

# TIFAC NEWSLETTER

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## **IFAC Activity Fund Update**

Control engineering is still very much a hidden technology – everyone relies on it in day-to-day life but very few are aware of it. At the same time, control academics are easily pulled into the rut of publication indices and grant applications.

The IFAC Activity Fund was initiated in 2020 by then IFAC President Frank Allgöwer to encourage the community engagement of control academics and practitioners, to promote control outside the usual areas and to build a thriving control engineering community.

Frank had a feeling that there are already many good ideas amongst colleagues that will take off with some financial assistance. These ideas – once they are off the ground – will have an impact for the good of the entire community.

The IFAC Activity Fund was therefore called into life to sponsor activities that go beyond the usual work of a control engineering academic. Carrying out such projects comes with much satisfaction as well as unsuspected rewards for the organisers such as recognition on a wider level and better networks in the community.



Pocket sized labs workshop session for secondary school teachers

The first call was issued in October 2020 and six very different projects were sponsored by the fund.

- The second Control Conference Africa (CCA) is a vibrant event showcasing control on the continent. The Activity Fund sponsors the attendance of six colleagues and students who do not have an IFAC representation in their home countries and pays for their travel. Organiser: Kevin Brooks, University of the Witwatersrand. Sponsoring IFAC Body: SACAC (South African IFAC National Member Organisation)
- Teaching Analytics software is aimed at control and non-control students to test their knowledge in control and can help all lecturers to assess students. This has become even more important in the pandemic where teach-

ing occurs predominantly online. Organiser: Simone Formentin, Politecnico di Milano, Italy. Sponsoring IFAC Body: TC 1.1 (Modeling, Identification and Signal Processing).

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- An Online Internation Benchmark for control engineering education that can be used as part of international competitions in IFAC symposiums and conference. The Benchmark will be first made available for the Advances in Control Education (ACE) Symposium in Hamburg. Organiser: Jose Luis Guzman. Sponsoring IFAC Body: TC 9.4 (Education).
- Pocket-sized labs explain control with simple hardware and tasks, such as temperature control with an Arduino. This activity consists of a workshop for secondary school teachers and demonstration sessions for both students and teachers at universities in Portugal. Organiser: Paulo Moura Oliveira. Sponsoring IFAC Body: APCA (Portuguese NMO).
- An educational solar car with remote and autonomous driving capability attracts high-school children in South Africa to control disciplines. The high-school children are actively involved in building and programming the car. Organiser: David Oyedokun. Sponsoring IFAC Body: SACAC (South African NMO).
- A free and integrated online workshop series on control systems and data science brings together experts in a novel format and educates undergraduate and graduate students on Control Systems and Data Science towards Industry 4.0. This high quality novel format is a result of the pandemic digitalization drive and may find future events to be organised in the same way. Organiser: S. Joe Qin. Sponsoring IFAC Body: TC 6.1 (Chemical Process Control)

Do you have an idea that furthers the control community engagement? The IFAC Activity Fund accepts application twice a year. These deadlines are 15 April and 15 October. More information can be found at: <a href="https://sites.ifac-control.org/activityfund">https://sites.ifac-control.org/activityfund</a> or contact activityfund@ifac-control.org.



Margret Bauer (DE), IFAC Activity Fund Chair

No.4

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#### 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-ofartificial-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-andcontrol

IFAC-PapersOnLine

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

#### EAAI Outreach Workshop 18 May 2021 Online

Outreach to the Control community is one of many ongoing journal priorities for the IFAC publisher, Elsevier. Following a very well-received webinar for researchers based in China last year, featuring the Editor-in-Chief and two Associate Editors of Control Engineering Practice, a second webinar was held on 18 May 2021 – this time for Engineering Applications of Artificial Intelligence (EAAI). The event was widely promoted in advance on social media, including Twitter and WeChat, as well as via direct communications between editors and their networks.

Sarah Spurgeon, Chair of the IFAC Publications Board, was joined by Ajith Abraham, Editor-in-Chief of *EAAI*, and Kay Tancock, Senior Publisher at Elsevier. They presented an hourlong session aimed at early career researchers interested in publishing in IFAC's prestigious journals, or perhaps thinking of an editorial position themselves in the future.

Sarah Spurgeon gave a run-down of IFAC's history, structure, aims and activities, and Ajith Abraham looked at *EAAI*'s performance, scope, development – and how to successfully submit an article. 209 people attended the session, and there was lively interaction with a great many questions submitted throughout via the online platform. Feedback for the presenters at the end was extremely positive!

The event was a great way to reach a large number of enthusiastic young scholars from across the world (this time, not focused only on China), and the publisher will be keen to work with IFAC again on similar sessions in the future.

Submitted by Kay Tancock, IFAC Elsevier representative

### IFAC Journal of Systems and Control: Update from the EiC

IFAC Journal of Systems and Control is now four years old and learning to run. A visit to the Journal's home website shows the array of papers from each year of the Journal's portfolio and from an impressively diverse geographical distribution of author and subjects. Clicking on the Elsevier Journal Insights pages for the journal reinforces this message of breadth. The number of papers published grows yearon-year and downloads run to over 20,000 in this early period, an average of about 260 per paper. So far, we have seen the acceptance rate tick up as the quality of submissions has improved and the Journal has established its credibility and audience focus. The subject coverage is wide with the unifying theme of feedback control systems and the emphasis on novel results with generalizable and extensible conclusions.

As the Journal evolves and grows it is approaching the stage of acquiring an Impact

Factor (IF) and other formal citation metrics from Clarivate and others. This represents an important stage in the maturity of the publication, since it will lead to its appearance on recognized promotion and advancement criteria for many institutions worldwide. That portends a large increase in the number of submissions, since the cachet of IF will increase the Journal's attraction as a publication venue. It could be said that we are trading on the IFAC name at present.

