



INTERNATIONAL FEDERATION  
OF AUTOMATIC CONTROL

**International Federation of Automatic Control**

# **The IFAC Brochure 2017-2020 Edition**

(update October 2018)

**Aims**

**Structure**

**Activities**

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## Preface

This triennially updated IFAC Information Brochure is addressed to you, as a professional, theorist, engineer, researcher, student, or representative of a technical society, interested and active in the broad field of Automatic Control. In the pages to follow you can find some useful information about IFAC, the International Federation of Automatic Control, including its aims, activities, outputs, and organization, as well as some information about the people currently serving the Federation on a voluntary basis. Regularly updated information can be accessed at our webpage

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

The current version of this brochure can be downloaded from:

<https://www.ifac-control.org/about/information-brochure>

August 2017

## Message from the IFAC President



It is a great privilege to address you as the newly elected 22<sup>nd</sup> President of IFAC and I am very grateful and honored to have the chance of serving IFAC in this capacity 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 pro-actively 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 promptly to new developments is one of my goals for the coming three years.

Having said that, I also want to stress that IFAC is at 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.

I am very proud of the team that will now lead IFAC over the next three years: My team of vice-presidents Paul Van der 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.

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. 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](http://www.ifac-control.org). You will be given an email address like [john.smith@ifac-mail.org](mailto:john.smith@ifac-mail.org), you will receive the IFAC newsletter and once in a while a conference announcement for an IFAC conference 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. I want to invite you all to join us in 2020 for the next IFAC World Congress in Berlin. For more information and updates please visit: <http://www.ifac2020.org/>



Frank Allgöwer  
University of Stuttgart, President of IFAC

## Executive Summary

### Structure of IFAC

The membership of IFAC consists of National Member Organizations (NMOs) who are responsible for furthering the aims and objectives of IFAC within their respective countries. IFAC provides NMOs with full international participation, whilst at the same time preserving local customs in the development of their activities.

Individuals can participate in IFAC in many ways: as Affiliates who receive the Newsletter; as Technical Committee Members through nomination either by the NMO or by the Technical Committee Chair; as members of the International Program Committees of IFAC events; as authors of papers for IFAC events; as Executive Committee Members; as attendees of IFAC events; as authors, reviewers, and editors of the IFAC journals; and, ultimately as officials of IFAC.

### IFAC Events

Promotion of the science and technology of automatic control and all of its technical, educational and social implications is of paramount importance for IFAC. This is achieved mainly by organizing and sponsoring technical meetings, and through technical publications. IFAC organizes about 40 high-quality technical meetings per year, whose scheduling, scope, and ways of participation can be accessed through our webpage. Technical meetings are proposed by NMOs, sponsored by one or more of the 39 IFAC Technical Committees, and reviewed by the IFAC Technical Board. Every third year, IFAC organizes a World Congress. Papers presented at IFAC technical meetings are published, in partnership with Elsevier (official IFAC publisher), on the IFAC-PapersOnLine website, at no cost to the event organizers. Papers archived in this form can be viewed and downloaded at no cost, and can be cited using the site ISSN, and the individual paper DOI (digital object identifier).

### IFAC Journals

A fundamental role in the dissemination of automatic control science and technology is also achieved by IFAC through the editorship of eight prestigious archival journals: *Automatica*, *Control Engineering*

*Practice, Annual Reviews of Control, Engineering Applications of Artificial Intelligence, Journal of Process Control, Mechatronics, Nonlinear Analysis: Hybrid Systems, and IFAC Journal of Systems and Control*, which are known as IFAC Journals and published in partnership with the official IFAC publisher, Elsevier.

#### IFAC Awards

Extraordinary contributions to automatic control science and technology are acknowledged by IFAC in various ways. Lifetime contributions, with either a theoretical or practical emphasis, are honoured by means of the Giorgio Quazza and Nathaniel Nichols Medals, awarded every third year. The High Impact Paper Award acknowledges the impact of a paper published in any of the official IFAC journals. The Industrial Achievement award is presented to an individual, or a team of individuals, who has made a significant contribution to industrial applications of control. The Manfred Thoma Medal 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. Distinguished individuals may be honored by the Council as IFAC Fellows. This recognition is given triennially to a limited number of individuals who have made outstanding and extraordinary contributions in the fields of interest of IFAC as engineers/scientists, technical leaders or educators. The relevance of education is emphasized through the Harold Chestnut Control Engineering Textbook Prize. At the time of the triennial World Congress, the best research articles published in each IFAC journal, with the exception of Annual Reviews of Control, are acknowledged and awarded. The best papers presented at the Congress in the area of applications, by a young author, or as an interactive paper, are also awarded. Long-term service to the Federation is recognized by the Outstanding Service Award, and by presidential appointment of a restricted number of individuals as IFAC Advisors.

#### Boards and Committees of IFAC

IFAC's executive organ is the IFAC Officers consisting of the IFAC President, the IFAC President Elect, the immediate past President, the two Vice-Presidents (Technical Board Chair and Executive Board Chair) as well as the IFAC Treasurer. The Technical Board, chaired by one of the Vice-Presidents, relies on the highly competent efforts of more than 2000 volunteers, and is responsible for managing the technical activities of the Federation. Its main purpose is to manage the portfolio of IFAC technical meetings. In addition, the Technical Board advises the Council on all technical matters related to technical meetings, publications, and the technical contents of the Triennial Congress. It is also responsible for reviewing the technical activities of IFAC.

The Executive Board, chaired by the other Vice-President, coordinates and supervises the executive activities of IFAC through various Executive Committees. It also coordinates the external relations of the Federation, including applications for IFAC membership. The Awards Committee regulates and controls all award-related activities; The Policy Committee advises the Council on matters of general policy, long-range planning, and the external relations of the Federation; The Publications Committee regulates and controls all IFAC publications; The Administrative and Finance Committee is responsible for directing the work of the Secretariat and controls the use of IFAC funds in accordance with the budgets approved annually by the Council.

The IFAC Council decides on most IFAC matters, having been empowered to do so by the General Assembly, which is composed of all NMOs. The IFAC Council interacts with the Officers who conduct the day-to-day business of IFAC. Please also feel free to contact me at [frank.allgower@ist.uni-stuttgart.de](mailto:frank.allgower@ist.uni-stuttgart.de) about any matter pertaining to IFAC. The most important goal of IFAC is to serve all of you who are part of the greater Automatic Control community.

## 1. WHAT IS IFAC, WHAT ARE ITS AIMS?

The International Federation of Automatic Control, founded in September 1957, is a multinational federation of National Member Organizations (NMOs), each one representing the engineering and scientific societies concerned with automatic control in its own country.

The purpose of the Federation is to promote the science and technology of control in the broadest sense in all systems, whether, for example, engineering, physical, biological, social or economic, in both theory and application. IFAC is also concerned with the impact of control technology on society. The Federation serves to all those concerned with the theory and application of automatic control and systems engineering, wherever situated. To further this aim, it maintains working relationships with other organizations, national and international, especially with other non-governmental professional organizations.

IFAC provides a framework for collaboration between those working in automatic control and systems engineering, irrespective of race, creed or colour, or of geographic location, and promotes free exchange of ideas and experts within its professional fields.

