IFAC NEWSLETTER

INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL

Introducing the IFAC Major Award Winners:

Continuation of a Series

No.6

December 2016

Over the course of several issues of the IFAC Newsletter readers have the opportunity to learn more about the winners of the IFAC Major Awards, which will be presented at the 2017 IFAC World Congress in Toulouse, FR in July 2017. The names of all IFAC Major Award winners, as well as the current citations for the 2014-2017 trienniumn, can be accessed on the IFAC website. The bios have all been provided by the winners themselves.

Quazza Medal: Roger Brockett (US)

Roger Brockett obtained his B.S. M.S. and Ph.D. degrees from Case Institute of Technology (Cleveland, OH, US), writing his doctoral thesis on invertibility of dynamical systems under the direction of M. D. Mesarovic. He began his teaching career in the Electrical Engineering Department at MIT (Cambridge, MA, US) in 1963, with research affiliation in the Electronic Systems Laboratory. His research at the time involved stability of nonlinear systems, especially work on frequency domain stability criteria, multipliers, etc. This work was published with a variety of students including Jacques Willems and Jan Willems. His textbook *Finite Dimensional Linear Systems* (recently reprinted by SIAM) was written while teaching the subject at MIT.

In 1969 Brockett joined the Division of Engineering and Applied Sciences at Harvard University (Cambridge, MA, USA) and about this time, motivated in part by consulting work done at Lincoln Laboratory on Satellite control, he began work on differential geometric methods for nonlinear systems. Together with post doctoral and visiting scientists, including Hector Sussmann, Velimir Jurdjevic and Art Krener, many of the foundations for nonlinear geometric control were developed in this period. These led to his work on feedback linearization and conditions for feedback stabilization. At the same time, the possibility of using recent developments in operator theory to extend the scope of linear system theory was explored with Paul Fuhrman and John Baras. During the 1980s, responding to the efforts of government agencies such as the National Science Foundation and the Army Research Laboratory, (and with the particularly notable support of Jadish Chandra at ARO, and Maryland/Harvard NSF Center) Brockett's research emphasis shifted to control problems involving computer vision, robotics and other aspects of the then emerging subject of intelligent control. Working closely with colleagues at Brown University, the University of Maryland and the Laboratory for Information Sciences at MIT, and with the early help of John Baillieul, this effort was successful in establishing important connections between the control community and experimental work central to these emerging fields. Among the outgrowths of this shift in emphasis was his 1993 paper on hybrid systems, work with Wing Wong on limited communication control and a widely cited paper on the product of exponentials representation for robotic manipulators.

One of the early papers in the burgeoning field of quantum control came out of the year 2000 thesis of Navin Khanija on the control of spin systems. Brockett's current research includes work with a multi university team devoted to the use of control theoretic models for cellular reprogramming.

Brockett is a fellow of IEEE, SIAM and AMS and a member of the National Academy of Engineering. His research and teaching has been previously recognized with awards from AACC, IEEE, ASME, and SIAM. As a Harvard faculty member he served on the faculty council for several years, initiated long-standing introductory level courses in engineering design and developed major funding for group efforts in robotics and computer vision. He has been fortunate to hold a variety of shorter term visiting appointments, including periods at Stanford (U.S), the University of Warwick, Imperial College (both in the U.K.), The University of Rome (IT), and Tokyo Institute of Technology (JP.) He retired from the teaching faculty at Harvard in 2012 and now holds the title of Research Professor.

The IFAC Journals

Automatica
http://www.journals.elsevier.com/automatica

Control Engineering Practice
http://www.journals.elsevier.com/control-engineering-practice

Engineering Applications of Artificial Intelligence
http://www.journals.elsevier.com/engineering-applications-of-artificial-intelligence

Journal of Process Control
http://www.journals.elsevier.com/journal-of-process-control

Annual Reviews in Control
http://www.journals.elsevier.com/annual-reviews-in-control

Journal on Mechatronics
http://www.journals.elsevier.com/mechatronics

Nonlinear Analysis: Hybrid Systems
http://www.journals.elsevier.com/nonlinear-analysis-hybrid-systems

IFAC Journal of Systems & Control
http://www.journals.elsevier.com/ifac-journal-of-systems-and-control

IFAC PapersOnLine

http://www.journals.elsevier.com/ifac-papersonline

Introducing the IFAC Major Award Winners 2014-2017

Industrial Achievement Award: Dejan Kihas (CA)

The Industrial Achievement Award was awarded to a team comprised of six members from Honeywell. All team members will be introduced to the IFAC Newsletter readership over the course of the next issues of this Newsletter.

