



INTERNATIONAL FEDERATION
OF AUTOMATIC CONTROL

NEWSLETTER

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IFAC Journal Annual Reviews in Control: New Editor-in-Chief

Under the successful leadership of Editor-in-Chief, Janos Gertler, the past 19 years of *Annual Reviews in Control* has seen the journal flourish through publication of high quality review content across the field of control and its applications. To honor Professor Gertler's valuable service to the community and allow him to hand the reigns over to the new Editor-in-Chief, Francoise Lamnabhi-Lagarrigue, a ceremony was held at the Safeprocess conference in Paris, France.



IFAC President Janan Zaytoon with Janos Gertler

Both IFAC and Elsevier expressed deep gratitude for Professor Gertler's leadership which saw significant improvements to *Annual Reviews in Control* over the years. IFAC President Janan Zaytoon, also recognized the continued contribution of Professor Gertler to IFAC over the years. Janos Gertler is an IFAC Advisor and Fellow. He served as chair of the IPC of the 1984 IFAC World Congress in Budapest, chair of the IFAC Publications Committee and of the Publications Management Board (PUMB), as well as many other roles.



ARC Editors Past and Present

Elsevier also acknowledged how Professor Gertler's strong editorial oversight of the journal continued to improve its service to the community by publishing highly relevant content. Through publication of important papers, the growing interest of the commu-

nity was reflected in the recent 34% increase in impact factor bringing it to 2.518 in 2014 (2014 Journal Citation Reports.)

Incoming Editor-in-Chief Professor Francoise Lamnabhi-Lagarrigue also took a moment to thank Professor Gertler for handing over the Journal in such a healthy condition. Francoise Lamnabhi-Lagarrigue will now lead the journal in to the next phase of providing high quality review content with guidance from her newly expanded Editorial Board comprised of leaders of the community.

Allison Waldron, Elsevier representative



The ARC team at editor transition ceremony

The ARC ceremony took place at the 9th IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes: SAFEPROCESS'15, held Sept 2-4 at Arts et Métiers ParisTech (ENSAM), Paris, France. The symposium was organized by the French working group GDRMACS-S3 : Sûreté, Surveillance, Supervision (WG Safety, Monitoring, Supervision).

The Symposium was sponsored by the IFAC Technical Committee on Fault Detection, Supervision and Safety of Technical Processes (TC 6.4). The technical co-sponsors were 10 other IFAC TCs (TC 1.1, TC 1.3, TC 4.2, TC 6.1, TC 6.2, TC 6.3, TC 7.2, TC 7.3, TC 7.4, TC 7.5) and the GDR MACS/CNRS (French National Council for Scientific Research). More than 325 people from 42 countries participated in the symposium.

Vincent Cocquempot,
SAFEPROCESS General Chair

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IN THIS ISSUE:

ARC: New Editor-in-Chief

New IFAC Major Medal

Call for Nominations: 2014 – 2017 IFAC Fellows & 2014-2017 Major Medals

Who's Who in IFAC: Derong Liu, IFAC Council Member

MICNON 2015

Forthcoming Events

New IFAC Major Medal: Manfred Thoma Medal

In its July 2015 meeting in Chicago, the IFAC Council approved the creation of a new major IFAC Medal, to recognize outstanding contributions of a young researcher or engineer to the domain of systems and control in its widest sense. Eligible candidates are young scientists and engineers under the age of 40 that have made outstanding contributions to our field. With this new medal IFAC honors and recognizes the important role of the younger generation within the systems and control community.

The new medal will be named after Manfred Thoma (1929-2014), a leading contributor to the field of control and to IFAC, advisor and former IFAC President (1984-1987), and supporter of the careers of many young scientists.

The medal will be awarded every triennium starting at the 2017 IFAC World Congress in Toulouse, France. A call for nominations is published in this Newsletter with a nominations deadline in the first quarter of 2016.

Paul Van den Hof, Awards Chair

IFAC Fellows: Call for Nominations 2014-2017

Call for 2017 IFAC Fellow Nominations

IFAC is seeking nominations for 2017 IFAC Fellows. The IFAC Fellow award provides a distinction of excellence in the Federation and is conferred on a small number of outstanding scientists or engineers by the IFAC Council, based on the proposal of the Fellow Selection Committee. With the appointment as an IFAC Fellow, IFAC honors outstanding contributions with a high impact in the fields of interest of IFAC in the role as a Scientist, Engineer, Technical Leader or Educator. These contributions may be technical publications, patents, control solutions, products, software, and leadership in research, development and education.