The Federation does not become involved in any kind of political activity, nor does it take a position in any such issue.

IFAC does not take part in any commercial activity with the explicit aim to acquire financial gain.

IFAC pursues its purpose by organizing technical meetings, by publications, and by any other means consistent with its constitution and which will enhance the interchange and circulation of information on automatic control activities.

Information on activities appears on the IFAC homepage:

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

and in the IFAC Newsletter which may be obtained free of charge from the IFAC Secretariat ([secretariat@ifac-control.org](mailto:secretariat@ifac-control.org)) or can be downloaded from the IFAC homepage:

<https://www.ifac-control.org/publications/newsletters>

The official journals of IFAC are *Automatica*, *Control Engineering Practice*, *Annual Reviews in Control*, *the Journal of Process Control*, *Engineering Applications of Artificial Intelligence*, *the Journal on Mechatronics*, *Nonlinear Analysis: Hybrid Systems* and *the IFAC Journal of Systems and Control* to which one may subscribe by writing to the publisher, Elsevier Ltd. As an IFAC affiliate you are entitled to a special rate for subscription to IFAC journals. After your registration as an IFAC affiliate you can write to the following e-mail address: [emeacslsm@elsevier.com](mailto:emeacslsm@elsevier.com) and have to note that you are qualified for the IFAC special rate.

Starting from 2015, all papers from IFAC meetings (where IFAC is the main sponsor) are published, in partnership with Elsevier, the IFAC Publisher, in the IFAC-PapersOnLine proceedings series hosted at the ScienceDirect web service. All papers published on the web site can be cited using the series ISSN and the individual paper DOI (Digital Object Identifier). Papers presented at IFAC technical meetings are published, in partnership with Elsevier, at no cost to the event organizers. Recently proceedings from the early years have been scanned and added to the IFAC-PapersOnLine collection (published as IFAC Proceedings Volumes).

In addition, IFAC publishes Milestone Reports, technical committee and task force reports as well as brochures of particular interest, such as guidelines for organizers of workshops, symposia, conferences and congresses.

IFAC closely cooperates with many other international organizations, by mutually co-sponsoring technical meetings and conducting activities of interest to the control and automation community.

## **2. IFAC's VISION AND MISSION**

### Vision

...for IFAC to be the worldwide federation for promoting automatic control for the benefit of Humankind.

### Mission

...to promote the science and technology of automatic control through technical meetings, publications and other means consistent with the goals and values of IFAC.

### Goals

- Organize and sponsor high-quality technical meetings that are relevant to the automatic control community
- Be a trusted source of publication material on automatic control renowned for its technical excellence
- Help create an environment within which the automatic control community can prosper
- Provide volunteers and staff with meaningful and rewarding opportunities for career-enhancing participation in the Federation
- Help promote the benefits of automatic control among the public at large

### Values

- Honesty and Integrity
- Excellence and Relevance
- Sustainability
- Diversity and Inclusivity

### 3. IFAC's HISTORY

In September 1956, the German VDI/VDE-Fachgruppe Regelungstechnik organized an International Conference on Automatic Control in Heidelberg. At that conference 30 participants signed a declaration in which the need to create an international organization of automatic control was clearly defined. The signatories pledged to promote the formation of national organizations, if not already existing at that time.

At the end of the conference in Heidelberg a Provisional Committee was established under the chairmanship of Victor Broida (France) to draft a constitution for the planned International Federation of Automatic Control.

On September 12, 1957, the First General Assembly convened at the constituent meeting in Paris. Delegates from 18 countries representing their national organizations assembled at the Conservatoire National des Arts et Métiers under the chairmanship of Victor Broida. They voted on the Constitution and By-Laws; they elected the first President, Harold Chestnut, as well as the members of the Executive Council; and they appointed committee chairs.

The IFAC Presidents:

1957-1959	Harold Chestnut	(US) *
1959-1961	Aleksander M. Letov	(SU) *
1961-1963	Eduard Gerecke	(CH) *
1963-1966	John F. Coales	(UK) *
1966-1969	Pawel J. Nowacki	(PL) *
1969-1972	Victor Broida	(FR) *
1972-1975	John C. Lozier	(US) *
1975-1978	Uolevi A. Luoto	(FI) *
1978-1981	Yoshikazu Sawaragi	(JP) *
1981-1984	Tibor Vamos	(HU)
1984-1987	Manfred Thoma	(DE) *
1987-1990	Boris Tamm	(SU) *
1990-1993	Brian D.O. Anderson	(AU)
1993-1996	Stephen J. Kahne	(US)
1996-1999	Yong-Zai Lu	(CN)
1999-2002	Pedro Albertos	(ES)
2002-2005	Vladimir Kucera	(CZ)
2005-2008	Wook Hyun Kwon	(KR)
2008-2011	Alberto Isidori	(IT)
2011-2014	Ian Craig	(ZA)
2014-2017	Janan Zaytoon	(FR)
2017-2020	Frank Allgöwer	(DE)

\*deceased

The IFAC Secretariat has a permanent home. By invitation of the Austrian Government it has been situated in Laxenburg, Austria (south of Vienna) since 1978. For more information please visit:

<https://www.ifac-control.org/about/history>

On the occasion of the 60<sup>th</sup> anniversary of IFAC a "[The IFAC Story e-book](#)" was compiled under the leadership of Steve Kahne (former IFAC President, IFAC Advisor). The e-book is a narrative created from an archive of formal records and recollections of a number of long time volunteers of the International Federation of Automatic Control. The central role of IFAC's National Member Organizations is explained as is IFAC's global technical structure that has enhanced progress in the control and system field over the decades. A robust publications program has played an important role in IFAC's scientific impact on the community, as well as on IFAC's fiscal stability.