Dejan Kihas is an R&D Engineer and Program Manager with Honeywell Automotive Software. He is a registered Professional Engineer in the province of British Columbia with more than 15 years of R&D and industrial engineering experience. He earned a M.Sc. and Dipl. Ing. Degree in Electrical Engineering from University of Belgrade (Serbia), and a M.Sc. Degree in Electrical Engineering from University of Alberta (CA.) He is specialized in Advanced Control Systems.

Kihas started his engineering career while pursuing graduate studies at University of Belgrade. During graduate studies at the University of Alberta he worked as a teaching assistant, research assistant and laboratory instructor. While at Matrikon, AB from 2003 to 2007 (now Honeywell Advanced Solutions) he was predominantly involved in industrial process improvement projects. He joined Honeywell, BC in 2007 at the inception of Honeywell Advanced Control Technology project which evolved in an independent business unit over time. Currently he leads projects in virtual sensing, powertrain control solutions, serves on patent review committee and as an academic liaison for HAS. His areas of interests include engineering management, business development, academic collaboration, solution startups, product development, systems modeling, virtual sensing, nonlinear control systems, model based predictive control, tools for control design and validation, process improvements, industrial solutions development and delivery. Kihas also enjoys mentoring and teaching.

Introducing the IFAC Fellows 2014-2017

Over the course of several issues of the IFAC Newsletter readers have the opportunity to learn about each of the 2014-2017 IFAC Fellows. The Fellows will be presented with their pins and certificates at the 2017 IFAC World Congress in Toulouse, FR in July 2017.

Roger Goodall

Roger Goodall graduated from the University of Cambridge (UK) in 1968. He worked for two years in manufacturing industry, and in 1982 joined British Rail's Research Division in Derby, where he spent 12 years in industrial research. He took up an academic position at Loughborough University (UK) in 1982, and he became Professor of Control Systems Engineering in 1994. He continues on a part-time basis at Loughborough University, as well as a part-time role as Professor in the Institute of Railway Research at the University of Huddersfield (UK.)

Goodall's research is concerned with a variety of practical applications of advanced control, usually for high performance electro-mechanical systems. Specific projects are concerned with active railway vehicle suspensions, advanced sensor systems for aircraft flight control systems, and advanced concepts for control technology in general. His projects have been characterised by strong industrial collaboration, having worked with companies such as Alstom, BAE Systems, Bombardier Transportation, and this is supported by excellent links with universities and research organizations worldwide.

Goodall has been involved with IFAC for many years, key roles being the inaugural Chair of the Technical Committee on Mechatronic Systems (TC4.2) from 2000-2005, and Vice-President from 2008-2014 (Chair of the Executive Board). In 2014 he received the Federation's Outstanding Service Award and was appointed as an IFAC Advisor.

In addition to his IFAC involvement Goodall has served in a variety of external scientific and technical roles including the Board of Trustees for the International Association for Vehicle System Dynamics (IAVSD), Chairman of the UK Automatic Control Council (UKACC, the IFAC NMO for the United Kingdom) and Chairman of the Railway Division for the UK's Institution of Mechanical Engineers (IMechE).

Goodall has received many awards, including the IMechE's prestigious James Watt International Gold Medal. He has been a Fellow of both the Institution of Electrical Engineers and the Institution of Mechanical Engineers in the UK for a number of years, and he was elected a Fellow of the Royal Academy of Engineering in 2007.

Jeff S. Shamma

Jeff S. Shamma is a Professor and Chair of Electrical Engineering at the King Abdullah University of Science and Technology (KAUST) in Thuwal, Saudi Arabia, where he is also the director of the Robotics, Intelligent Systems & Control Laboratory (RISC). He is the former Julian T. Hightower Chair in Systems & Control in the School of Electrical and Computer Engineering at Georgia Tech. He has also held faculty positions at the University of Minnesota, The University of Texas at Austin, and the University of California, Los Angeles (all in the U.S.)