Any control scientist or engineer (with the exceptions listed below) can be a candidate for the title of an IFAC Fellow. Past involvement in IFAC activities, publications and events is desirable and an asset but not absolutely mandatory. For a list of IFAC Fellows elected so far, please go to the IFAC website at: <http://www.ifac-control.org/awards/ifac-fellows>.

Current members of the IFAC Council, Fellow Search Committee or the Fellow Selection Committee are not eligible to be considered as Fellow Candidates. IFAC Fellow candidates must be proposed by a separate nominator.

Nominators

Any person is eligible to serve as a nominator with the exception of members of the IFAC Council, Fellow Search Committee or Fellow Selection Committee. The nominator is responsible for the information provided about the candidate. The nominator is asked to read the Nominator Information, complete the Nomination Form according to the requirements given below, and alert the persons indicated as referees that they have been named as such.

If you plan to submit an IFAC Fellow Nomination Form, please find instructions below to assist you in this nomination process. Strict adherence to this procedure is essential; otherwise, a candidate may be placed at a serious disadvantage and possibly excluded from consideration this triennium.

Fellow Nomination Forms must reach the IFAC Secretariat (by e-mail: secretariat@ifac-control.org) by

January 12, 2016

References

Each nomination must be supported by at least three, but no more than five references from internationally reputed experts in the field who are aware of the Candidate's contributions. These referees need not be IFAC Fellows themselves. It is to be noted that the choice of referees is important for the success of the candidate's nomination. Members of the IFAC Council, Fellow Search Committee or the Fellow Selection Committee are not eligible to serve as referees. If you have been asked to act as a referee, please read the Reference Information and complete the Reference Form.

Fellow Reference Forms must reach the IFAC Secretariat (by e-mail: secretariat@ifac-control.org) by

February 2, 2016

The Call for Nominations, the Nominator Information and Nomination Form and the Reference Information and Reference Form are available for download at the IFAC website at

<http://www.ifac-control.org/awards/fellow-nominations-2017>

The completed forms must be submitted directly to the IFAC Secretariat. A nomination or reference is valid only if confirmed by the IFAC Secretariat.

New Fellows Announcement

The announcement of the newly elected Fellows will be made shortly after the completion of the vote taken by the IFAC Council in June 2016. IFAC will inform all successful candidates and their nominators of the election results by e-mail and first class mail. Nominators of unsuccessful candidates will be notified by e-mail. The new elected IFAC Fellows will be honored in a ceremony at the 2017 IFAC World Congress.

IFAC Major Medals: Call for Nominations 2014-2017

Call for Nominations for the IFAC Major Awards: Giorgio Quazza Medal, Nathaniel B. Nichols Medal, Manfred Thoma Medal, Industrial Achievement Award, High Impact Paper Award

According to the provisions as outlined for the IFAC Major Awards, the IFAC NMOs and the IFAC Technical Committee Chairs as well as other individuals are invited to nominate a candidate (candidates) for one or more of these awards and to send these nominations to the IFAC Secretariat until

February 15, 2016

The nominations should in general contain a curriculum vitae of the candidate, a summary of his/her major contributions, a proposed citation and the names of three referees. Specific details for the different awards are listed below. Nominations should be submitted by email to the IFAC secretariat: secretariat@ifac-control.org

It is the nominator's role to inform the people listed as referees to send in an electronic reference form with an assessment of the candidate(s) to the IFAC secretariat before the deadline. Reference forms are available at <http://www.ifac-control.org/awards/nominations-2017>

For each of the Major Awards a selection committee has been appointed. All awards will be presented by the IFAC President at the Opening Ceremony of the 2017 IFAC World Congress in July 2017 in Toulouse, France.

Every individual can act as nominator or referee, with the exception of members of the relevant major award selection committee, the major awards search committee, and members of the IFAC Council. Self-nominations are not allowed.

Every individual is eligible to be a nominee, with the exception of members of the relevant major award selection committee and IFAC officers.

It may be useful to consider the list of past winners on the IFAC Website, at http://www.ifac-control.org/Past_Award_Winners.pdf

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

A more detailed description of the several Awards, including selection criteria, follows below:

GIORGIO QUAZZA MEDAL

(Created 1979)

This IFAC award recognizes lifetime achievements in science and engineering in any of the 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 criteria are:

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

Nominations should contain a curriculum vitae of the candidate, a summary of his/her major contributions and an account of their impact, a proposed citation and the names of three referees.