## 4. STRUCTURE OF IFAC

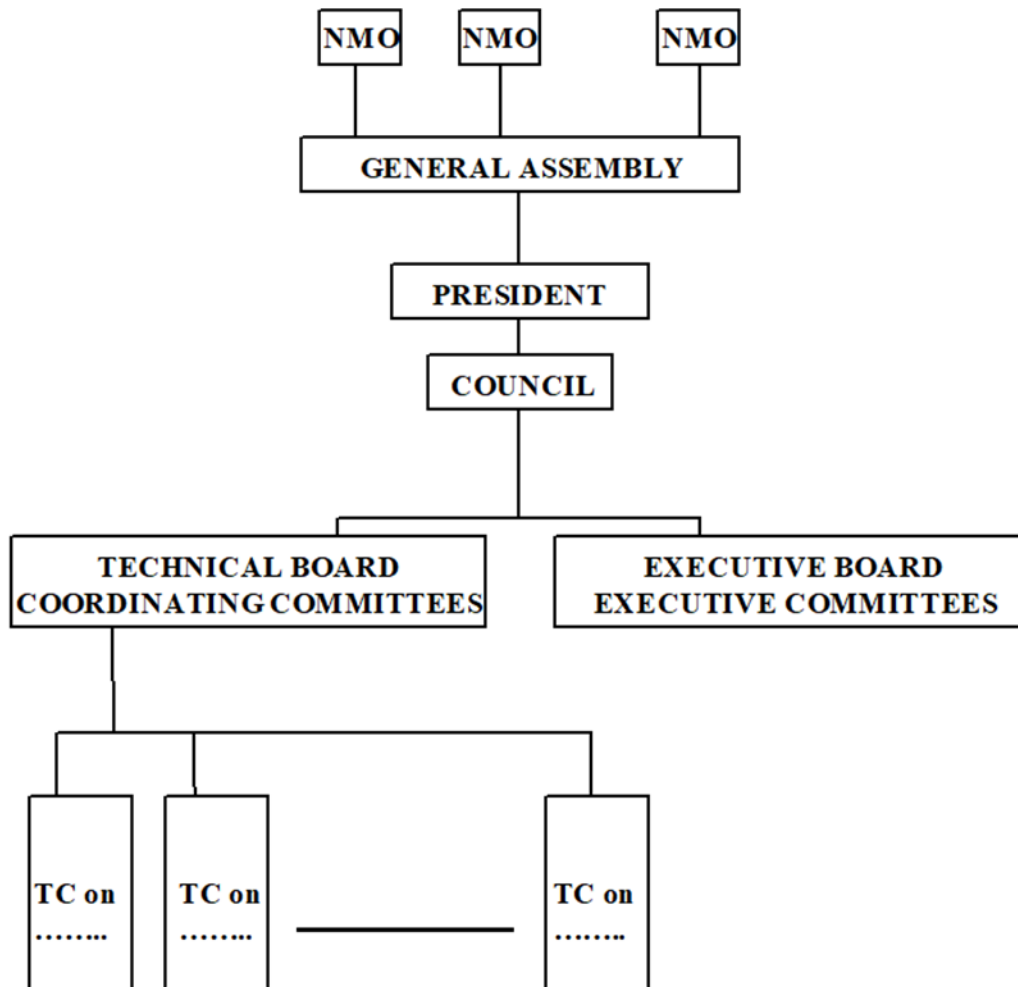
### 4.1 IFAC CONSTITUTION AND BY-LAWS

Copies of the Constitution and By-Laws, as well as information about IFAC and its activities, are available from the IFAC Secretariat:

IFAC Secretariat  
Schlossplatz 12  
2361 Laxenburg, Austria  
Tel: +43/2236/71447  
Fax: +43/2236/72859  
e-mail: [secretariat@ifac-control.org](mailto:secretariat@ifac-control.org)  
website: <https://www.ifac-control.org/structure/constitution-and-by-laws>

### 4.2 GOVERNANCE

The structure of IFAC's administration is depicted in the following chart:



The supreme body of the Federation is the General Assembly (GA) which consists of delegations from all National Member Organizations (NMOs), each one having equal rights and equal voting power. As of August 2017 IFAC has had 49 NMOs.

Between meetings of the General Assembly, the management of the Federation is vested in the Council. To manage the technical and executive activities, respectively, there are two working organs of the Federation, both reporting to the Council: the Technical Board (TB) and the Executive Board (EB). These boards are chaired by the two IFAC Vice-Presidents. All Technical Committees report to their cognizant Coordinating Committee Chair on the Technical Board. Four Executive Committees report to the Executive Board.

The President legally represents IFAC. All services to IFAC by any IFAC officer or official are voluntary and unpaid.

### **4.3 TECHNICAL COMMITTEES**

The technical work of IFAC is performed by the Technical Board (TB) and the Coordinating Committees (CCs). Each CC consists of a number of Technical Committees (TCs). The Technical Committees (TCs) are responsible for the planning and monitoring of technical events, such as symposia, conferences and workshops, with the NMOs acting as hosts. They also promote their respective areas in other ways, such as establishing contacts with other international organizations, publishing reports on selected topics, etc. The IFAC TCs cover specialized topics in control engineering. Their tasks among many others include promoting interest in emerging control subfields, assuming responsibility for technical meetings (or for series of such), providing for cooperation among specialists of their particular field, etc.

#### **4.3.1 Participation in Technical Committees**

For membership in a Technical Committee, there are different paths of participation. An individual may write a letter to the Secretariat, which will forward it to the respective TC Chair. A nomination may be made to the TC Chair by one's National Member Organization through the IFAC Secretariat. A person interested in participating in IFAC work may also contact the TC Chair directly.

#### **4.3.2 List of Coordinating and Technical Committees and their Brief Scopes**

IFAC currently has 9 Coordinating Committees (CCs), each comprising 3 to 5 Technical Committees (TCs). The list of CCs and TCs and Brief Scopes of Technical Committees are given below.

##### **CC1. Systems and Signals**

**CC Chair**      **Hideaki Ishii (JP)**

##### **1.1      Modelling, Identification and Signal Processing**

**Chair:**      **Alessandro Chiuso (IT)**

Addresses all aspects of data-based system modelling and statistical signal processing, from theoretical and methodological developments to practical applications. Includes model selection, robust estimation, regularization, finite sample results, tracking and adaptation, model validation, experiment design. Considers several model classes including parametric, non-parametric, state-space, frequency domain, linear and nonlinear models.

## **1.2 Adaptive and Learning Systems**

**Chair: Fouad Giri (FR)**

Developing control design methods for all systems that are subject to model uncertainty and compensating for uncertainty by using adaptation and machine learning techniques. The TC members' expertise include the design of adaptive controllers, adaptive state observers, adaptive parameter estimators, adaptive predictors, adaptive filters, ....

## **1.3 Discrete Event and Hybrid Systems**

**Chair: Jörg Raisch (DE)**

All aspects of analysis and control of Discrete Event Systems and Hybrid Systems.

## **1.4 Stochastic Systems**

**Chair: Subrakanti Dey (SE)**

All aspects related to probabilistic and statistical methods in modelling, identification, estimation and control.

## **1.5 Networked Systems**

**Chair: Maurice Heemels (NL)**

Networked systems are complex dynamical systems composed of a large number of simple subsystems interacting through a communication medium. Control systems operating over (resource-constrained) communication networks and multi-agent systems are at the heart of this TC. Networked systems arise as natural models in many areas of engineering and sciences, such as autonomous unmanned vehicles, cooperative robotics, smart grids, biological networks, internet-of-things and many more.

## **CC2. Design Methods**

**CC Chair Alessandro Astolfi (UK)**

### **2.1 Control Design**

**Chair: Laura Menini (IT)**

Design of feedback systems, including data-based control, fault tolerant control, switching control, observer design, supervision and computational techniques.

### **2.2 Linear Control Systems**

**Chair: Silviu-Iulian Niculescu (FR)**

Study and investigation on structural properties, analysis and synthesis of linear dynamical systems, including n-D, infinite dimensional, singular, positive, fractional, delayed, time and structure varying systems.

### **2.3 Non-Linear Control Systems**

**Chair: Christophe Prieur (FR)**

Methods for analysis and design of control systems described by non-linear differential or difference equations including the application of these methods.

### **2.4 Optimal Control**

**Chair: Eric Kerrigan (UK)**

The development and application of theory and methods for solving optimal control problems, as well as the closed-loop implementation of optimal controllers on real-time computer systems. Particular methods include, but are not limited to, the calculus of variations, Pontryagin's maximum principle, dynamic programming, model predictive control and differential games.