Shamma received a Ph.D. in systems science and engineering from MIT (Cambridge, MA, US) in 1988. He is the recipient of an NSF Young Investigator Award in 1992, the American Automatic Control Council's Donald P. Eckman Award in 1996, and the Mohammed Dahleh Distinguished Lecturer Award from the Center for Control at the College of Engineering, , Dynamical-Systems, and Computation (CCDC) at the University of California- Santa Barbara (US.) In addition to becoming an IFAC Fellow, Shamma has been an IEEE Fellow since 2006. He is currently the deputy editor-in-chief for the IEEE Transactions on Control of Network Systems and associate editor for the journal Games (MDPI, Multidisciplinary Digital Publishing Institute).

Tariq Samad

Tariq Samad holds the Honeywell/W.R. Sweat Chair at the Technological Leadership Institute at the University of Minnesota. He joined TLI in May 2016 after a 30-year career with Honeywell, for the last half of which he was Corporate Fellow with Honeywell Automation and Control Solutions.

During his career with Honeywell Samad contributed to and led automation and control technology developments for applications in electric power systems, clean energy, building management, the process industries, automotive engines, unmanned aircraft, and advanced manufacturing. His research interests relate broadly to automation, intelligence, and autonomy for complex engineering systems.

Samad was the president of the American Automatic Control Council, the U.S. IFAC NMO, from 2014-15 and the President of IEEE Control Systems Society in 2009. He is a Fellow of IFAC and IEEE and the recipient of a few awards including the 2008 IEEE CSS Control Systems Technology Award, a Distinguished Member Award from IEEE CSS, an IEEE Third Millennium Medal, and an Excellence Award from the Society of Technical Communications (NYC Metro Chapter) in 2002. He is currently editor-in-chief of IEEE Press and was editor-in-chief of *IEEE Control Systems Magazine* from 1998 to 2003.

Samad holds 20 patents and has authored or coauthored over 100 conference and journal publications. He has also authored one book and edited several books and reports. He has given about 30 keynote and plenary lectures at national and international events. He was a founding member of the Board of Directors of the Smart Grid Interoperability Panel, representing industrial and commercial stakeholders. In 2012 and 2014 he co-led technology deep dives on advanced sensing, controls, and platforms for manufacturing as part of the U.S. Advanced Manufacturing Partnership initiative. Samad holds a B.S. degree in Engineering and Applied Science from Yale University (U.S) and M.S. and Ph.D. degrees in Electrical and Computer Engineering from Carnegie Mellon University (U.S.)

Samad chairs the new "pilot" Industry Committee for IFAC that is developing recommendations for improving university/industry collaborations in control and automation, in addition to serving as one of the two Technical Board vice-chairs. Past roles with IFAC have included chairing the Industrial Achievement Award committee, as well as various editorial and IPC responsibilities.

Thomas Parasini

Thomas Parisini was born in Genoa, IT in 1963. He received the ``Laurea'' degree (Cum Laude and printing honours) in Electronic Engineering from the University of Genoa in 1988 and the Ph.D. degree in Electronic Engineering and Computer Science in 1993.

From 1988 to 1995 he was with the Dept. of Communications, Computer and Systems Sciences, University of Genoa. In 1995, he joined the Dept. of Electrical, Electronic and Computer Engineering, University of Trieste (IT), as an Assistant Professor, and in 1998, he joined the Dept. of Electronic and Information Engineering, Politecnico di Milano (IT), as Associate Professor. In 2001 he was appointed Full Professor and Danieli Endowed Chair of Automation Engineering at University of Trieste. During 2009-2012 he was Deputy Rector at University of Trieste. He currently holds the Chair of Industrial Control and is Director of Research at Imperial College London (UK.)

