IFAC NEWSLETTER

INTERNATIONAL FEDERATION
OF AUTOMATIC CONTROL

Inaugural Address of IFAC President Frank Allgöwer
Delivered at the Closing Ceremony of the 2017 IFAC World Congress in Toulouse, France
July 14, 2017

No.4
Aug 2017

Ladies and Gentlemen,
dear IFAC Friends and Colleagues,

It is a great privilege to address you as the newly elected 22nd President of IFAC and I am very grateful and honored to have the chance of serving IFAC in this role for the next three years. I am taking over the presidency of IFAC at a very interesting time for our community. While automation and control have without doubt been very important disciplines during the past decades, they are now even stepping into the spotlight of decision makers, technology companies and the general public. For example with autonomous vehicles, smart grids, smart manufacturing/industry 4.0 and, not least, modern robotics growing in importance, our discipline is not only seen as one contributing field, but as a scientific field of central importance. Systems engineering, automation and control are more timely, more relevant and needed than ever. This opens exciting opportunities for our community. Opportunities that we have to actively pursue and take advantage of.

But we are also at a time when other communities claim that they can better solve "our" problems by "their" means. And, in fact, we have to acknowledge that in some cases this is partially true. It is our task to face this challenge proactively and to make a stand for "our systems approach". I believe we are in an excellent position for the future. But we cannot rest on our past successes. We have to take up opportunities, we have to develop further and to adapt to a changing environment in all our subfields from mathematical systems theory to systems and control engineering, all application fields and to industrial implementation. The key is that we have to do this fast and with a vision. IFAC is prepared and willing to take a leading role in this process and to support our community in all possible ways. But IFAC will also have to change itself. IFAC will have to adapt to the new challenges. And IFAC has to also do this fast. Making our federation efficient, effective and able to react fast to new developments is one of my goals for the coming three years.

Having said that, I also want to stress that IFAC is in a healthy state with lots of activities and lots of value for the community. I would like to take this opportunity to sincerely thank the

past IFAC officers and officials for their tremendous dedication and service to the Federation that led to the current excellent position. IFAC's greatest strength is its people, from the permanent secretariat in Laxenburg, Austria, to the more than 2000 volunteers who devote so much of their time to make IFAC function as well as it does. But in particular I wish to express my sincerest thanks to outgoing president Janan Zaytoon who has led the federation with an unrivaled dedication.

Frank Allgöwer, IFAC President 2017-2020

I am very proud of the team that will now lead IFAC over the next three years: My team of vice-presidents Paul Van den Hof, Dan Cho and Carlos Pereira. Plus president-elect Hajime Asama, past-president Janan Zaytoon, our treasurer John Lygeros and of course IFAC's secretary general Kurt Schlacher. But I also have the highest expectations for the council members, committee chairs and committee members. I have full confidence in you and I am very much looking forward to jointly work with you to maintain and develop IFAC's strong and leading position.

IFAC: The International Federation of Automatic Control. When I talk in the breaks with congress attendees about what they believe that IFAC is, then many delegates tell me roughly the following: IFAC is a group of old, male people who are organizing conferences in order to make money. I hear: THEY charge registration fees that are too high. THEY reject MY papers. THEY spend MY money to travel to events all over the world. What I consistently hear is a reference to IFAC as THEY and THEM.

IN THIS ISSUE:

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

As opposed to the community having a feeling of belong, a feeling of being part of IFAC. But this is not what IFAC is. IFAC is there for YOU! IFAC's primary purpose is (and I quote from the constitution) "… is to serve all those concerned with the theory and application of automatic control and systems engineering, wherever situated. IFAC is to provide a framework for collaboration between those working in automatic control and systems engineering, irrespective of race, creed or colour or of geographic location and to promote the free exchange of ideas and experts within its professional field". And the constitution continues: "IFAC will not take part in any commercial activity with the explicit aim of acquiring financial gain". Admittedly there are funny things like IFAC banners, interesting looking IFAC tapestries, gavels and seals. But THIS is NOT IFAC. IFAC is a very lean professional society, whose purpose is to SERVE the community. To serve YOU. And in fact, the people serving you are your colleagues. 100% unpaid professionals, that have a job at universities, government institutions or in industry. So IFAC is not THEY and THEM! IFAC is US! You, we all, are a PART of IFAC. We all together form IFAC.

And while it is totally fine to not participate actively in any of the IFAC committees, working groups and organization teams, everybody is invited to actively participate. And not only in the many IFAC meetings, but also in the IFAC organization. There are opportunities for senior researchers as well as for junior faculty, colleagues from industry, as well as PhD students. IFAC does not have a personal membership. So sorry, if you want to pay an annual membership fee, IFAC will not be able to help you. But you can become an affiliate member. For free. Just sign up. How, is, for example, described on the IFAC webpage at www.ifac-control.org. You will be given an email address like john.smith@ifac-mail.org, you will receive the IFAC newsletter and once in a while an event announcement for an IFAC technical event in your field of interest. If you are willing to contribute more, please visit the IFAC website, where you find more information about the various opportunities to get engaged. Or just contact me or any of the many other IFAC volunteers.