NATHANIEL B. NICHOLS MEDAL

(Created 1996)

This IFAC award 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. The award is given for contributions in any of the technical fields of IFAC. The contributions should be manifested in technical publications, patents or reports documenting completed projects or developed products. The selection criteria are:

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

Nominations should contain a curriculum vitae of the candidate, a summary of his/her major contributions and an account of their impact, a proposed citation and the names of three referees.

IFAC Major Medals: Call for Nominations 2014-2017

MANFRED THOMA MEDAL (Created 2015)

This is an IFAC award for early career achievements that recognizes outstanding contributions of a young researcher and/or engineer under the age of 40 to the field of systems and control in its widest sense. For the award to be given at the 2017 World Congress candidates are eligible that were born after January 1, 1977. Candidates are assessed by their scientific and technical contributions to the field of systems and control. The selection criteria are:

- Quality and impact of publications
- Engineering significance
- International recognition

Involvement in IFAC is not part of the criteria.

Nominations should contain a curriculum vitae of the candidate, a summary of the major achievements in terms of the selection criteria above, a proposed citation and the names of three referees.

INDUSTRIAL ACHIEVEMENT AWARD (Created 2000)

The IFAC Industrial Achievement Award is given to an individual, or a team of individuals, who has made significant contributions to industrial applications of control in any of the technical fields covered by IFAC. The award can be given for a single achievement (an invention or a leadership of a major project) or a record of achievements over a period of time. There is no requirement that the nominated candidates must have been involved in IFAC. The selection criteria are:

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

Nominations should contain a curriculum vitae of the candidate(s), a summary of the major achievements in terms of the selection criteria above, a proposed citation and the names of three referees.

HIGH IMPACT PAPER AWARD (Created 2009)

This award is to acknowledge the impact of a paper published in any of the official IFAC journals on the broad areas of automatic control theory and applications. At most two such awards will be made in any triennium.

Eligible papers must have been published in any of the official IFAC Journals (Automatica, Control Engineering Practice, Annual Reviews in Control, Journal of Process Control, Engineering Applications of Artificial Intelligence, Mechatronics, Nonlinear Analysis: Hybrid Systems). For the award(s) to be given at the 2017 Congress, only papers published within the time period 1 January 1987 through 31 December 2008 are eligible.

The selection criteria are:

- Evidence of high number of citations, as obtainable from either (or both) the engineering databases: Thompson ISI's Web of Science and Elsevier's SCOPUS.
- Evidence that the work under consideration has been actually used by others in their research/professional activity.
- Opinions expressed by three references from internationally reputed experts in the field who are personally aware of the contributions of the nominated paper.

Nominations should include:

- A statement specifying the number of citations, as obtainable from either (or both) the engineering databases: Thompson ISI's Web of Science and Elsevier's SCOPUS;
- Excerpts of technical papers documenting work and progress made possible because the prior contributions of the nominated paper. Papers (co)authored by one of the authors of the nominated paper cannot be used for this purpose.
- A description (if appropriate) of industrial achievements made possible because the prior contributions of the nominated paper.
- The names of three internationally reputed experts that can serve as referee.

Who's Who in IFAC: Council Member Derong Liu

Derong Liu received the B.S. degree in mechanical engineering from the East China Institute of Technology (now Nanjing University of Science and Technology), Nanjing, China, in 1982, the M.S. degree in automatic control theory and applications from the Institute of Automation of the Chinese Academy of Sciences, Beijing, China, in 1987, and the Ph.D. degree in electrical engineering from the University of Notre Dame, Indiana, US, in 1994.

Dr. Liu was a product design engineer with China North Industries Corporation, Jilin, China, from 1982 to 1984. He was an instructor with the Graduate School of the Chinese Academy of Sciences, Beijing, from 1987 to 1990. He was a staff fellow with General Motors Research and Development Center from 1993 to 1995. He was an assistant professor with the Department of Electrical and Computer Engineering, Stevens Institute of Technology, from 1995 to 1999. He joined the University of Illinois at Chicago (US) in 1999, and became a full professor of Electrical and Computer Engineering and of Computer Science in 2006. He was selected for the "100 Talents Program" by the Chinese Academy of Sciences in 2008. He has published 15 books (six research monographs and nine edited volumes).