Thomas Parisini is the Editor-in-Chief of the IEEE Trans. on Control Systems Technology. Effective January 1, 2017, he will serve as Vice-President for Publications Activities of the IEEE Control Systems Society. He is also the Chair of the IFAC Technical Committee on Fault Detection, Supervision & Safety of Technical Processes (SAFEPROCESS) TC 6.4. He was the Chair of the IEEE CSS Conference Editorial Board and a Distinguished Lecturer of the IEEE. He is currently serving as an Associate Editor of the Int. J. of Control and served as Associate Editor of Automatica, of the IEEE Trans. on Automatic Control, of the IEEE Trans. on Neural Networks, and of the International Journal of Robust and Nonlinear Control. He was the Guest Editor of the IEEE Trans. on Neural Networks - Special Issue on Adaptive Learning Systems in Communication Networks and of the IEEE Trans. on Neural Networks - Special Issue on Neural Networks for Feedback Control and he serves as Chair of the EUCA Conference Editorial Board.

Among several awards, he is a co-recipient of the 2011-2014 Journal of Process Control Paper Prize, funded by Elsevier, and of the 2004 Outstanding Paper Award of the IEEE Trans. on Neural Networks. He is also a recipient of the 2007 IEEE Distinguished Member Award. In 2012 he was awarded a prestigious ABB Research Grant dealing with energy-autonomous sensor networks for self-monitoring industrial environments.

Parisini was involved in the organization and in the technical program committees of several IEEE CSS sponsored conferences. Among others, he was the Program Chair of the 2008 IEEE Conference on Decision and Control and General Co-Chair of the 2013 IEEE Conference on Decision and Control. He will serve as Co-General Chair of the 2018 IEEE Conference on Control Systems Technology and Applications and as Program Chair of the 2018 European Control Conference.

He authored or co-authored more than 270 research papers in archival journals, book chapters, and international conference proceedings. His research interests include neural-network approximations for optimal control problems, fault diagnosis for nonlinear and distributed systems, nonlinear model predictive control systems and nonlinear estimation.

Thomas Parisini was and is involved as Project Leader in several projects funded by the European Union, and by the Italian Ministry for Research, securing overall funding exceeding 2 Millions Euro. Moreover, he is currently leading consultancy projects with some major process control companies (ABB, Danieli, and Duferco among others). In addition to being an IFAC Fellow Thomas Parisini is a Fellow of the IEEE.

Gang George Yin

Gang George Yin received the B.S. degree in mathematics from the University of Delaware (US) in 1983, the M.S. degree in Electrical Engineering and the Ph.D. degree in Applied Mathematics, both from Brown University (Providence, RI, US) in 1987. He joined Wayne State University (Detroit, MI, US) in 1987, and became a professor in 1996.

His research interests include stochastic processes, stochastic systems theory and applications, numerical methods for stochastic systems, stochastic approximation, stochastic control, identification, and signal processing. His publications include numerous refereed journal papers in Automatica, IEEE Transactions on Automatic Control, SIAM Journal on Control and Optimization, and in other major probability, applied mathematics, and engineering journals. His also has nine research monographs published by Springer, Birkhauser, and Science Press.

Yin has served on many technical committees and conference program committees including IFAC Technical Committee on Modeling, Identification, and Signal Processing, and program committees for many IFAC and IEEE Conferences. He was Co-Chair of SIAM Conference on Control & Its Application, 2011 Co-Chair of several AMS-SIAM Summer Conferences in Applied Mathematics. He was the chair of the SIAM Activity Group on Control and Systems Theory. He has also been serving on the Board of Directors of American Automatic Control Council. He was an associate editor of the IFAC Journal Automatica (2005-2011) and IEEE Transactions on Automatic Control (1994-1998).

Yin is an associate editor of Nonlinear Analysis: Hybrid Systems (a journal of IFAC), Nonlinear Analysis: Real World Applications, IET Control Theory and Applications, SIAM Journal on Control and Optimization, Applied Mathematics & Optimization, and on the editorial board of many other journals and book series. He was President of Wayne State University's Academy of Scholars. In addition to being an IFAC Fellow Yin is a Fellow of IEEE and a Fellow of SIAM.