### **2.5 Robust Control**

**Chair: Mario Sznaier (US)**

Modelling of systems affected by uncertainty and the development of computational techniques for analysis, optimal controller synthesis and implementation.

### **2.6 Distributed Parameter Systems**

**Chair: Ralph C. Smith (US)**

Fostering methods and systematics for modeling, analysis, and control/observer design for distributed parameter systems.

## **CC3. Computers, Cognition and Communication**

**CC Chair Klaus Schilling (DE)**

### **3.1 Computers for Control**

**Chair: Birgit Vogel-Heuser (DE)**

Embedded and cyber-physical systems for real-time control with special emphasis in model-driven paradigm, modeling languages, verification & validation and certification, execution platforms including multi-core, real-time operating systems, virtualization layer for mixed-criticality systems and networks. Scheduling methods and real-time networks, as well as control techniques for computer systems.

### **3.2 Computational Intelligence in Control**

**Chair: Thierry-Marie Guerra (FR)**

Focuses on all aspects of knowledge-based, fuzzy and neuro-fuzzy and neural (both, artificial and biologically plausible) systems and evolutionary algorithms relevant to control, both in theory and application driven.

### **3.3 Telematics: Control via Communication Networks**

**Chair: Ulrich Jumar (DE)**

Computerized and telecommunication-based automation systems providing services to remote equipment for tele-operation, tele-maintenance, tele-medicine and tele-education, and their methodologies. Concepts of Cyber Physical Systems, Industrial Internet and of Internet of Things, which enlarge the scope of classical remote control.

## **CC4. Mechatronics, Robotics and Components**

**CC Chair Klaus Janschek (DE)**

### **4.2 Mechatronic Systems**

**Chair: Tsu-Chin Tsao (US)**

The synergistic combination of precision mechanical engineering, electronic control and systems thinking in the design of products and processes.

### **4.3 Robotics**

**Chair: Ivan Petrovic (HR)**

Robots manipulators and stationary robots, mobile and flying robots, autonomous systems, tele-robotics and internet robots. Intelligent robotics, perception and sensing, information and sensor fusion, guidance, navigation and control.

#### **4.5 Human Machine Systems**

**Chair: Jianhua Zhang (CN)**

This TC is concerned with complex technical or social systems where human factors and tight human-machine interaction/coupling play a significant role as an integral component. It is primarily aimed at promoting analysis, design, modeling, optimization, control, and evaluation of human-machine systems, human-automation integration, and brain-machine interfacing systems.

### **CC5. Manufacturing and Logistics Systems**

**CC Chair Hervé Panetto (FR)**

#### **5.1 Manufacturing Plant Control**

**Chair: Benoit lung (FR)**

All aspects of modelling, methodologies, tools, applications related to automation, information and communication technologies needed to control the manufacturing plant within the e-enterprise. Investigations on new manufacturing plants as advocated by "Factory of the Future" or "Industry 4.0" visions.

#### **5.2 Manufacturing Modelling for Management and Control**

**Chair: Dmitry Ivanov (DE)**

Models of e-manufacturing and supply chain systems, for production and service management, design, and control in communication and Internet based enterprises.

#### **5.3 Enterprise Integration and Networking**

**Chair: Georg Weichhart (AT)**

Enterprise integration, enterprise architectures, enterprise engineering methods, enterprise modelling. Use of technologies (Robots, CPS, IoT) in the networked enterprise to support interoperability.

#### **5.4 Large Scale Complex Systems**

**Chair: Xiaofan Wang (CN)**

Theory of complex systems, decentralized control and estimation, decision-making, hierarchical optimization and control, networked/interconnected systems, communication-based information systems.

### **CC6. Process and Power Systems**

**CC Chair Jay H. Lee (KR)**

#### **6.1 Chemical Process Control**

**Chair: Richard D. Braatz (US)**

Modeling and control of chemical and biological processes.

#### **6.2 Mining, Mineral and Metal Processing**

**Chair: Andreas Kugi (AT)**

All aspects of modeling, automation, control and optimization in the field of mining, mineral and metal processing.

#### **6.3 Power and Energy Systems**

**Chair: Kwang Y. Lee (US)**

All aspects of modelling, operation, and control of power and energy systems.

#### **6.4 Fault Detection, Supervision & Safety of Technical Processes - SAFEPROCESS**

**Chair: Thomas Parisini (UK)**

On-line fault detection and isolation; fault decision theory; diagnosis, monitoring and supervision based on hardware and analytical redundancy.

#### **CC7. Transportation and Vehicles Systems**

**CC Chair Lars Eriksson (SE)**

##### **7.1 Automotive Control**

**Chair: Per Tunestal (SE)**

Modeling, supervision, control, and diagnosis of automotive systems, power trains, vehicle dynamic systems, automotive sensors, integrated traffic, and in-vehicle communication.

##### **7.2 Marine Systems**

**Chair: Roberto Galeazzi (DK)**

Theory and application of control engineering and artificial intelligence techniques to the maritime field. Navigation, guidance and control, monitoring and surveillance, fault diagnosis, optimization, planning, modelling, identification, human factors and control architectures.

##### **7.3 Aerospace**

**Chair: Antonios Tsourdos (UK)**

Dynamics, control, and mission control of all aeronautical and space related vehicles and vehicle systems.

##### **7.4 Transportation Systems**

**Chair: Bart De Schutter (NL)**

Ground transportation systems (road and guided transport) and air traffic control systems for both passengers and transported goods.

##### **7.5 Intelligent Autonomous Vehicles**

**Chair: Paul G. Plöger (DE)**

Generic system methodologies and technologies applicable to intelligent autonomous vehicles including mobile robots on land, at sea, or in space.

#### **CC8. Bio & Ecological Systems**

**CC Chair Mustafa Khammash (CH)**

##### **8.1 Control in Agriculture**

**Chair: Manoj Karkee (US)**

Modeling, simulation and control aspects of agricultural machines, systems, and processes; Tools, techniques and methodologies for crop production and animal husbandry; post-harvest systems and processes (grading, drying, storage of crops); Food processing methods and systems (efficiency, quality and safety); Environmental and climate control of greenhouses, vertical farming environments, warehouses and animal houses; Energy efficiency and precision agricultural issues.

##### **8.2 Biological and Medical Systems**

**Chair: Thomas Desaive (BE)**

Applications of systems, modelling, informatics and control concepts, methodology and techniques in biology, physiology, medicine and healthcare.

### **8.3 Modelling and Control of Environmental Systems**

**Chair: Ronald van Nooijen (NL)**

Modelling and control methodologies for reliable management of natural resources and prevention and mitigation of environmental hazards and disasters. Application areas include, but are not limited to, urban and rural water systems and pollution control of soil, water, and air.

### **8.4 Biosystems and Bioprocesses**

**Chair: Alejandro Vargas (MX)**

Promotion of research and development in all major areas of biotechnology where computers are used to aid bioprocess design, supervision, diagnosis, operation, optimisation and control.

## **CC9. Social Systems**

**CC Chair Lawrence (Larry) Stapleton (IE)**

### **9.1 Economic, Business, and Financial Systems**

**Chair: Fei-Yue Wang (CN)**

Modeling, analysis, synthesis, control, and management of Economic, Business, and Financial Systems. Operating at the interface between economics, business administration and financial engineering. Exploring theoretical and computational methods and tools for decision and control in economics, finance and management.