It is customary for IFAC, that the home country of the president will also be the host country for the IFAC World Congress taking place at the end of the triennium. Therefore the next World Congress in 2020 will take place in Germany, and in particular in the exciting German capital city of Berlin. And, as you might guess, preparations for the Berlin Congress are already under way. In fact since more than three years.

The present Toulouse Congress is organized in a fabulous way and I have to congratulate Janan Zaytoon and the General Congress Chair, Dimitri Peaucelle, the IPC co-chairs Didier Henrion and Denis Dochain and their large, dedicated team for their great, successful work. We all enjoyed and admire the hospitality and great organizational skills of our French friends. The bar has been set high for the next world congress. But I assure you that the Berlin Team will do our best to also host a scientifically stimulating, high quality congress for which we also plan to include many exciting social and cultural activities that we will be reporting on over the next months. I want to invite you all to join us in 2020 for the next IFAC World Congress in Berlin.

Thank you very much for your attention.
Frank Allgöwer, IFAC President 2017-2020

IFAC Email Addresses
Now Available

As you read in the inaugural speech text from IFAC President Frank Allgöwer one of the services being provided to the IFAC community/ IFAC affiliates (if you are on the mailing list for this Newsletter then you are an IFAC affiliate!) is the possibility to have an IFAC email address. Posessing and using an IFAC email address is free of charge.

An IFAC email address is an email forwarding address/alias that doesn't change, even if your email provider, place of employment, etc. does change. Emails sent to an IFAC email address forward to an email account of your choosing. You can access emails sent to your IFAC email address in the same way you access your other emails, with no need to check or maintain an additional email account. IFAC does not store the emails sent to IFAC email aliases or have any access to them in any way.

The email aliases end in the domain name:

@ifac-mail.org

Examples for the email aliases will be automatically generated factoring in the first and last names of the affiliate.

To begin the process of registering for an IFAC email alias please go to the following link and follow the step-by-step instructions:

https://hera.ifac-control.org/ifacmail/

Step 1: You will need to enter the email address with which you are registered as an IFAC affiliate. If you are unsure you may be able to find this info from your last IFAC Newsletter email. Otherwise please contact the IFAC Secretariat.

Step 2: Choose from the proposed email aliases. The system will generate some possibilities based on your first and last names and you will need to choose one of the possibilities. You can only pick from the suggested possibilities.

Please note: Due to the grounds of safety and protection from misuse it is not possible to manually input a different email address!

Step 3: Confirm your choice of email address. The system displays the IFAC email address of your choice and the target address. Please review your choice carefully before confirmation.

Step 4: Final information screen. Your IFAC email address will be immediately functional.

If you have any questions or need any assistance with this matter please contact the IFAC Secretariat via email.

20th IFAC World Congress
Toulouse, FR
9-14 July 2017

The 20th IFAC World Congress in 2017 was the opportunity to celebrate the IFAC 60th anniversary. On top of excellent standard contributions from all areas covered by IFAC, the program featured highlights on the history of IFAC and history Automatic Control, on control education and outreach, as well as on control applications both in industry and in social system.

Plenary lectures: Presentations are planned to be available on the IFAC YouTube channel.The list of plenary speakers in alphabetical order is as follows:

- C Cassandras, *Autonomous Mobility in Smart Cities*
- C Champion and G Vittadini, *Pioneering the Future of Aerospace*
- J-M Coron, *Some Key Steps in the History of Feedback Control*
- F Försterling, Electronic Horizon: *Cloud Based Solution For Automated Driving*
- J-H Kim, *Towards Smart Service Robots with Task Intelligence*
- I Mareels, *Systems Engineering in Water Engineering*
- C-E Pereira, *Historical Survey & Emerging Challenges in Manufacturing System Control – A Global Perspective*
- K Pettersen, *Snake Robots: from Biology, through University, towards Industry*
- *A Tribute in Memory of Roberto Tempo*, by T Basar, A Isidori, B R Barmish, F Dabbene, H Ishii and A V Proskurnikov
- D Tilbury, *Hybrid Processes for Controlling Cyber-Physical Manufacturing Systems*
- Q-C Zhong, *Synchronized & Democratized Smart Grids*

Panel Sessions

The 20th IFAC World Congress delegates have had the opportunity to attend high quality panel sessions on the program highlights. The panel sessions are planned to be available on the IFAC YouTube channel. The list of these panel sessions in chronological order is as follows:

- *The IFAC Story*, S Kahne (Chair), P Albertos Pérez, V Kucera, W H Kwon
- *Preparing Tomorrow's Scientists and Engineers for the Challenges of the 21st Century*, B Pasik-Duncan (Chair), F Doyle (Organizer), L Bushnell (Chair), J S Baras, T Basar, L Pao, C G Cassandras, D M Tilbury, S Trimpe, M E Valcher, I Mareels, F Lamnabhi-Lagarrigue
- *History of Automatic Control*, Luc Dugard (Chair), S Bittanti, L Ljung, P Pakshin, M Silva Suarez, G Morel, D Alazard
- *Your Research Sharing through Outreach*, B Pasik-Duncan (Chair), I Mareels, L Bushnell, J A Rossiter, S Trimpe
- *How to Enhance Industry/University Collaboration on Advanced Control*, S Mastellone (Chair), A van Delft (Chair), K Brooks, S Engell, T Jones, M Lees, T Yamaguchi
- *Automated Vehicles and Safety*, spon-

sored by MOVEO, G Yahiaoui (Chair), A Guillaume, P Chrétien, O Anselme
- *Control Challenges for Social Systems*, F Lamnabhi-Lagarrigue (Chair), C L P Chen, W Perruquetti, Q-S Jia, S Dormido, L Stapleton
- *Advanced Control in Industry: The Path Forward,* K Asano (Chair), T Samad (Chair), P Goupil, B Grosman, A Pantazi, J Pekar, R S Sánchez-Peña