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NOLCOS 2016
Monterey, CA, USA
23-25 August 2016

The 10th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2016) was held from August 23-25, 2016 at the Marriott Hotel in Monterey, California, USA. The symposium was sponsored by the IFAC Technical Committee on Non-Linear Control Systems (TC 2.3) and the American Automatic Control Council. MathWorks was the industrial sponsor. The symposium had seven co-sponsoring committees of IFAC (TC 2.1 Control Design, TC 2.4 Optimal Control, TC 4.3 Robotics, TC 6.1 Chemical Process Control, TC 6.3 Power and Energy Systems, TC 7.1 Automotive Control and TC 7.3 Aerospace). The IPC Chair was Professor Wei Kang. The IPC co-Chair and Editor was Professor Andrew Teel (US). Professor Arthur J. Krener (US) chaired the NOC. The IPC and NOC consisted of more than 70 members from 23 countries.

Since the first NOLCOS in 1989 in Capri, IT, for almost thirty years NOLCOS has been the preeminent IFAC symposium on nonlinear control systems and their applications. This year's NOLCOS was no exception and brought together leading researchers from around the globe to discuss the latest advances in this vibrant and constantly evolving field. With about 25% registrations being students, NOLCOS 2016 was also a forum for young scientists from all over the world. They were given the opportunity to introduce their research ambitions and scientific work to an audience of international experts. Following the NOLCOS tradition, the symposium's scope covered the theory and applications of nonlinear control systems. With advances in science, technology and computing, these topics have grown in importance and presented new challenges and opportunities.

The symposium opened with the remarks by Arthur J. Krener. Alberto Isidori, IFAC Advisor, addressed the audience as the IFAC President's representative. Wei Kang gave some remarks on the outline and highlights of the program. The feature presentations consisted of four plenary and four semi-plenary speakers covering the state-of-the-art on a wide spectrum of topics:

- "Physics Based Modeling for Design and Control of Thermal-Fluid Systems" by John Burns (Virginia Tech, US)

- "Computational Nonlinear Control Theory: A Path Forward for Meeting the Real World Challenges" by Fariba Fahroo (DARPA, US)

- "Networks of Dissipative Systems: Compositional Certification of Stability, Performance, and Safety" by Murat Arcak (UC Berkeley, US)

- "Moments of Nonlinear Systems: From Model Reduction to Identification and Circuits Theory" by Alessandro Astolfi (Imperial College London, UK)

- "Cybernetic Cycling: A Nonlinear Switched Systems Approach to Facilitate Neurological Rehabilitation" by Warren Dixon (Univ. of Florida, US)

- "Nonlinear Observer Design for GNSS and Camera-Aided Strapdown Inertial Navigation Systems" by Thor Fossen (NTNU, NO)

- "Control Problems in Building Energy Retrofit and Maintenance Planning" by Xiaohua Xia (Univ. of Pretoria, ZA)

- "Asymptotic Stability of Saddle-Point Dynamics and Its Role in Network Coordination" by Jorge Cortes (UC San Diego, US).

In addition, the plenary speakers organized four featured sessions to highlight some of the most important areas and challenges in nonlinear control. Giampiero Campa from MathWorks, the symposium's industrial sponsor, gave a talk on *Nonlinear Control: From Theory to Practice*.

With 229 submissions received from 27 contributing countries and more than 220 participants, NOLCOS provided a unique platform for strengthening worldwide contacts between academia and industry to build up new networks and cultivate existing relations. Thanks to the 10 topic and area chairs for their fantastic job, the review process was carried out smoothly. The final program consisted of 22 contributed sessions and 11 invited sessions with a total of 184 papers that covered a wide spectrum of topics on control theory and its applications.

In addition to the technical program, MathWorks, the developer of Matlab and Simulink, generously donated funds for the evening in the Aquarium Monterey Bay, which was held on Thursday after the aquarium closed to the general public. The banquet was held Wednesday evening in the Marriott Hotel Monterey. During the banquet Lorenzo Marconi, chair of IFAC TC 2.3, bestowed the Certificate of Excellent Achievements to Andrew Teel for his outstanding achievements and significant contributions to nonlinear control theory.

