichols,** a leading contributor in the USA to control engineering and applications. The medal is presented by the President at each IFAC Triennial Congress. A prize is presented to the recipient together with the medal. Financing is provided by IFAC.

Selection Committee
The medal is awarded by the IFAC Council on the recommendation of a Selection Committee of five to seven distinguished engineers appointed by the Council no later than 18 months and normally more than 24 months prior to the IFAC Congress at which the medal is to be presented.

Nomination Procedure
Not less than 18 months before the start of the Congress at which the medals are presented, the IFAC Secretary invites nominations from the NMOs and TCs. The call for nominations should also be issued to individuals through IFAC periodicals, the IFAC Newsletter and the IFAC Home Page. Nominations should contain:

- Summary of the contributions
- a Curriculum Vitae
- List of publications
- Supporting letters
- Suggested citation

The Secretariat should make sure that the nomination material is complete and request additional material if necessary. IFAC Officers are not eligible. The Selection Committee and the Council may add further suitable candidates for consideration. The list of candidates is considered by the Selection Committee which recommends a candidate and a runner up to the Council no less than 12 months prior to the Congress in Question.

Selection Criteria
The award is given in technical fields covered by IFAC. The contributions should be manifested in technical publications, patents or reports documenting completed projects or developed products. The selection is based on:

- Quality of publications
- Impact of publications
- Innovation level of patents
- Impact of patents
- Engineering significance of products and projects
- International recognition

Selection Procedure
The nominations are distributed to the committee members by the IFAC Secretariat. Each member makes an individual assessment of the candidates and sends his/her choice of the top five candidates to the Chair. A short list of two to five candidates is prepared possibly by dialog among the committee members. A selection of a winner is made after careful evaluation of candidates and by vote of the Council at least 12 months prior to the Congress in question.

Members of the Committee
Appointed by the President on behalf of the Council.

Comments
The Selection Committee has found it useful to establish a list of strong candidates that is kept and transferred to the next triennium. It has also been a good tradition that several of the Selection Committee members are former award winners, as well as that the members typically serve for a few three year periods.

IAA: INDUSTRIAL ACHIEVEMENT AWARD
(Created 2000)

This is an IFAC award to an individual, or a team of individuals, who has made a significant contribution to industrial applications of control. The award, together with a certificate, is presented to the recipient by the President at each IFAC Congress. Financing is provided by IFAC.

Selection Committee
The award is given by the IFAC Council on the recommendation of a Selection Committee. The Chair of this Committee is nominated by the Council and the members are nominated by the Selection Committee Chair, all them being appointed by the President on behalf of the Council.

Nomination Procedure
Not less than 18 months before the start of the Congress at which the medals are presented, the IFAC Secretary invites nominations from the NMOs and TCs. Call for nominations should also be issued to individuals through IFAC periodicals, the IFAC Newsletter and the IFAC Home Page. Nominations should contain:

- Summary of the contributions
- a Curriculum Vitae
- Supporting letters
- Suggested citation

The Secretariat should make sure that the nomination material is complete and request additional material if necessary. IFAC Officers are not eligible. The Selection Committee and the Council may add further suitable candidates for consideration. The list of candidates is considered by the Selection Committee which recommends a candidate and a runner up to the Council no less than 12 months prior to the Congress in question.

Selection Criteria
The award is given in technical fields covered by IFAC. The selection is based on industrial achievements measured in terms of:

- Inventions in the control area
- Engineering significance of products and projects
- Industrial leadership
- Promotion of control technology in industry
- Impact of patents
- International recognition

The award may be given to a team of engineers for joint achievements. There is no requirement that the nominated candidates must have been involved in IFAC. The award can be given to a single achievement (an invention or a leadership of a major project) or a record of achievements over a period of time.

Selection Procedure

The nominations are distributed to the Selection Committee members by the IFAC Secretariat. Each member makes an individual assessment of the candidates and sends his choice of the top five candidates to the Chair. A short list of two to five candidates is prepared possibly by dialog among the committee members. A selection of a winner is made after careful evaluation of candidates and by vote of the Council at least 12 months prior to the Congress in question.

Comments

The Selection Committee may find it useful to establish a list of strong candidates that is kept and transferred to the next triennium.

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A Journal of IFAC the International Federation of Automatic Control

Papers from the February 2004 Issue

Papers

Synthesis of Non-rational Controllers for Linear Delay Systems
M.C. de Oliveira, J.C. Geromel
Design of Robust Model-based Controllers via Parametric Programming
V. Sakizlis, N. M.P. Kakalis, V. Dua, J. D. Perkins, E.N. Pistikopoulos
Multi-channel Active Noise Control for Periodic Sources-indirect Approach
B. Wu, M. Bodson
Guaranteed Cost Control for Multi-inventory Systems with Uncertain Demand
F. Blanchini, S. Miani, F. Rinaldi
Parameter Estimation in Stochastic Grey-box Models
N.R. Kristensen, H. Madsen, S.B. Jorgensen
Specialized Fast Algorithms for IQC Feasibility and Optimization Problems
C.-Y. Kao, A. Megretski, U. Jonsson
The Size of the Membership-set in a Probabilistic Framework
H. Akcay