### **9.2 Social Impact of Automation**

**Chair: Wilfrid Perruquetti (FR)**

Relations between automated systems and social environments, including social effects of automation, requirements for automation development, and environmental and health implications.

### **9.3 Control for Smart Cities**

**Chair: (Samuel) Qing-Shan Jia (CN)**

Promote research and education of control for smart cities, includes but is not limited to buildings, transportation systems, water system management, pollution monitoring and control systems.

### **9.4 Control Education**

**Chair: John (Anthony) Rossiter (UK)**

Education issues in control engineering. Methodologies for improving the theory, practice and accessibility of control systems education. Improving awareness of the general population in the importance of systems and control.

### **9.5 Technology, Culture and International Stability (TECIS)**

**Chair: Peter Kopacek (AT)**

Identification, definition, and improvement of factors which significantly influence international stability and improve its effectiveness.

## **4.4. EXECUTIVE COMMITTEES**

The scopes of the respective committees are as follows:

### **Administrative and Finance Committee (Chair: Hajime Asama, JP)**

The Administrative and Finance Committee is responsible for directing the work of the Secretariat and controls the use of IFAC funds in accordance with the budgets approved annually by the Council.

### **Awards Committee (Chair: Karl Henrik Johansson, SE)**

The Awards Committee is responsible for the management of the IFAC awards program including recommendations to the Council for award selection committees, awards planning and procedures, recommendations for initiating and terminating each award, and awards funding.

### **Policy Committee (Chair: Lucy Pao, US)**

The Policy Committee advises the Council, at the Council's request or on its own initiative, on the general policy and long-range planning of the Federation, on matters concerning the relations between IFAC and other international organizations and between IFAC and its NMOs, as well as on procedural matters and guidelines related to the conduct of business within the Federation and to the organization of technical meetings.

### **Publications Committee (Chair: Ian K. Craig, ZA)**

The Publications Committee regulates and controls all IFAC publications in accordance with guidelines laid down by the Council, and authorizes expenditure on publications within strict budgetary limits approved by the Council.

## **4.5 IFAC AFFILIATES: INDIVIDUAL INVOLVEMENT IN IFAC**

Anyone interested in control engineering may become an IFAC Affiliate. IFAC Affiliates receive the IFAC Newsletter free of charge. The Newsletter contains information about IFAC technical meetings as well as about other matters of interest to the control community. IFAC Affiliates will also receive Calls for Papers for technical meetings in their selected areas of interest and are entitled to a special rate for subscriptions to the IFAC Journals. On-line registration as an Affiliate is possible from the IFAC homepage.

For membership in a Technical Committee, there are different paths of participation. An individual may write a letter to the Secretariat, which will forward it to the respective TC Chair. A nomination may be made to the TC Chair by one's National Member Organization through the IFAC Secretariat. A person interested in participating in IFAC work may also contact the TC Chair directly.

## **4.6 IFAC AWARDS**

### **The Giorgio Quazza Medal (Chair: Alberto Isidori, IT)**

The Giorgio Quazza Medal recognizes outstanding lifetime contributions of a researcher and/or engineer to conceptual foundations in the field of systems and control. This IFAC award, created in 1979, is a memorial to the late Giorgio Quazza, a leading Italian electrical and control engineer who served IFAC in many capacities in a most distinguished manner. The medal is presented by the President at each IFAC Triennial Congress at the Opening Ceremony. A prize is presented to the recipient together with the medal. Medal winners have been:

- 1981	John F. Coales	(UK)
- 1984	Yakov Z. Tsytkin	(RU)
- 1987	Karl J. Åström	(SE)
- 1990	Petar Kokotovic	(US)
- 1993	Edward J. Davison	(CA)
- 1996	Alberto Isidori	(IT)
- 1999	Brian D.O. Anderson	(AU)
- 2002	Lennart Ljung	(SE)
- 2005	Tamer Başar	(US)
- 2008	Graham Goodwin	(AU)
- 2011	Hidenori Kimura	(JP)



- 2014 David Mayne (UK)
- 2017 Roger Brockett (US)

**Nathaniel B. Nichols Medal (Chair: Pramod Khargonekar, US)**

The Nichols Medal recognizes outstanding contributions of an individual to design methods, software tools and instrumentation, or to significant projects resulting in major applications and advancement of control education. The spirit is captured by the name of Nathaniel Nichols, one of the pioneers of control engineering. The medal is awarded by the IFAC Council on the recommendation of a selection committee. A monetary prize is presented to the recipient together with the medal. Medal winners have been:

- 1996 Jürgen Ackermann (DE)
- 1999 Gunter Stein (US)
- 2002 Carl Nett (US)
- 2005 William F. Powers (US)
- 2008 Gerd Hirzinger (DE)
- 2011 Siva Banda (US)
- 2014 Reza Moheimani (AU)
- 2017 Lennart Ljung (SE)

**Manfred Thoma Medal (Chair: Lei Guo, CN)**

The Manfred Thoma Medal, created in 2015, 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. It is named after Manfred Thoma, a leading contributor to the field of control and to IFAC, and supporter of the careers of many young scientists. The medal is awarded by the IFAC Council on the recommendation of a selection committee. A monetary prize is presented to the recipient together with the medal.

- 2017 Ming Cao (NL)

**Industrial Achievement Award (Chair: Alf Isaksson, SE)**

This is an IFAC award to an individual, or a team of individuals, who has made a significant contribution to industrial applications of control. The award is given in technical fields covered by IFAC. The selection is based on industrial achievements measured in terms of:

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

A monetary prize is presented to the winner or team of winners. Winners have been:

- 2002 Yasuo Ichii, Shoji Murayama, and Takahiro Yamasaki  
(of the Kawasaki Steel Corporation) (JP)
- 2005 Serge Boverie (FR)
- 2008 not awarded
- 2011 Anton van Zanten (DE)
- 2014 Giovanni Cherubini, Jens Jelitto, Mark Lantz, and Angeliki Pantazi  
(of IBM Zurich) (CH)
- 2017 Francesco Borrelli, David Germann, Dejan Kihass, Daniel Pachner,  
Jaroslav Pekar, Greg Stewart (US/CA/CZ)  
(Honeywell Int. Inc., University of California, Berkley)

### **High Impact Paper Award (Chair: James Rawlings, US)**

This IFAC Award was introduced in 2009 and first awarded in 2011. It acknowledges the impact of a paper published in any of the official IFAC journals on the broad areas of Automatic Control theory and application. A monetary prize is presented to the recipient together with a plaque.

Winners have been:

- 2011                    D.Q. Mayne                    (UK)  
                              J.B. Rawlings                (US)  
                              C.V. Rao                      (US)  
                              P.O.M. Scokaert            (BE)

in recognition of the high impact of the paper entitled "Constrained Model Predictive Control: Stability and Optimality," *Automatica*, Vol. 36, pp. 789-814, 2000.

- 2014                    Manfred Morari              (CH)  
                              Alberto Bemporad          (IT)

in recognition of the high impact of the paper entitled "Control of systems integrating logic, dynamics and constraints," *Automatica*, Vol. 35, No. 3, pp. 407-427, 1999.