NOLCOS has been organized every three years: Capri (IT) 1989, Bordeaux (FR) 1992, Lake Tahoe (US) 1995, Enschede (NL) 1998, Saint Petersburg (RU) 2001, Stuttgart (DE) 2004, Pretoria (ZA) 2007, Bologna (IT) 2010, and Toulouse (FR) 2013.

Submitted by: Wei Kang, IPC Chair (US)

Check out IFAC's YouTube channel for new and historical IFAC video materials!

The link to the YouTube channel can be accessed via the IFAC website

www.ifac-control.org

MMM 2016
Vienna, Austria
23-25 August 2016

The IFAC MMM 2016 Symposium took place in Vienna, Austria, from August 31st to September 2nd, 2016, hosted and organized by the Automation and Control Institute (ACIN) of Technische Universität Wien (Vienna Technical University.) IFAC MMM 2016 provided a forum for professionals, researchers, and experts in control, mining, mineral and metal processing to review state-of-the-art control, optimization, measurement, and automation technologies in the field.

The main-sponsoring technical committee of this IFAC symposium was TC 6.2 (Mining, Mineral and Metal Processing.) The symposium was co-sponsored by TC 2.3 (Non-Linear Control Systems), TC 2.4 (Optimal Control), TC 4.2 (Mechatronic Systems), TC 4.5 (Human Machine Systems), TC 5.1 (Manufacturing Plant Control), TC 6.3 (Power and Energy Systems), and TC 8.3 (Modelling and Control of Environmental Systems.) Our special thanks go to the financial sponsors of IFAC MMM 2016: voestalpine Stahl, Danieli Automation, Andritz Metals, and the Austrian Ministry for Transport, Innovation and Technology (BMVIT.) (Disclosure: It should also be noted that IFAC receives a subsidy from the Austrian government through BMVIT's association support program, as is notated in each issue of this Newsletter.)

Andreas Kugi (Vienna Technical University, Austria) was the chair of the National Organizing Committee and Ian Craig (University of Pretoria, South Africa) chaired the International Program Committee (IPC) which consisted of 53 members. The following persons served as vice-chairs of the IPC: Kazuya Asano (JFE Steel Corporation, Japan), Luis Bergh (Santa Maria University, Chile), André Desbiens (Universite Laval, Canada), Thomas Parisini (Imperial College London, UK), and Harald Peters (VDEh-Betriebsforschungsinstitut GmbH, Germany).

For the IFAC MMM 2016 symposium, 91 papers were submitted from 26 countries. Each contribution was peer-reviewed by at least 2 reviewers. The final program included 5 plenary talks, 12 future perspectives talks, 43 full contributions, 10 industrial contributions, and four poster contributions. The full contributions will be published in the IFAC-PapersOnLine series hosted on ScienceDirect.

Five plenary talks were given in the course of IFAC MMM 2016:

- "Smart Production In the Steel Industry" by Dr. Franz Androsch (voestalpine Stahl, Austria)

- "Process Data Analytics – State of the Art and Applications in Oil Sands Industry" by Prof. Biao Huang, PhD (University of Alberta, Canada)

- "Mining Automation: Where Are We Going?" by Prof. Ross McAree (University of Queensland, Australia)

- "Application of Industry 4.0 Concepts at Steel Production From An Applied Research Perspective by Prof. Dr.-Ing. Harald Peters (VDEh-Betriebsforschungsinstitut, Germany)

- "The Prehistoric Salt Mines from Hallstatt – Perfect Preservation Leading to Insightful Simulation!" by Dr. Gabriel Wurzer (Technische Universität Wien, Austria)

For the first time, IFAC MMM 2016 also featured "Future Perspectives Sessions", where renowned experts from industry presented their most recent solutions and their perspectives on future challenges in control, optimization, and automation in mining, mineral, and metal processing. In the course of these sessions, speakers from major companies in the field such as ABB, Andritz Metals, Danieli Automation, Dillinger Hüttenwerke, JFE Steel Corporation, Outotec, POSCO, Primetals Technologies, Siemens, SMS Group, Tata Steel Europe, and voestalpine Stahl gave fascinating talks and an excellent insight into the industrial perspective. This new format received extremely positive feedback from the participants.