Derong Liu

Dr. Liu was an associate editor of *Automatica* from 2006 to 2009. Currently, he is a distinguished lecturer of the IEEE Computational Intelligence Society and he is the editor-in-chief of the IEEE Transactions on Neural Networks and Learning Systems. He also serves as an associate editor of *Soft Computing*, *Neurocomputing*, *Neural Computing and Applications*, and *Science in China Series F: Information Sciences*. He was an associate editor of the IEEE Transactions on Circuits and Systems-I: Fundamental Theory and Applications from 1997 to 1999, the IEEE Transactions on Signal Processing from 2001 to 2003, the IEEE Transactions on Neural Networks from 2004 to 2009, the IEEE Computational Intelligence Magazine from 2006 to 2009, and the IEEE Circuits and Systems Magazine from 2008 to 2009, and the letters editor of the IEEE Transactions on Neural Networks from 2006 to 2008.

Awards and honors that Dr. Liu has received include the Faculty Early Career Development Award from the National Science Foundation in 1999, the University Scholar Award from Uni-

versity of Illinois from 2006 to 2009, and the Overseas Outstanding Young Scholar Award from the National Natural Science Foundation of China in 2008. He is a Fellow of the IEEE and a Fellow of the International Neural Network Society.

Derong Liu (CN) is serving as an Ordinary Member of the IFAC Council for the 2014-2017 triennium.

MICNON 2015 St. Petersburg, Russia 24-26 June 2015

The 1st (Inaugural) IFAC Conference on Modelling, Identification and Control of Nonlinear Systems (MICNON 2015) took place on June 24-26, 2015 in Saint Petersburg, Russia. MICNON 2015 attracted a lot of interest: 265 submissions from 41 countries, including 6 invited sessions. After rigorous reviewing, 212 invited and contributed papers were included into the final program, which equals to acceptance rate 80%. More than 200 participants wereregistered. The countries leading in the number of registrants were Russia (94), China (12), Germany (12), France (9), Japan (9), USA (9), Slovakia (6), Austria (5), Italy (5), Mexico (5), Sweden (5).

MICNON 2015 gives start to the new series of the IFAC conferences covering all areas of nonlinear systems theory and applications in science and engineering, including control of nonlinear systems, analysis of nonlinear systems, modelling and identification of nonlinear systems and all types of applications in connection to nonlinear systems. The richness and diversity of the technical program is a sign of demand of the community and growth of interest in the area of nonlinear systems. The outstanding list of exceptional plenary speakers (Karl Åström, Roger Brockett, David Hill, Rudi Kalman, and Boris Polyak) made this conference really special.

There were a number of sessions dedicated to applications: Flight Control, Control of Electro-Mechanical Systems, Process Control, Control of Robots. Two sessions were dedicated to Networked Systems and Control of Networks.

The conference was dedicated to the memory of Vladimir Yakubovich, one of the founders of the modern control theory. There was a special track (27 papers) in honor of Vladimir Yakubovich: two Historical Sessions "Essays and Recollections" three Invited Sessions: KYP Lemma and Relevant Issues, Optimal and Adaptive Control, Nonlinear Stability and Oscillations. A special talk "The Legacy of Vladimir Yakubovich" was given by Alexander Fradkov. In ad-

dition a CD-collection of the research papers and books coauthored by V.A.Yakubovich was presented to each registered participant.

The conference took place in Saint Petersburg, the former capital and a historical scientific center of Russia, and one of the most beautiful cities in the world. Two sponsoring universities, Saint Petersburg State University and ITMO University, provided the venue for the conference in Vassilievsky Island, in the bottom of the historical center of Saint Petersburg. The location allowed the participants to participate in some sightseeing after the sessions.



Rudolf Kalman
at MICNON 2015

The organization of a conference like this is impossible without the help of many people. The organizers express their sincere thanks to the many contributors, the reviewers and in particular to the members of the National Organizing Committee and the International Program Committee for their great help and support. Furthermore we would like to express our sincere thanks to the members of the Department of Control Systems and Informatics of the ITMO University and members of the Department of Theoretical Cybernetics of the Saint Petersburg State University for their wonderful help with the local arrangements.