The IFAC Story panel session.
The IFAC Story eBook can be accessed at
https://www.ifac-control.org/about/the-ifac-story
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Technical contributions

The Congress attracted a total number of 4267 contributions, which include:
- 98 Open Invited Tracks with an average of 13 papers per track. 5 of these Open Invited Tracks have attracted more than 30 contributions
- 46 Invited Sessions of six papers
- 30 Workshops and Tutorials
- 4093 papers

The 4093 submitted papers have the following distributions
- 3870 IFAC-standard papers, 187 Extended Abstracts, and 36 Survey papers
- 2540 Contributed papers, 1265 Open Invited Track papers, 288 Invited Session papers
- 3816 Regular papers, 167 Application papers, 66 Demonstrator papers, 33 History papers, and 11 plenary papers.

Reviewing of the contributions was conducted under the supervision of the International Program Committee Chairs, with the help of the nine IFAC Coordinating Committee Chairs, the 40 Technical Committee Chairs, 281 Technical Associate Editors and 5726 reviewers. Overall 11302 reviews have been collected.

A total of 2919 submissions were accepted. Details of accepted contributions are as follows:
- 1512 Contributed Papers
- 1145 Papers submitted in Invited Sessions or Open Invited Tracks
- 143 Extended Abstract Papers
- 35 Invited Sessions
- 76 Open Invited Tracks that appear in the program as Open Invited Sessions with a number of sessions ranging from 1 to 5

The acceptance rate for Contributed Papers is 62%. It goes up to 72% for papers submitted to Open Invited Tracks, and up to 82% for those submitted to Invited Sessions, thus indicating the excellent work done by the organizers of these invited items. Overall, the acceptance rate of papers with IFAC Copyright is 66.4%.

The statistics per IFAC areas as represented by the Coordinating Committees (CC) are as indicated in the following table. Column A gives the percentage of papers of a CC among all submitted contributions. Column B gives the percentage of papers of a CC among accepted papers.

Coordinating Committees	A	B
1 Systems & Signals	20.6%	19.4%
2 Design Methods	26.7%	26.4%
3 Computers, Cognition and Communication	2.3%	2.1%
4 Mechatronics, Robotics and Components	11.4%	10.4%
5 Manufacturing and Logistics Systems	6.1%	6.5%
6 Process and Power Systems	12.1%	12.8%
7 Transportation and Vehicle Systems	10.7%	10.7%
8 Bio- and Ecological Systems	5.5%	6.4%
9 Social Systems	4.6%	5.2%

The final program included 2723 presentations (some accepted papers were not submitted on time to be included in the program) organized in 389 sessions. Among these, 329 were oral podium sessions, 54 were oral interactive sessions with individual TV screens for each presentation, and 6 were demonstrator sessions. Among the 389 sessions, 36 were invited sessions and 127 were open invited sessions. No value ranking is implied by the presentation format, all the papers underwent the same review process and appear the same way in the proceedings. Demonstrator sessions were organized by the IPC based on papers suggested to be in such sessions by the authors.

The demonstrator sessions were inspired by a domestic conference dedicated to control demonstrators organized every 4 years in Angers, France. In 2017 this even was successfully integrated into the IFAC World Congress. Two demonstrator sessions resulted from contributed submissions. The four other sessions were by-products of open invited track proposals on the following topics:

- Tools and demonstrators for Discrete Event and Hybrid Systems
- Exhibition of Demonstrators for Educational purposes in Control sciences
- Automotive Advanced Control Demonstrators
- Mini-Unmanned Aerial Vehicles Demonstrators

Feedback is important for our control community. Please complete a short survey about the 20th World Congress: https://sysadmin.laas.fr/intranet/limesurvey/index.php/survey/index/sid/597116/

Workshops and Tutorials

The pre-congress Workshops and Tutorials were held on 8-9 July. Most of them were selected by the IPC for their tutorial features. Other workshops were organized and sponsored by GdR MACS (CNRS structure dedicated to scientific coordination of automation and control research activities in France), iCODE (Institute for Control and Decision of Paris Saclay University) and Elsevier jointly with IFAC (A Guide to Being Active in the Community as Author and Reviewer). The list of Workshops and Tutorials is available on the Congress web site.