- 2017                    Franco Blanchini            (IT)

in recognition of the high impact of the paper entitled "Set Invariance in Control", published in the IFAC Journal *Automatica*, vol. 35, no. 11, 1999.

### **IFAC Fellows (Chair: Anders Rantzer, SE)**

This distinction was awarded for the first time at the 16<sup>th</sup> IFAC World Congress in Prague, Czech Republic in 2005. It consists of a lapel pin and a certificate and is given to individuals for outstanding and extraordinary individual contributions in the fields of interest of IFAC. The IFAC Fellow award provides a distinction of excellence in the Federation and is conferred by the IFAC Council based on the proposal of a Fellow Selection Committee, which is appointed by the President. The Fellow Selection Committee responds to nominations. At the meeting of the incoming Council in Milan in 2011, the decision was taken to change from an annual selection process to a triennial one.

The list of all Fellows elected so far can be obtained from the IFAC website at <https://www.ifac-control.org/awards/ifac-fellows>

### **IFAC Journal Awards**

- ***Automatica* Paper Prize Award**
- ***Control Engineering Practice* Paper Prize Award**
- ***Engineering Applications in Artificial Intelligence* Paper Prize Award**
- ***Journal of Process Control* Paper Prize Award**
- ***Journal of Mechatronics* Paper Prize Award**
- ***Nonlinear Analysis: Hybrid Systems* Paper Prize Award**

The IFAC Journal Awards are given for outstanding papers published in the above IFAC journals. At each Triennial IFAC World Congress monetary prizes are presented to the authors of papers selected by the Journal Prize Awards Selection Committees. The prize funds are provided by the publisher of the IFAC Journals, Elsevier Ltd.

### **IFAC Congress Applications Paper Prize (Chair: Iven Mareels, AU)**

This prize is awarded at each IFAC World Congress for the best Applications Paper.

### **IFAC Congress Young Author Prize (Chair: Hitay Ozbay, TR)**

This prize is awarded at each IFAC World Congress for the best paper of an author (authors) younger than 35 years of age.

**IFAC Congress Interactive Paper Prize (Chair: Alexander L. Fradkov, RU)**

This prize is awarded at each IFAC World Congress for the best interactive (or poster) paper.

Candidates for all of the above-mentioned prizes are nominated by a selection committee appointed by the Council. The prizes consist of a monetary prize and a certificate. The prize funds are provided by IFAC.

A list of prize winners for all awards is available on the IFAC website at <https://www.ifac-control.org/awards>

**Harold Chestnut Control Engineering Textbook Prize**

This award is presented at each Triennial 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 Harold Chestnut, IFAC's first president.

**IFAC Outstanding Service Award**

This award is presented to IFAC officials who have served and contributed substantially to IFAC in various capacities, according to criteria set by the Council. The award consists of a certificate and a lapel pin and is presented to the candidates on the occasion of the World Congress.

## 4.7 FINANCES

The revenue of IFAC chiefly consists of annual membership fees paid by the NMOs and publications income from the IFAC Journals. It is used for administrative expenses as recommended by the Administrative and Finance Committee. Its recommendations are approved by the Council which is held accountable by the General Assembly for the expenses.

IFAC has three membership categories and the fees for each category are determined by the General Assembly (current annual membership fees in brackets):

- **Ordinary membership category (€1.500/€3.000/€6.000/€12.000)**
- **Reduced-fee membership category (€500)**
- **Introductory membership category (€150)**

For the Ordinary membership category, each NMO can select an appropriate fee level in the four sub-categories from €1.500 to €12.000. NMOs in the ordinary membership category must communicate to the IFAC Treasurer by October 1st of each year if they wish to change their sub-category of membership for the ensuing year.

All financial matters of IFAC are managed by the Treasurer:

Prof. John Lygeros  
ETH Zurich, Automatic Control Laboratory, IfA  
Physikstrasse 3, ETL I 22  
8092 Zurich  
Switzerland  
e-mail: [jlygeros@ethz.ch](mailto:jlygeros@ethz.ch)

### 4.7.1 Non-binding suggested membership fee

The following formula offers a non-binding membership fee suggestion and can be seen as indicator for a suitable category. The formula takes the minimum of each category

**Suggested fee = min (category wrt. participation, category wrt. GDP, category wrt. GDP p. capita),**

with the categories being defined in Table. 1.

<b>Average participation in IFAC World Congresses (%)</b>	<b>GDP (US\$MM)</b>	<b>GDP per capita (1000US\$)</b>	<b>Suggested category</b>
<b>0 – 1</b>	<b>0 - 500.000</b>	<b>0 - 5</b>	<b>1.500</b>
<b>1 – 2</b>	<b>500.000 - 1.000.000</b>	<b>5 - 10</b>	<b>3.000</b>
<b>2 – 4</b>	<b>1.000.000 - 2.000.000</b>	<b>10 - 20</b>	<b>6.000</b>
<b>&gt; 4</b>	<b>&gt; 2.000.000</b>	<b>&gt; 20</b>	<b>12.000</b>

*Table 1: Proposed categories with respect to participation, with respect to GDP and with respect to GDP per capita.*

The NMOs are encouraged to ask the IFAC secretariat for their respective data.

## **4.8 IFAC SUPPORT**

### **4.8.1 IFAC Foundation**

Since 2006, the IFAC Foundation has been officially incorporated in Switzerland, following Swiss law. Its mission is to acquire, manage and distribute resources to further the scientific goals of the International Federation of Automatic Control (IFAC). The IFAC Foundation is a not-for-profit organization that accepts donations from individuals and organizations, both private and public, who wish to contribute to the mission of IFAC. Like IFAC, the goal of the IFAC Foundation is to support the development of automation and automatic control science, technology, and education which benefits the global economy and human life. The website of the IFAC Foundation is <https://foundation.ifac-control.org/>

## 5. IFAC EVENTS

### 5.1 CONGRESSES

Triennial Congresses are organized on a worldwide scale, with attendance up to 3.000 persons. They are traditionally held in the home country of the President in office during the third year of his/her term of office.

Location and dates of IFAC Congresses are shown below:

1 <sup>st</sup> Congress	1960 Moscow	(SU)
2 <sup>nd</sup> Congress	1963 Basel	(CH)
3 <sup>rd</sup> Congress	1966 London	(UK)
4 <sup>th</sup> Congress	1969 Warsaw	(PL)
5 <sup>th</sup> Congress	1972 Paris	(FR)
6 <sup>th</sup> Congress	1975 Boston/Cambridge	(US)
7 <sup>th</sup> Congress	1978 Helsinki	(FI)
8 <sup>th</sup> Congress	1981 Kyoto	(JP)
9 <sup>th</sup> Congress	1984 Budapest	(HU)
10 <sup>th</sup> Congress	1987 Munich	(DE)
11 <sup>th</sup> Congress	1990 Tallinn	(SU)
12 <sup>th</sup> Congress	1993 Sydney	(AU)
13 <sup>th</sup> Congress	1996 San Francisco	(US)
14 <sup>th</sup> Congress	1999 Beijing	(CN)
15 <sup>th</sup> Congress	2002 Barcelona	(ES)
16 <sup>th</sup> Congress	2005 Prague	(CZ)
17 <sup>th</sup> Congress	2008 Seoul	(KR)
18 <sup>th</sup> Congress	2011 Milan	(IT)
19 <sup>th</sup> Congress	2014 Cape Town	(ZA)
20 <sup>th</sup> Congress	2017 Toulouse	(FR)
21 <sup>st</sup> Congress	2020 Berlin	(DE)
22 <sup>nd</sup> Congress	2023 Yokohama	(JP)

### 5.2 SYMPOSIA, CONFERENCES AND WORKSHOPS

In addition to the triennial IFAC World Congresses, the Federation manifests the progress of automatic control through international symposia, conferences and workshops sponsored or co-sponsored by IFAC.