Vladimir Yakubovich

There were two invited sessions related to the history of control: namely, sessions dedicated to the memory of Prof. Vladimir Yakubovich. There were eminent scholars among participants including: R. Kalman, A. Isidori, R. Brockett, A. Lindquist, and D. Hill. The sessions were recorded and are available to view on the IFAC YouTube Channel. The plenary and historical sessions were open for all students of SPbSU and ITMO Universities.

IPC Chair Frank Allgöwer, IPC Co-Chair Alexander Fradkov, and NOC Chair Alexey Bobtsov

Calendar of IFAC Events

Title	2015	Place	Further information
3rd IFAC Workshop on Internet Based Control Education IBCE 2015	November 04 – 06	Brescia Italy	http://ibce15.unibs.it/ e-mail: ibce15@unibs.it
Eng. Australia and others Conference on Australian Control Conference (in cooperation with IFAC) AUCC 2015	November 05 – 06	Gold Coast Australia	http://www.aucc.org.au/AUCC2015/ e-mail: not yet available
7th INSTICC (SCITEPRESS) IFAC International Conference on Computational Intelligence IJCCI 2015	November 12 – 14	Lisbon Portugal	http://www.ijcci.org/ e-mail: ijcci.secretariat@insticc.org
12th European EACD/IFAC Workshop on Advanced Control and Diagnosis ACD 2015	November 19 – 20	Pilsen Czech Republic	http://acd2015.zcu.cz/ e-mail: acd2015@kky.zcu.cz
9th IFAC Symposium on Control of Power and Energy Systems CPES 2015	December 09 – 11	New Delhi India	http://www.cpes2015.org/ e-mail: info@cpes2015.org

Title	2016	Place	Further information
4th ACODS IFAC IEEE (MadrasSection&BangaloreSection) Conference on Advances in Control and Optimization of Dynamical Systems ACODS 2016	February 01 – 05	NIT Tiruchirappalli India	http://acods2016.nitt.edu/ e-mail: acods.2016@nitt.edu
7th IFAC Conference on Management and Control of Production and Logistics MCPL 2016	February 22 – 24	Bremen Germany	http://mcpl2016.logdynamics.de/ e-mail: pan@biba.uni-bremen.de
14th IFAC Symposium on Control in Transportation Systems CTS 2016	May 18 – 20	Istanbul Turkey	http://www.cts2016.itu.edu.tr/ e-mail: cts2016@itu.edu.tr
14th IFAC Symposium on Large Scale Complex Systems: Theory and Applications LSS 2016	May 26 – 28	Riverside USA	http://www.ee.ucr.edu/~ren/lss16 e-mail: not yet available
4th IFAC Conference on Intelligent Control and Automation Sciences ICONS 2016	June 01 – 03	Reims France	http://icons2016.univ-reims.fr/ e-mail: icons2016@univ-reims.fr
11th IFAC Symposium on Advances in Control Education ACE 2016	June 01 – 03	Bratislava Slovakia	http://www.ace2016.sk/ e-mail: info@ace2016.sk
11th IFAC Symposium on Dynamics and control of process systems, including biosystems DYCOPS 2016	June 06 – 08	Trondheim Norway	http://dycops2016.org/ e-mail: dycops2016@itk.ntnu.no
2nd IFAC/IEEE CSS Workshop on Control of Systems Governed by Partial Differential Equations CPDE 2016	June 13 – 15	Bertinoro Italy	http://www.cpde2016.org/ e-mail: cpde2016@gmail.com
8th IFAC Symposium on Advances in Automotive Control AAC 2016	June 20 – 23	Kolmården Wildlife R. Sweden	http://aac2016.isy.liu.se/ e-mail: aac2016@isy.liu.se
13th IFAC Workshop on Time Delay Systems TDS 2016	June 22 – 24	Istanbul Turkey	http://www.tds2016.itu.edu.tr/ e-mail: not yet available
6th IFAC Symposium on System Structure and Control SSSC 2016	June 22 – 24	Istanbul Turkey	http://www.tds2016.itu.edu.tr/ e-mail: not yet available
8th IFAC/IEEE/IFORS/INFORMS Conference on Manufacturing Modelling, Management and Control MIM 2016	June 28 – 30	Troyes France	http://mim2016.utt.fr/ e-mail: mim2016@utt.fr
12th IFAC Workshop on Adaptation and Learning in Control and Signal Processing ALCOPS 2016	June – July 29 – 01	Eindhoven Netherlands	http://alcosp2016.wtb.tue.nl/ e-mail: not yet available