Technical Visits

A total of 7 Technical Visits were organized during the Congress. The chronological list follows:
- LAAS-CNRS, Academic research center. Included two tracks: "Robotics platform" and "How chips are made?"
- Airbus (commercial aircraft) ground test facilities
- Quai des Savoirs, Science dedicated Museum. Visit of the current exhibition about Cities and welcome by the exhibition creators.
- Cité de l'Espace, Space dedicated Museum. Short visit of part of the Exhibition with a presentation of how it has been conceived.
- Airbus Defence & Space, Space Industry. View on Satellites Integration Room & Exchanges on Control Engineering for Space Systems
- Automotive Demonstrators, Special visit to the Automotive Demonstrators at Manoir du Prince.
- Veolia, Ginestou-Garonne water de-pollution plant

Authors and delegates

There were a total of 8956 authors of papers in the Congress program from 83 countries/regions. The total number of delegates is 3462 from 68 countries/regions. The following table indicates in column A the number of corresponding authors of submitted contributions; in column B the number of corresponding authors of papers in the program; in column C the number of authors of papers in the program; in column D the number of delegates.

	A	B	C	D
France	748	506	1783	829
Germany	314	238	741	295
China	430	208	709	284
USA	310	216	679	237
Italy	239	184	641	175
UK	163	109	334	136
NL	115	92	296	116
Japan	165	101	293	162
Spain	107	71	273	96
Sweden	98	81	258	107
Brazil	131	69	246	70
Russia	152	89	209	77
Canada	95	60	181	63
Australia	72	55	176	52
Mexico	96	56	166	41
CH	56	48	165	49

Belgium	55	39	139	52
Austria	43	36	112	51
NZ	26	19	103	11
India	70	31	94	31
Portugal	40	24	92	23
KR	58	26	90	63
Denmark	29	22	87	29
Hungary	33	25	83	33
Slovakia	45	25	80	25
Norway	28	24	78	37
Poland	40	27	71	33
Turkey	45	23	61	28
Greece	25	14	53	17
Israel	29	19	53	22
Tunisia	33	14	48	11
CZ	33	21	47	22
Finland	24	13	45	19
Colombia	16	8	41	14
Romania	29	12	39	7
Chile	17	10	34	12
ZA	25	11	32	17
Ireland	16	12	31	13
SG	11	8	26	11
Morocco	35	8	22	14
Iran	19	6	20	4
Algeria	22	4	19	3
Argentina	5	4	19	2
Croatia	8	6	18	7
SA	13	6	14	8
LU	8	4	12	4
Slovenia	5	3	12	4
Taiwan	15	4	12	7
Egypt	5	3	11	2
Cyprus	4	2	10	5
Ukraine	4	2	9	2
Bulgaria	3	2	7	2
AE	7	3	7	3
CM	1	1	6	0
Cuba	4	2	5	0
Malaysia	5	1	5	2
Pakistan	9	2	5	3
Belarus	2	0	4	0
Peru	2	1	4	2
BD	0	0	3	0
CR	1	1	3	0
Ecuador	5	2	3	2
Ghana	0	0	3	0
Iceland	2	1	3	2
Lebanon	3	2	3	1
MK	0	0	3	0
Serbia	0	0	3	1
Thailand	1	1	3	1
BF	1	1	2	0
Estonia	1	1	2	2
Indonesia	2	1	2	1
Kenya	0	0	2	0
Kosovo	2	0	2	0
Qatar	3	1	2	2
Albania	0	0	1	0
Jordan	0	0	1	0
Oman	0	0	1	0
Panama	0	0	1	1
Sri Lanka	0	0	1	0
VE	1	1	1	0
Vietnam	1	1	1	2
BA	1	0	0	0
Georgia	1	0	0	0
Nigeria	1	0	0	1
TT	1	0	0	0
Kuwait	0	0	0	2

The 20th IFAC World Congress was sponsored by

Main sponsor: Continental Automotive; Lead Sponsors: Occitanie Region, Toulouse Métropole; Major sponsors: CNES, Université Toulouse III Paul Sabatier, Inria, CNRS; Sponsors: OPTITRACK, MDPI, ISAE-Supaero, iCODE, EECI, International Journal of Automation and Computing, IEEE/CAA Journal of Automatica Sinica, Movéo; Contributors: INSA Toulouse, INP Toulouse, ITMO University

13 Exhibitors participated in the Congress Exhibition: Continental Automotive, Elsevier, WAGO, Springer Nature, MathWorks, The Journal of The Franklin Institute, Robotikum, OPAL-RT, SOBEN, THALES, Taylor & Francis, Robotex, InTeCo.

The following Institutional Partners contributed to the Congress by their administrative and communication support: IFAC Foundation, European Control Association (EUCA), Société de l'électricité, de l'électronique et des technologies de l'information et de la communication (SEE), LAAS-CNRS, GdR MACS, Université de Reims Champagne-Ardenne, Club des Enseignants et Chercheurs en Electrotechnique, Electronique et Automatique (Club EEA), Aerospace Valley cluster, SoToulouse Convention Bureau, EuroScience Open Forum 2018 (ESOF2018), Robotics Place Midi Pyrénées. Thanks go to all sponsors.