An **IFAC Symposium** is a technical meeting covering a well-defined theme of control engineering. Symposia on the same subject are arranged as a regular series, usually on a triennial basis. They are organized by a host country NMO and are scientifically assisted by those IFAC Technical Committees which take an active interest in the selected topics of the meeting. Attendance usually ranges between 100 and 500 participants.

An **IFAC Conference** is a technical meeting of about the same scope and size as a Symposium but it is not necessarily part of a series of events. Conferences may also cover topics that are more specialized.

An **IFAC Workshop** is a more informal and less structured meeting than a Symposium or a Conference. It usually has a narrower scope and a more limited attendance (between 50 and 100 participants). However, provisions for the host country NMO acting as organizer, for the scientific support by the appropriate TCs and for co-sponsorship by other scientific organizations are similar to those for Symposia.

As a general rule, during the year of the Congress, there are no Symposia or Conferences, and the number of Workshops is restricted.

Information on forthcoming IFAC technical meetings can be found in every issue of the IFAC Newsletter and on the IFAC website:

[https://www.ifac-control.org/events/@@events\\_view](https://www.ifac-control.org/events/@@events_view)

To assist those involved in organizing and preparing Symposia and Workshops a booklet entitled "Procedure for the Organization of IFAC Technical Meetings" is available from the IFAC Secretariat or can be downloaded from the IFAC website:

<https://www.ifac-control.org/events/organizer-guide>

### **5.3 MASTERPLAN OF IFAC SYMPOSIA**

Future IFAC events include the following regular symposia:

- Advanced Control in Chemical Processes (ADCHEM)
- Advances in Automotive Control (AAC)
- Advances in Control Education (ACE)
- Automatic Control in Aerospace (ACA)
- Biological and Medical Systems (BMS)
- Control in Transportation Systems (CTS)
- Dynamics and Control of Process Systems, including Biosystems (DYCOPS)
- Fault Detection, Supervision and Safety for Technical Processes (SAFEPROCESS)
- Human-Machine Systems (HMS)
- Information Control in Manufacturing (INCOM)
- Intelligent Autonomous Vehicles (IAV)
- Large Scale (Complex) Systems (LSS)
- Mechatronic Systems (MECHATRONICS)
- Control, Optimization and Automation in Mining, Mineral and Metal Processing (MMM)
- Non-Linear Control Systems (NOLCOS)
- New name: Control of Power and Energy Systems (CPES) until 2012: Power Systems and Power Plants (PSPP)
- Robot Control (SYROCO)
- Robust Control Design (ROCOND)
- System Identification (SYSID)
- System Structure and Control (SSSC)
- Telematics Applications (TA)

## 6. IFAC PUBLICATIONS

Under the terms of an agreement between Pergamon Press Ltd (as of January 1994 Elsevier Ltd) and IFAC, [Elsevier Ltd.](#) is the official, sole publisher of IFAC publications. The agreement covers all of the publications listed below, with the exception of the IFAC Newsletter and reports.

- IFAC Symposium, Conference and Congress Proceedings Volumes  
([IFAC-PapersOnLine proceedings series](#))
- IFAC Journal *Automatica*
- IFAC Journal *Control Engineering Practice*
- IFAC Journal *Annual Reviews in Control*
- IFAC Journal of *Process Control*
- IFAC Journal on *Engineering Applications in Artificial Intelligence*
- IFAC Journal on *Mechatronics*
- IFAC Journal *Nonlinear Analysis: Hybrid Systems*
- *IFAC Journal of Systems and Control*
- IFAC Newsletter
- IFAC Technical Committee and Task Force Reports
- Milestone Reports

The management of IFAC Publications, the IFAC - Elsevier joint publication venture, is vested in the Publications Managing Board, presently chaired by Prof. Tamer Başar (US). All inquiries regarding IFAC Publications should be addressed to:

Elsevier Ltd.  
att. Kay Tancock  
Senior Publisher - Signal Processing and Control  
The Boulevard  
Langford Lane, Kidlington, Oxford  
OX5 1GB, UK  
Tel: +44 (0)1865 843 721

### 6.1 PREPRINTS AND IFAC-PapersOnLine

#### Preprints:

Preprints are the collection of accepted papers produced prior to a meeting for distribution at the meeting, either in printed or electronic form. Preprints provide easy access for participants to papers before or during a meeting. Preprints are provided solely for meeting participants, included as part of the registration fee. They may be available for sale, but they must not carry an ISBN, Bar Code, cataloguing details or the words "published by..." Preprints are not a publication and should not have any mark that enables them to be cited as such.

#### IFAC-PapersOnLine:

Proceedings are the final collection of papers from an IFAC meeting. They are the only way in which papers from IFAC meetings are published. Proceedings from all IFAC events are published by IFAC, in cooperation with the IFAC publisher, on the IFAC-PapersOnLine website and are citable via an ISSN and a DOI (Digital Object Identifier), a unique industry-standard identifier assigned to every paper.

Proceedings must be published for Symposia and Conferences, but they are not mandatory for Workshops. If the organizers of a Workshop choose to publish proceedings, the same procedures as for Symposia, including peer review of full draft papers, must be followed. If the Organizers decide not to publish proceedings, they must not produce any other publication of the Workshop.



### **IFAC Publications and Copyright Policy**

“All publication material submitted for presentation at an IFAC-sponsored meeting (Congress, Symposium, Conference, Workshop) must be original and hence cannot be already published, nor can it be under review elsewhere. The authors take responsibility for the material that has been submitted. IFAC-sponsored conferences will abide by the highest standard of ethical behavior in the review process as explained on the Elsevier webpage (<https://www.elsevier.com/authors/journal-authors/policies-and-ethics>), and the authors will abide by the IFAC publication ethics guidelines (<https://www.ifac-control.org/events/organizers-guide/PublicationEthicsGuidelines.pdf/view>).

Accepted papers that have been presented at an IFAC meeting will be published in the proceedings of the event using the open-access IFAC-PapersOnLine series hosted on ScienceDirect (<https://www.sciencedirect.com/>). To this end, the author(s) must confer the copyright to IFAC when they submit the final version of the paper through the paper submission process. The author(s) retain the right to use a copy of the paper for personal use, internal institutional use at the author(s)' institution, or scholarly posting at an open web site operated by the author(s) or their institution, limited to noncommercial use. Any other use of the paper requires approval by IFAC.”