Apart from the scientific program, the IFAC MMM 2016 symposium offered a number of social events for networking and fruitful discussions. A highlight of the social activities was the banquet dinner that took place in the charming Rathauskeller restaurant in the Viennese city hall on September 1, which was accompanied by a musical journey through Austria. We thank all participants for their excellent contributions to a successful event!

Submitted by: Ian Craig (ZA), IPC Chair and IFAC Immediate Past President and NOC Chair and IFAC TC 6.2 (Mining, Mineral and Metal Processing) Chair Andreas Kugi (AT)

Approaching Nomination Deadlines

Harold Chestnut Textbook Prize
Deadline: 1 Feb. 2017

Call available on the IFAC website at:
http://www.ifac-control.org/awards/textbook-prize-call-for-nominations

IFAC Foundation Award
Deadline: 15 Jan. 2017

Call available on the IFAC Foundation website at:

http://foundation.ifac-control.org/projects/research-for-society

Information concerning awards deadlines and many other topics is posted in the "News" section of the IFAC website.

http://www.ifac-control.org/news

IFAC Blog and Social Media Presence Update

As part of the IFAC Social Media Strategy, the IFAC Blog was established in 2015. Based on the blog posts, IFAC has also established a presence in a number of social media, so far with an emphasis on Twitter and Facebook. IFAC expects to launch a LinkedIn presence shortly. The ultimate goal is to share knowledge and stir conversation about the influence of automatic control in today's society with the wider public audience.

It is widely regarded that one of the cornerstones of a successful social media campaign is the ability to generate consistent, relevant and engaging content to one's audience. Taking into consideration the complexity, size and overlapping 'streams' of content the social media presence is based on 'feeding' content into the social media channels by means of articles generated by the IFAC Technical Committees. The content generation relies mainly on a number of designated voluntary TC members.

Contributed blog articles from the IFAC TCs are edited and curated by the IFAC Social Media Liaison before the scheduled post in order to ensure that the content and quality of each article supports the mandate of the IFAC media policy.

The primary contact point for the publishing of the articles takes place on the IFAC blog (blog.ifac-control.org) and is simultaneously announced on IFAC's Twitter (@IFAC_Control) and Facebook (IFACcontrol) pages as a means of driving traffic to the IFAC website and blog page. Supplementing posts in Twitter and Facebook serve to supplement each article and to drive continued discussion around this in order to grow the interest and subsequently the discussion around the primary themes. Aggregated content related to each post is shared on Twitter and Facebook to stir the conversation.

The activity and growth of these platforms has been monitored using the latest social media analytics tools. These analyses show that IFAC based on the social media platforms is steadily gaining followers and, seemingly, also reaching new audiences! In terms of unique downloads, each blog post seems to exceed the following, at the moment with 1000+ unique downloads. The prospect of building an online community and engaging with them on the role of automatic control in our modern society is looking good.

All Newsletter readers are encouraged to support the IFAC Social Media Strategy by following and retweeting/sharing the IFAC blog and participating in the discussions at the IFAC Twitter and Facebook accounts. Interested blog contributors should contact IFAC Social Media Liaison Jakob Stoustrup at jakob@es.aau.dk

Submitted by Jakob Stoustrup

New IFAC Journal: IFAC Journal of Systems and Control

Elsevier and IFAC are pleased to announce the forthcoming launch of a new title, *IFAC Journal of Systems and Control*, under the leadership of Editor-in-Chief Robert Bitmead. This new journal will cover the gamut of systems and control with special emphasis on relevant papers developing significant, novel, generalizable, extensible and transferable innovations across all aspects of the field of control and automation. This includes systems theory, control for enhanced digital communications and storage, accessible high-performance computing in control, improvements in sensor and actuator capabilities and availability, education, and social aspects of automation in addition to relevant technologies in many domains, notably industrial automation, renewable energy and energy grids, biomedical technology, transportation systems, predictive analytics and Big Data.