The 20th IFAC World Congress in Toulouse has been a major event. Acknowledgements go to IFAC Officers, Council, Advisors, National Member Organizations, Secretariat, Technical Board and Technical Committees, Executive Board and Executive Committees. Our thanks also go to the delegates, authors, reviewers, IPC members, volunteers, NOC members, sponsors and professionals who collectively made this event memorable.

The 20th IFAC World Congress ended on 14 July 2017. It has been a long, intense and exciting event to prepare and organize. While we are globally satisfied with the outcome, we acknowledge that some elements could have been better. But our satisfaction is mainly thanks to you the Congress delegates. Not only have you been many to register and attend the Congress, but also, by your kind and comprehensive attitude, you helped in making things go smoothly. Many thanks to you.

One last request. Could you take 5-10 minutes of your time for a short survey? The 20th IFAC World Congress ended on 14 July 2017. It has been a long, intense and exciting event to prepare and organize. While we are globally satisfied with the outcome, we acknowledge that some elements could have been better. But our satisfaction is mainly thanks to you the Congress delegates. Not only have you been many to register and attend the Congress, but also, by your kind and comprehensive attitude, you helped in making things go smoothly. Many thanks to you.
http://www.ifac2017.org/article/survey

Dimitri Peaucelle
IFAC 2017 General Chair
Janan Zaytoon
IFAC 2014-2017 President

IFAC 2017 Website (including names of NOC volunteers, and IPC members):
http://www.ifac2017.org/contact

IFAC 2017 Photo album:
https://www.flickr.com/photos/ifac2017/albums

Please note: The copyright for photos goes to ©CNRS/IFAC2017. Photos can be used for personal purpose. No commercial usage is allowed. Photographers Angelos Detsis, Lilie Pinot, and Myrtille Visscher should be credited.

Alberto and Maria Adelaide Isidori
Ian K. Craig and Andrie Garbers-Craig
at the Gala Dinner ©CNRS/IFAC2017

Harold Chestnut Textbook Prize 2017
Winners:
Pedro Albertos & Iven Mareels

The Harold Chestnut Textbook Prize is presented at each IFAC World Congress for the best control engineering textbook for which the first edition(s) occurred not later than the Congress just prior to the one at which the award is presented. It recognizes the author(s) of the textbook(s) judged to have most contributed to the education of control engineers. The candidates for the prize are nominated by a selection committee, while the books under consideration come before the committee through recommendation of the control engineering community. The prize consists of a monetary prize and a certificate. The funds for this prize were donated by the family of the late Harold Chestnut, IFAC's first president. This prize was created in 1986 and renamed in 2002.

The 2017 Harold Chestnut Textbook Prize was presented by Andrew Chestnut, son of Harold Chestnut. The winners of the 2017 Harold Chestnut Textbook Prize were Pedro Albertos (ES) and Iven Mareels (AU) for their book *Feedback and Control for Everyone* (Springer, 2010).

Pedro Albertos

Pedro Albertos is an Emeritus Professor in the Systems Engineering and Control Dept., UPV, Spain. He is Doctor Honoris-Causa from Oulu University (FI) and Bucharest Polytechnic (RO). Honorary Professor at North-Eastern University, Shenyang, (CN). As an invited professor in more than 20 universities, he has delivered

seminars in more than 30 universities and research centres. He has authored over 300 papers, book chapters and congress communications, co-editor of seven books and co-author of *"Multivariable Control Systems"* (Springer 2004) and *"Feedback and Control for Everyone"* (Springer 2010).

Albertos' research areas include Embedded Control Systems, time delays systems and control applications. "Prometeo" researcher in Spain and Ecuador. Recently he launched a on-line open course on Dynamics and Control. He is an associated editor of *Control Engineering Practice* (and previously at *Automatica* for for ten years) and EiC of the Spanish journal RIAI.

Involved in IFAC since 1984, Albertos became the Chair of the Technical Committee of Components, Vice President and Chair of the Executive Board, President Elect, reaching the IFAC Presidency (1999-2002). He was the responsible for the XV IFAC World Congress held in Barcelona, Spain in 2002, with over 2000 attendees, a record at that time. He took a number of successful initiatives, promoting the Fellowship position in IFAC and being appointed as Chair of the IFAC Foundation. Pedro Albertos is an IFAC Fellow and an IFAC Advisor. A Senior Member for life of IEEE, he was a member of the CSS Board of Governors from 1996-97.

Left to right: Iven Mareels, IFAC Advisor Steve Kahne, Andrew Chestnut (son of first IFAC President Harold Chestnut), IFAC President 2014-2017 Janan Zaytoon, and Pedro Albertos at the awards presentation component of the IFAC 2017 President's Dinner in Toulouse. Photo ©CNRS/IFAC2017

Iven Mareels

Iven Mareels, Dean of the Melbourne School of Engineering (University of Melbourne, AU), is co-author of *"Feedback and Control for Everyone"* (Springer, 2010). He is a Redmond Barry Distinguished Professor, holding the Chair of Electrical and Electronic Engineering.

After serving two terms as IFAC Vice-President (Chair of the Technical Board) from 2008-2014) Iven Mareels was appointed as an IFAC Advisor in 2014, and was elected as an IFAC Fellow in the 2014-2017 triennium.