Brief Papers

A mixed H_2/H-infinite Approach to Simultaneous Fault Detection and Control
M.J. Khosrowjerdi, R. Nikoukhah, N. Safari-Shad
Supervisory Control with State-dependent Dwell-time Logic and Constraints
C. De Persis, R. De Santis, A.S. Morse
Time Scaling for Observer Design with Linearizable Error Dynamics
W. Respondek, A. Pogromsky, H. Nimeijer
Equivalence and Identifiability Analysis of Uncontrolled Nonlinear Dynamical Systems
L. Denis-Vidal, G. Joly-Blanchard
Approximate Explicit Receding Horizon Control of Constrained Nonlinear Systems
T.A. Johansen
Slowing Deforestation Pace through Subsidies: a Differential Game
K. Fredj, G. Martin-Herran, G. Zaccour
Enlargement of Polytopic Terminal Region in NMPC by interpolation and partial Invariance
M. Cannon, B. Kouvaritakis, V. Deshmukh
Reduced-order controllers for the H-infinite control Problem with Unstable Invariant
X. Xin

Technical Communiques

Comparing Digital Implementation via the Bilinear and Step-invariant Transformations
G. Zhang, T. Chen
Robust Stabilization of Uncertain Systems with Unknown Input Delay
D. Yue

Book Reviews

Relay Feedback, by Q.-G. Wang, T.H. Lee and C. Lin
C. De Persis
RAMSETE-Articulated and Mobile Robotics for Services and Technologies, by S. Nicosia, B. Siciliano, A. Bicchi and P. Valigi
A. Tornambe
Industrial Control Systems Design, by Michael J. Grimble
M. Sbarciog

Control Engineering Practice

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Papers from the February 2004 Issue

A Methodology for Robust Fault Detection in Dynamic Systems
I. R. Petersen, D. C. McFarlane
Application of Robust and Adaptive Control Techniques to Cooperative Manipulation
I. Uzmay, R. Burkan, H. Sarikaya
A Robust Adaptive Nonlinear Control Approach to Missile Autopilot Design
S.H. Kim, Y.S. Kim, C. Song
Design and Implementation of a Grey Sliding Mode Controller for Synchronous Reluctance Motor Drive
H.-K. Chiang, C.-H. Tseng
Control of GDI Engines Using Torque Feedback Exemplified by Simulations
M. Gafvert, K.-E. Arzen, L.M. Pedersen, B. Bernhardsson
Advanced Detection of Rolling Bearing Spalling from De-noising Vibratory Signals
F. Bolaers, O. Cousinard, P. Marconnet, L. Rasolofondraibe
RBF-ARX Model-based Nonlinear System Modeling and Predictive Control with Application to a NOx Decomposition Process
H. Peng, T. Ozaki, Y. Toyoda, H. Shioya, K. Nakano, V. Haggan-Ozaki, M. Mori
Modular Supervisory Control of an Experimental Automated Manufacturing System
M. Nourelfath, E. Niel
Modelling End-of-roll Dynamics in Positioning Servos
A. Guesalaga
Proportional-integral-plus (PIP) Control of Ventilation Rate in Agricultural Buildings
C.J. Taylor, P. Leigh, L. Price, P.C. Young, E. Vranken, D. Berckmans

Book Reviews

Neural Networks for Modelling and Control of Dynamic Systems, by M. Norgaard, O. Ravn, N. K. Poulsen and L. K. Hansen
J. Sjöberg
Nonlinear System Identification
J. Sjöberg