## **6.2. IFAC JOURNALS**

***Automatica*** is an IFAC journal, published monthly. It is a leading archival publication in the field of systems and control, featuring a characteristic blend of theoretical and applied papers of lasting value, reporting cutting edge research results by authors across the globe. All submissions undergo a rigorous review process. The Journal features articles in distinct categories, including regular, brief and survey papers, technical communiqués, correspondence items, as well as reviews on published books of interest to the readership.

***Control Engineering Practice*** is IFAC's applications journal, published monthly. It contains high-quality papers which illustrate the direct application of control theory and its supporting technologies in all possible areas of automation. Papers demonstrating the contribution of automation and control in improving the performance, quality, productivity, sustainability, resource and energy efficiency, and the manageability of systems and processes for the benefit of mankind and are relevant to industrial practitioners are most welcome. All papers, whether originating from IFAC events or directly submitted, are rigorously reviewed by an international panel of referees.

***Annual Reviews in Control*** is published twice a year, averaging about 200 pages per issue. The Journal contains review articles selected from the material of the most recent IFAC symposia, conferences and workshops, and of the latest Congress. It may also carry papers specifically written for the Journal, either review papers on main methodologies or technical advances – ‘Survey papers’ or cutting-edge papers on topics that are just emerging or tend to bring together several disciplines – ‘Vision papers’.

The ***Journal of Process Control*** is published eight times per year and invites papers relating to all aspects of Chemical Process Control, including many papers arising from the regular IFAC meetings in process control. All papers are rigorously reviewed.

***Engineering Applications of Artificial Intelligence*** is an international journal that publishes rigorously reviewed papers relating to intelligent real-time automation. It is published ten times per year. Regular special issues are published on new and emerging topics of interest.

***Mechatronics*** is an international journal that publishes papers relating to the multidisciplinary area of design and use of advanced automated systems, where the synergistic integration of mechanics, electronics, and control plays a fundamental role. It is published ten times a year and all papers are rigorously reviewed prior to publication. Special issues are published on new and emerging topics of interest.

***Nonlinear Analysis: Hybrid Systems*** is the IFAC journal devoted to hybrid dynamic systems, i.e., systems involving the interplay between discrete and continuous dynamic behaviors. It publishes 4 issues per year including special issues on new and emerging topics. It features regular submissions as well as papers originating from IFAC meetings. All papers are rigorously reviewed under the supervision of a Senior Editor and of an Associate Editor.

***The IFAC Journal of Systems and Control*** is the newest addition to the IFAC Journal collection. The journal, invites leading Researchers in the area of Systems and control to submit papers that present significant, novel, generalizable, extensible and transferable innovations across Areas of Automation and control.

For information, inspection copies and subscriptions of all Journals, please contact

IFAC Publications, Elsevier Ltd., Kay Tancock  
Senior Publisher - Signal Processing and Control  
The Boulevard  
Langford Lane  
Kidlington, Oxford OX5 1GB, UK  
e-mail: [k.tancock@elsevier.com](mailto:k.tancock@elsevier.com)

### 6.3 IFAC NEWSLETTER

The IFAC Newsletter is produced bimonthly for the purpose of disseminating current information relevant to IFAC. It is sent free of charge to NMOs, IFAC Affiliates (electronically) and libraries. It contains up-to-date information about forthcoming IFAC events as well as brief announcements of other IFAC-related activities. All material proposed for publication in the IFAC Newsletter should be sent to the Newsletter Editor, Kurt Schlacher, c/o IFAC Secretariat ([secretariat@ifac-control.org](mailto:secretariat@ifac-control.org)). The latest edition of the IFAC Newsletter is available on the IFAC homepage, as well as an online archive dating back to the very beginning of IFAC (1958).

<https://www.ifac-control.org/publications/newsletters>

### 6.4 IFAC Social Media Activities

IFAC is active on the social media platforms of Facebook, LinkedIn, and Twitter. We encourage you to join/like/follow these platforms for news on IFAC events, awards, and general news about automatic control. You are welcome to post appropriate news on these managed sites, or you can email news to Linda Bushnell at <mailto:lb2@uw.edu>.

Facebook: <https://www.facebook.com/IFACcontrol/>

LinkedIn: <https://www.linkedin.com/groups/13400016>

Twitter: [https://twitter.com/IFAC\\_Control](https://twitter.com/IFAC_Control)

IFAC also has a YouTube channel with videos of plenary talks and historical talks. In addition, IFAC posts a Blog with interesting articles for a general audience.

IFAC YouTube channel:

<https://www.youtube.com/channel/UCLcWqpbVNxo9rVSS9NKQDeA>

IFAC Blog: <http://blog.ifac-control.org>

## 7. NATIONAL MEMBER ORGANIZATIONS

<b>ARGENTINA</b>	AR
Asoc. Argentina de Control Automático - AADECA e-mail: <a href="mailto:administracion@aadeca.org">administracion@aadeca.org</a> <a href="http://www.aadeca.org/">http://www.aadeca.org/</a>	
<b>AUSTRALIA</b>	AU
The Institution of Engineers, Australia Att: Att. Prof. Ian Petersen <a href="mailto:i.r.petersen@gmail.com">i.r.petersen@gmail.com</a> <a href="http://www.engineersaustralia.org.au/">http://www.engineersaustralia.org.au/</a>	
<b>AUSTRIA</b>	AT
Oest. Ges. f. Automatisierung & Robotertechnik - OeGART Att: Prof. Peter Kopacek <a href="mailto:kopacek@ihrt.tuwien.ac.at">kopacek@ihrt.tuwien.ac.at</a> <a href="http://www.ifac-austria.at/">http://www.ifac-austria.at/</a>	
<b>AZERBAIJAN</b>	AZ
Azerbaijan Robotics and Automation Society (ARAS) Att: Dr. techn. Bahadur Ibrahimov <a href="mailto:aras.azerbaijan@gmail.com">aras.azerbaijan@gmail.com</a>	
<b>BELGIUM</b>	BE
DYSCO, IC TEAM/INMA Att: Denis Dochain <a href="mailto:denis.dochain@uclouvain.be">denis.dochain@uclouvain.be</a> <a href="http://sites-final.uclouvain.be/dysco/">http://sites-final.uclouvain.be/dysco/</a>	
<b>BRAZIL</b>	BR
Sociedade Brasileira de Automatica, SBA Att: President Prof. Osvaldo Saavedra <a href="mailto:o.saavedra@ieee.org">o.saavedra@ieee.org</a> <a href="http://www.sba.org.br/">http://www.sba.org.br/</a>	
<b>BULGARIA</b>	BG
Federation of the Scientific Engineering Unions in Bulgaria Att: Prof. Kosta Boshnakov <a href="mailto:kosta.boshnakov@gmail.com">kosta.boshnakov@gmail.com</a> <a href="http://www.sai.bg/saie.html">http://www.sai.bg/saie.html</a>	
<b>CANADA</b>	CA
IFAC--Canada Att: Prof. Jurek Sasiadek <a href="mailto:Jurek.Sasiadek@carleton.ca">Jurek.Sasiadek@carleton.ca</a>	
<b>CHILE</b>	CL
Asociacion Chilena de Control Automatico - ACCA Att: Prof. Carolina Lagos <a href="mailto:carolina.lagos@usach.cl">carolina.lagos@usach.cl</a>	
<b>CHINA</b>	CN
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<b>CROATIA</b>	HR
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