Mareels' full bio in recognition of his Fellow appointment was featured in the February 2017 issue of this Newsletter, which is accessible in the Newsletter online archive at the following link:
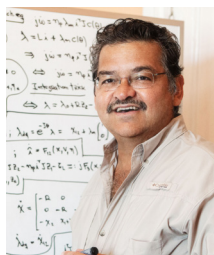
https://www.ifac-control.org/newsletter_archive/IFAC_Newsletter_2017_1_February.pdf

Introducing the IFAC Fellows 2014-2017
continuation of a series

Romeo Ortega

Romeo Ortega was born in Mexico. He obtained his BSc in Electrical and Mechanical Engineering from the National University of Mexico, Master of Engineering from Polytechnical Institute of Leningrad, USSR, and the Docteur D`Etat from the Politechnical Institute of Grenoble, France in 1974, 1978 and 1984 respectively.

He then joined the National University of Mexico, where he worked until 1989. He was a Visiting Professor at the University of Illinois (US) in 1987-88 and at McGill University (CA) in 1991-1992, and a Fellow of the Japan Society for Promotion of Science in 1990-1991. He has been a member of the French National Research Council (CNRS) since June 1992. Currently he is a Directeur de Recherche in the Laboratoire de Signaux et Systemes (SUPELEC) in Paris. His research interests are in the fields of nonlinear and adaptive control, with special emphasis on applications.

Dr. Ortega has published three books and more than 270 scientific papers in international journals, with an h-index of 70. He has supervised more than 30 PhD theses. He is a Fellow Member of the IEEE since 1999 and an IFAC Fellow since 2016. He has served as chairman in several IFAC and IEEE committees and participated in various editorial boards of international journals.

Alessandro Astolfi

Alessandro Astolfi was born in Rome, Italy in 1967. He graduated in electrical engineering from the University of Rome in 1991. In 1992 he joined ETH-Zurich (CH) where he obtained a M.Sc. in Information Theory in 1995 and the Ph.D. degree with Medal of Honor in 1995 with a thesis on discontinuous stabilization of nonholonomic systems. In 1996 he was awarded a Ph.D. from the University of Rome "La Sapienza" for his work on nonlinear robust control. Since 1996 he has been with the Electrical and Electronic Engineering Department at Imperial College London, London (UK), where he is currently Professor of Nonlinear Control Theory and Head of the Control and Power Group.

From 1998 to 2003 he was also an Associate Professor at the Dept. of Electronics and

Information of the Politecnico of Milano (IT.) Since 2005 he has also been a Professor at Dipartimento di Ingegneria Civile e Ingegneria Informatica, University of Rome Tor Vergata. He has been a visiting lecturer of nonlinear control at several universities, including ETH-Zurich (CH, 1995-1996); Terza University of Rome (IT, 1996); Rice University, Houston (US, 1999); Kepler University, Linz (AT, 2000); SUPELEC, Paris (FR, 2001).

Astolfi's research interests are focused on mathematical control theory and control applications, with special emphasis for the problems of discontinuous stabilization, robust and adaptive control, observer design and model reduction. He is the author of more than 130 journal papers, 30 book chapters and of over 240 papers in refereed conference proceedings. He is the recipient of the IEEE CSS A. Ruberti Young Researcher Prize (2007) and of the IEEE CSS George S. Axelby Outstanding Paper Award (2012). He is a "Distinguished Member" (2012) of the IEEE CSS. He is the author (with D. Karagiannis and R. Ortega) of the monograph *"Nonlinear and Adaptive Control with Applications"* (Springer-Verlag).

Astolfi is Associate Editor of Automatica, the International Journal of Control and Subject Editor for the International Journal of Adaptive Control and Signal Processing. He is Senior Editor of the IEEE Trans. on Automatic Control and Editor-in-Chief of the European Journal of Control. He has also served on the IPCs of various international conferences and is currently the chair of the IEEE CSS Conference Editorial Board.

Additionally he has served as Chair of the IFAC TC 2.1 on Control Design from 2008 to 2014 and he is currently Chair of the IFAC CC 2 (Design Methods.) He has also been IPC Vice-Chair and Invited Sessions Supervisor for the IFAC World Congress 2011 (Milan, IT.)

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

https://www.ifac-control.org/

Readers of this Newsletter are kindly requested to keep their contact details updated with the IFAC Secretariat.
https://www.ifac-control.org/about/ifac-affiliate-registration

IFAC INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL

James Rawlings

James B. Rawlings received the B.S. from the University of Texas and the Ph.D. from the University of Wisconsin, both in Chemical Engineering. He spent one year at the University of Stuttgart as a NATO postdoctoral fellow and then joined the faculty at the University of Texas. He moved to the University of Wisconsin in 1995 and is currently the Steenbock Professor of Engineering and W. Harmon Ray Professor of Chemical and Biological Engineering, and the co-director of the Texas-Wisconsin-California Control Consortium (TWCCC).

Professor Rawlings's research interests are in the areas of chemical process modeling, monitoring and control, nonlinear model predictive control, moving horizon state estimation, and molecular-scale chemical reaction engineering. He has written numerous research articles and coauthored three textbooks: *"Modeling and Analysis Principles for Chemical and Biological Engineers"* (2013) with Mike Graham, *"Model Predictive Control: Theory and Design"* (2009), with David Mayne, and *"Chemical Reactor Analysis and Design Fundamentals,"* 2nd ed. (2012), with John Ekerdt.