Title	2004	Place	Further Information
IFAC/(CIGR) Workshop 5th Artificial Intelligence in Agriculture	March 8 – 10	Cairo Egypt	http://www.claes.sci.eg/aia04 e-mail: soliman@claes.sci.eg
IFAC Symposium Computer Applications in Biotechnology	March 28 – 31	Nancy France	http://www.ensic.inpl-nancy.fr/CAB9/ e-mail: cab9@ensic.inpl-nancy.fr
IFAC Symposium 11th Information Control Problems in Manufacturing – INCOM 2004	April 5 – 7	Salvador Brazil	http://www.eletro.ufrgs.br/incom2004/ e-mail: cpereira@eletro.ufrgs.br
IFAC Symposium Advances in Automotive Control	April 19 – 23	Salerno Italy	http://www.ifac04.unisa.it e-mail: ifac04@unisa.it
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
IFAC Conference Control Applications in Marine Systems – CAMS 2004	July 7 – 9	Ancona Italy	http://cams04.unian.it e-mail: cams04@unian.it
IFAC Workshop Fractional Differentiation and its Applications – FDA '04	July 19 – 20	Bordeaux France	http://www.lap.u-bordeaux.fr/fda04/home.html e-mail: fda04@lap.u-bordeaux.fr
Asian Control Conference (5th) – in co-operation with IFAC –	July 20 – 23	Melbourne Australia	http://www.ascc2004.com/ e-mail: ascc@ee.mu.oz.au
IFAC Symposium Large Scale Systems: Theory and Applications	July 26 – 28	Osaka Japan	http://www-watt.mech.eng.osaka-u.ac.jp/lss2004/ e-mail: ifac-lss04@watt.mech.eng.osaka-u.ac.jp
IFAC Symposium Modeling and Control of Economic Systems	July 28 – 31	Redlands CA, USA	http://newton.uor.edu/ifac_sme_2004/ e-mail: SME_2004@Redlands.edu
INSTICC/IFAC Intl. Conference Informatics in Control, Automation and Robotics – ICINCO 2004	August 25 – 28	Setubal Portugal	http://www.icinco.org e-mail: secretariat@icinco.org
IFAC Workshops on – Adaptation and Learning in Control and Signal Processing – ALCOSP – Periodic Control Systems – PSYCO	August 30 – September 1	Yokohama Japan	http://www.contr.sd.keio.ac.jp/ifacws04/main.htm e-mail: sano@sd.keio.ac.jp e-mail: katayama@amp.i.kyoto-u.ac.jp
IFAC Symposium 6th Nonlinear Control Systems – NOLCOS'04	September 1 – 3	Stuttgart Germany	http://www.nolcos2004.uni-stuttgart.de e-mail: nolcos2004@ist.uni-stuttgart.de
IFAC 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
IFAC Workshop Internet Based Control Education – IBCE'04	September 6 – 7	Grenoble France	http://ibce.lag.ensieg.inpg.fr e-mail: ibce@inpg.fr
IFAC Symposium Mechatronic Systems	September 6 – 8	Sydney Australia	http://rumi.newcastle.edu.au/mech2004/ e-mail: kdisney@mail.newcastle.edu.au

FORTHCOMING EVENTS (ctd.)

Title	2004	Place	Further Information
IFAC Workshop Real Time Programming	September	Istanbul Turkey	http:// not yet available e-mail: not yet available
IFAC/(IFIP/IFORS/IEA) Symposium 9th Analysis, Design, and Evaluation of Human-Machine Systems – HMS 04	September 7 – 9	Atlanta GA, USA	http://www.isye.gatech.edu/IFAC-HMS2004 e-mail: sheila.devezin@isye.gatech.edu
IFAC Workshop 5th Time Delay Systems	September 8 – 10	Leuven Belgium	http://www.cs.kuleuven.ac.be/conference/tds04/ e-mail: tds04@cs.kuleuven.ac.be
IFAC Symposium 11th Automation in Mining, Mineral and Metal Processing – MMM 2004	September 8 – 10	Nancy France	http://www.cran.uhp-nancy.fr/ifac-mmm2004/ e-mail: mmm2004@cran.uhp-nancy.fr
IFAC Workshop 2nd Advanced Fuzzy/Neural Control	September 16 – 17	Oulu Finland	http://www.ntsat.oulu.fi/ e-mail: office@atu.fi
IFAC Workshop Discrete Event Systems	September 22 – 24	Reims France	http://www.univ-reims.fr/wodes04 e-mail: wodes04@univ-reims.fr
IFAC Workshop Generalized Solutions in Control Problems GSCP-2004	September 24 – 26	Pereslavl- Zalessky	http://www.botik.ru/PSI/CPRC/GSCP2004 e-mail: gscp@cprc.botik.ru
IFAC Workshop Modelling and Control for Participatory Planning and Managing Water Systems	Sep. 29 – Oct. 1	Venice Italy	http://www.elet.polimi.it/IFAC_TC_Environment/Venice2004 e-mail: venice2004@elet.polimi.it
IFAC Workshop Automatic Systems for Building the Insfrastructure in Developing Countries: Regional and Global Aspects (DECOM –TT)	October 3 – 5	Bansko Bulgaria	http://hsi.iccs.bas.bg/decom04/ e-mail: decom04@hsi.iccs.bas.bg
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://pds2004iele.polsl.gliwice.pl e-mail: pds2004@iele.polsl.gliwice.pl
IFAC Symposium System Structure and Control	December 8 – 10	Oaxaca Mexico	http://sssc04.cinvestav.mx e-mail: jtorres@cinvestav.mx
Title	**2005**	**Place**	**Further Information**
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 7th Advances in Control Education	June 16 – 18	Madrid Spain	http:// not yet available e-mail: not yet available
IFAC Symposium System Identification – SYSID 2006	July	Newcastle Australia	http:// not yet available e-mail: not yet available
IFAC Symposium Fault Detection, Supervision and Safety of Technical Processes – SAFEPROCESS	August 30 – September 1	Beijing China	http:// not yet available e-mail: not yet available
IFAC 50th Anniversary Celebration **Present and Future of Automatic Control**	**September** **15**	**Heidelberg** **Germany**	