Professor Robert Bitmead of University of California, San Diego draws on a personal wealth of experience across many aspects of Automation and Control, from fundamental theory to modeling to implementation across many application sectors. He was awarded the 2014 ASME Rufus Oldenburger Medal and the 2015 IEEE Control Systems Society Transition to Practice Award. He has played leadership roles, both technical and managerial, in IFAC over many years, including six years as a member of the IFAC Council and six years on the IFAC Technical Board. He brings this extensive domain background and organizational skill to his role as Editor-in-Chief. As a former Subject Editor of the IFAC journal Automatica and as a well-published author, he appreciates the requirements of a top-tier journal and the expectations of authors and readers in terms of quality of content, accessibility, feedback, and commentary.

IFAC Journal of Systems and Control expects to start taking submissions in December 2016. Everyone in the control engineering community is encouraged to submit their best papers to the new journal.

More information will be available at

http://journals.elsevier.com/ifac-journal-of-systems-and-control

For further information, feel free to contact the publisher, Alison Waldron at:

a.waldron@elsevier.com

Submitted by Alison Waldron, Elsevier

Calendar of IFAC Events

Title	2017	Place	Further information
ASET, IFAC, IEEE International Conference on Advanced Systems and Electrical Technologies IC_ASET 2017	January 14 – 17	Hammamet Tunisia	http://aset.ieee.tn/ e-mail: not yet available
Conference on American Control Conference (in cooperation with IFAC) ACC 2017	May 24 – 27	Seattle, WA USA	http://acc2017.a2c2.org/ e-mail: jingsun@umich.edu
20th IFAC World Congress 2017	July 09 – 14	Toulouse France	http://www.ifac2017.org/ e-mail: contact@ifac2017.org
SACAC IFAC Conference on Control Conference Africa CCA 2017	December 07 – 08	Johannesburg, South Africa	http://sacac.org.za/pages/cca/ e-mail: cca2017@sacac.org.za
IEEE - CSS, IFAC, SICE, ICROS Conference on Asian Control Conference (in cooperation with IFAC) ASCC 2017	December 17 – 20	Gold Coast Australia	https://www.ascc2017.com/ e-mail: l.vlacic@griffith.edu.au
Title	**2018**	**Place**	**Further information**
9th TU Wien/IFAC Vienna International Conference on Mathematical Modelling MATHMOD 2018	February 21 – 23	Vienna Austria	http://www.mathmod.at/ e-mail: info@mathmod.at
14th IFAC/IEEE Workshop on Discrete Event Systems WODES 2018	May - June 30 – 01	Sorrento Coast - Castellammare di Stabia (NA) Italy	http://not yet available e-mail: not yet available
16th IFAC/IEEE et al. Symposium on Information Control Problems in Manufacturing INCOM 2018	June 11 – 13	Bergamo Italy	http://not yet available e-mail: not yet available
IFAC Workshop on Networked & Autonomous Air & Space Systems NAASS 2018	June 13 – 15	Santa Fe, NM USA	http://not yet available e-mail: not yet available
Conference on American Control Conference (in cooperation with IFAC) ACC 2018	June 27 – 29	Milwaukee, WI USA	http://not yet available e-mail: not yet available
18th IFAC/IEEE CSS Symposium on System Identification SYSID 2018	July 09 – 11	Stockholm Sweden	http://not yet available e-mail: not yet available
7th CACHE, IFAC Conference on Foundation of Systems Biology in Engineering FOSBE 2018	August 05 – 08	Chicago, IL USA	http://not yet available e-mail: not yet available
10th IFAC/Polish Academy of Sciences Symposium on Fault Detection, Supervision and Safety for Technical Processes SAFEPROCESS 2018	August 29 – 31	Warsaw Poland	http://not yet available e-mail: not yet available
9th IFAC/IEEE CSS Symposium on Robust Control Design ROCOND 2018	September 03 – 05	Florianópolis Brazil	http://rocond18.ufsc.br/ e-mail: rocond18@gmail.com
Title	**2019**	**Place**	**Further information**
10th IFAC Symposium on Intelligent Autonomous Vehicles IAV 2019	July 03 – 05	Gdansk Poland	http://not yet available e-mail: not yet available
9th IFAC IEEE IFIP IFORS et al. Conference on Manufacturing Modelling, Management and Control MIM 2019	August 28 – 30	Berlin Germany	http://not yet available e-mail: not yet available