In recognition of his research and teaching, Professor Rawlings has received several awards including: National Academy of Engineering; "Doctor technices honoris causa" from the Danish Technical University; The inaugural High Impact Paper Award from the International Federation of Automatic Control; The Ragazzini Education Award from the American Automatic Control Council; The Computing in Chemical Engineering Award and Excellence in Process Development Award from the AIChE; The Chancellor's Distinguished Teaching Award, a WARF Named Professorship (Wisconsin Alumni Research Foundation), and the Byron Bird Award for Excellence in a Research Publication, also from the University of Wisconsin. Rawlings is a Fellow of IFAC, IEEE, and AIChE.

Who's Who in IFAC:
Emilia Fridman,
IFAC Council Member

Emilia Fridman (IL), who is serving as a member of the IFAC Council for the 2017-2020 triennium, received the M.Sc. degree from Kuibyshev State University, USSR, in 1981 and the Ph.D. degree from Voronezh State University, USSR, in 1986, all in mathematics. From 1986 to 1992 she was an Assistant and Associate Professor in the Department of Mathematics at Kuibyshev Institute of Railway Engineers, USSR. Since 1993 Fridman has been at Tel Aviv University (IL), where she is currently Professor of Electrical Engineering-Systems.

She has held visiting positions at the Weierstrass Institute for Applied Analysis and Stochastics in Berlin (DE), INRIA in Rocquencourt (FR), Ecole Centrale de Lille (FR), Valenciennes University (FR), Leicester University (UK), Kent University (UK), CINVESTAV (MX), Zhejiang University (CN), St. Petersburg IPM (RU), Melbourne University (AU), Supelec (FR), and KTH (SE).

Fridman's research interests include time-delay systems, networked control systems, distributed parameter systems, robust control, singular perturbations and nonlinear control. She has published more than 100 articles in international scientific journals and is the author of the monograph *"Introduction to Time-Delay Systems: Analysis and Control"* (Birkhauser, 2014).

In 2014 Fridman was nominated as a Highly Cited Researcher by Thomson Reuters ISI. She serves/served as an Associate Editor of *Automatica*, *SIAM Journal on Control and Optimization* and *IMA Journal of Mathematical Control and Information*.
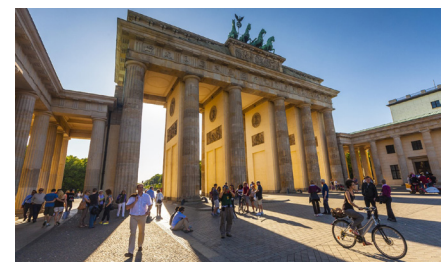
Editor's Note: The names and email addresses for all 2017-2020 IFAC Council members, as well as other IFAC officials, can be found on the List of Officials: https://www.ifac-control.org/structure/list-of-officials

Preview: Next IFAC World Congress
Berlin, Germany
13-17 July 2020

Berlin – where innovation meets science and culture

Berlin, host city for IFAC 2020 and Germany's capital, is a vibrant cosmopolitan city, offering a wide range of cultural and touristic attractions. Berlin is a green city, with rivers and canals, and is particularly enjoyable in summer time.

Berlin has a long tradition of science and innovation: it is the city where Alexander and Wilhelm von Humboldt, Max Planck, Gustav Hertz, Albert Einstein and many others lived and worked. Today, the Berlin area is amongst the most important and diverse regions of science within Europe. It has the largest concentration of universities and research institutes within Germany and a student population of about 200,000.

Brandenburg Gate
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All sessions of IFAC 2020, scheduled to take place from 13-17 July 2020, will be held in the Estrel Hotel and Congress Center (www.estrel.com/en/). It is situated in the Neukölln district of Berlin, and is easily accessible by public transport from everywhere in the city. Neukölln, which has traditionally been a working class area with a strong immigrant component, is rapidly transforming itself into a lively neighborhood attractive for students and artists, with lots of cultural and culinary attractions.

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Promotion for IFAC 2020 was launched at the IFAC World Congress in Toulouse, including the Congress website: http://www.ifac2020.org/ The German team is looking forward to welcoming the IFAC community to Berlin in July 2020!

Submitted by Klaus Janschek, IFAC 2020 NOC Chair

Calendar of IFAC Events

Title	2017	Place	Further information
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
5th Conference on Advances in Control and Optimization of Dynamical Systems ACODS 2018	February 18 – 22	Hyderabad India	http://www.drdo.gov.in/acods2018/ e-mail: acods2018@gmail.com
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
6th IFAC/IEEE (TC on DPS) Workshop on Lagrangian and Hamiltonian Methods for Nonlinear Control LHMNC 2018	May 02 – 04	Valparaiso / Viña del Mar, Chile	http://www.lhmnlc18.org/ e-mail: juan.yuz@usm.cl
3rd IFAC Conference on Advances in Proportional-Integral-Derivative Control PID 2018	May 09 – 11	Ghent Belgium	http://www.pid18.ugent.be/ e-mail: not yet available
1st IFAC Workshop on Integrated Assessment Modelling for Environmental Systems IAMES 2018	May 10 – 11	Brescia Italy	http://not yet available e-mail: not yet available
15th IFAC Conference on Programmable Devices and Embedded Systems PDES 2018	May 23 – 25	Ostrava Czech Republic	http://pdes-conference.eu/ e-mail: zdenek.slanina@vsb.cz
14th IFAC/IEEE Workshop on Discrete Event Systems WODES 2018	May - June 30 – 01	Sorrento Coast - Castellammare di Stabia (NA) Italy	http://wodes2018.unisa.it/ e-mail: wodes2018@unisa.it
3rd IFAC Workshop on Automatic Control in Offshore Oil and Gas Production OOGP 2018	May - June 30 – 01	Esbjerg Denmark	http://ifac-oogp2018.org/ e-mail: secretariat@ifac-oogp2018.org
15th IFAC Symposium on Control in Transportation Systems CTS 2018	June 06 – 08	Savona Italy	http://www.cts2018.unige.it/ e-mail: cts2018@unige.it
3rd IFAC Conference on Embedded Systems, Computational Intelligence and Telematics in Control CESCIT 2018	June 06 – 08	Faro Portugal	http://www.cescit2018.org/ e-mail: geral@untappedevents.pt
16th IFAC et al. Symposium on Information Control Problems in Manufacturing INCOM 2018	June 11 – 13	Bergamo Italy	http://www.incom2018.org/ e-mail: secr@incom2018.org
IFAC Workshop on Networked & Autonomous Air & Space Systems NAASS 2018	June 13 – 15	Santa Fe, NM USA	https://sites.google.com/site/naass2018/ e-mail: richardscotterwin@gmail.com
2nd IFAC Conference on Modelling Identification and Control of Nonlinear Systems MICNON 2018	June 20 – 22	Guadalajara, Jalisco Mexico	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://acc2018.a2c2.org/ e-mail: not yet available

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Calendar of IFAC Events

Title		Place	Further information
14th IFAC Workshop on Time Delay Systems TDS 2018	June 28– 30	Budapest Hungary	http://not yet available e-mail: not yet available
18th IFAC/IEEE CSS Symposium on System Identification SYSID 2018	July 09 – 11	Stockholm Sweden	www.ee.kth.se/sysid2018 e-mail: hanna.holmqvist@ee.kth.se
6th IFAC Conference on Analysis and Design of Hybrid Systems ADHS 2018	July 11 – 13	Oxford United Kingdom	http://www.cs.ox.ac.uk/conferences/ADHS18/ e-mail: aabate@cs.ox.ac.uk
10th IFAC Symposium on Advanced Control of Chemical Processes ADCHEM 2018	July 25 – 27	Shenyang, China	http://www.adchem2018.org/ e-mail: adchem2018@mail.neu.edu.cn
7th CACHE, IFAC Conference on Foundation of Systems Biology in Engineering FOSBE 2018	August 05 – 08	Chicago, IL USA	http://www.fosbe.org/ e-mail: rcraven@fosbe.org
5th IFAC Workshop on Mining, Mineral and Metal Processing MMM 2018	August 23 – 25	Shanghai China	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://safeprocess18.uz.zgora.pl/ e-mail: safeprocess18@uz.zgora.pl
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
10th IFAC Symposium on Biological and Medical Systems BMS 2018	September 03 – 05	São Paulo Brazil	http://www.ifacbms2018.org/ e-mail: secretariat@ifacbms2018.org
10th IFAC/ CEGRE Symposium on Control of Power and Energy Systems CPES 2018	September 03 – 05	Tokyo Japan	http://not yet available e-mail: not yet available
18th IFAC Conference on Technology, Culture and International Stability TECIS 2018	September 13 – 15	Baku Azerbaijan	http://not yet available e-mail: not yet available
5th IFAC Conference on Engine and Powertrain Control, Simulation and Modeling E-COSM 2018	September 20 – 22	Changchun China	http://www.ascl.jlu.edu.cn/ecosm2018/ e-mail: gaobz@jlu.edu.cn
5th IFAC Conference on Analysis and Control of Chaotic Systems CHAOS 2018	Oct./Nov. 30 – 02	Eindhoven Netherlands	http://not yet available e-mail: not yet available
2nd IFAC Conference on Cyber-Physical and Human Systems CPHS 2018	December 13 – 15	Miami, FL USA	http://not yet available e-mail: not yet available
Title	**2019**	**Place**	**Further information**
12th IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems DYCOPS 2019	April 23 – 26	Florianópolis Brazil	http://not yet available e-mail: not yet available
10th IFAC Symposium on Intelligent Autonomous Vehicles IAV 2019	July 03 – 05	Gdansk Poland	http://www.konsulting.gda.pl/iav2019/ e-mail: iav2019@konsulting.gda.pl
9th IFAC Symposium on Advances in Automotive Control AAC 2019	June 24 – 27	Orléans France	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	https://blog.hwr-berlin.de/mim2019/ e-mail: not yet available