While the process of obtaining an Impact Factor is involved and time-consuming, the post-IF will likely require tooling up the editorial structure to manage the paper flow. To date, I as Editor-in-Chief have closely read each paper submitted before developing an impression and deciding to move it one to one of our talented Senior Editors: Carlos Eduardo Pereira, Debasish Chatterjee, Geoff Chase, Sebastian Dormido, Benoît lung, João Gomes da Silva, Hemanshu Pota. Most likely moving forward we will deepen the Editorial Board to include Associate Editors and broaden it with more Senior Editors. The objective, of course, is to identify and assist to appear the most innovative and technically novel papers in the field. The breadth of scope will remain, as will our intention to publish papers from across the reaches of the IFAC Technical Committees.

Stay tuned, things will soon start to heat up.

Submitted by: Bob Bitmead (US), *IFAC Journal of Systems & Control* Editor-in-Chief

## 16<sup>th</sup> IFAC Symposium on Control in Transportation Systems (CTS 2021)

8-10 June 2021 Lille, FR

The IFAC Symposium on Control in Transportation Systems (CTS 2021) was held in Lille, FR from 8-10 June 2021 in a virtual form. This symposium is the 16<sup>th</sup> in the series of triennial symposia organized by the IFAC Technical Committee 7.4 on Transportation Systems.



CTS 2021 based in Lille, FR

These symposia have a long tradition, starting in 1970 in Versailles, FR, and continuing by taking place in several countries all over the world, with the last edition held in Savona, IT, in 2018. This 16<sup>th</sup> symposium was organized by Université Gustave Eiffel, FR.

#### From the IFAC President

Dear IFAC Friends and Colleagues,

The IFAC Council and Related Meetings recently wrapped up, taking place over the course of several days in July 2021. Usually these meetings take place once a year with an in-person format and are a chance for friends and colleagues from around the world to gather together in one physical location. It is hoped to be able to return to meeting in-person in 2022 but due to the ongoing pandemic and related issues (such as restrictions on international travel) online was the only feasible option for 2021.

Due to the online nature of the meetings with participants from all parts of the globe the sessions could only take place over the course of several hours in the afternoon European time, in an effort to hold meetings during "awake hours" of as many participants as possible.

This was the first time IFAC used the new procedure for the selection of its president and World Congress location, as now these decisions have been separated. Six NMOs submitted Expressions of Interest for consideration to host the 2029 IFAC World Congress. These NMOs gave a brief presentation to the IFAC Council on the second day of their 2021 meeting. After closed deliberations and voting the Council selected three of the EoIs to be expanded for a second and final round of presentations at the 2022 IFAC Council meeting. The three NMOs who will be making presentations in 2022 for the 2029 IFAC World Congress location are Italy, the Netherlands, and the United States of America (in alphabetical order).

At some point later in 2021 a letter will be sent to the NMOs (all, not only the three bidding for the Congress location) asking them to submit expressions of interest concerning the IFAC presidency for 2026-2029. It was decided that the 2022 IFAC Council meeting will be held in conjunction with ECC 2022, which will be held from 13-15 July 2022, in London, UK. At the 2022 IFAC Council meeting two separate decisions will be made: the location of the IFAC 2029 World Congress and the president of IFAC for the 2026-2029 triennium. This is all different to past procedure when the IFAC president and council location were chosen with one bid submission process and IFAC Council vote.

I would like to thank all six NMOs for their excellent presentations and Expressions of Interest. I would also like to thank all of the IFAC officials and IFAC secretariat for participating in the meetings and for their hard work in the past months during this time of many challenges.

Best regards,

Hajime Asama, IFAC President 2020-2023



In total, 55 papers authored by 175 authors from 22 countries were presented in twelve regular sessions of the symposium covering numerous aspects related to the broad area of analysis, supervision, management, planning, and control of transportation systems. The presentations of the accepted papers were made using pre-recorded videos prepared by the authors. Q&A sessions were scheduled after each presentation in an interactive form. Despite the fact some authors had to deal with time differences, almost all the corresponding authors were present during their sessions. About 120 people joined the various symposium sessions which were very interactive with intensive interaction between the authors and the audience.

Besides the regular sessions, three plenary sessions were organized:

- Luc Julia CTO and Senior Vice President of Innovation for Samsung Electronics: "There is no such thing as Artificial Intelligence".
- Rob M.P. Goverde, Professor at Technical University of Delft (NL): "An integrated control approach to resilient railway traffic systems"
- Nikolas Geroliminis, Professor at EPFL Lausanne (CH): "Large-scale perimeter control for heterogeneously congested transport networks".

An "IFAC Young Author Award" was organized. The finalists were Raffaele Soloperto (Univ. of Stuttgart, DE), Joost Jeschke (TU Delft, NL), Ouail Himrane (Univ. Gustave Eiffel, FR). The winner was Raffaele Soloperto for his paper entitled "A Control Framework for Autonomous F-Scooters".

The IFAC CTS symposium was sponsored by the IFAC Technical Committee 7.4 on Transportation Systems, and co-sponsored by TC 6.4 Fault Detection, Supervision & Safety, TC 7.1. Automotive Control, TC 7.2. Marine Systems, TC 7.3. Aerospace and TC 7.5. Intelligent Autonomous Vehicles.

The CTS 2021 event website can be accessed at: <a href="https://cts2021.univ-gustave-eiffel.fr">https://cts2021.univ-gustave-eiffel.fr</a>

Submitted by: Mohamed GHAZEL (Univ. Gustave Eiffel, IFSTTAR/COSYS, France), IFAC CTS 2021 NOC Chair

## The IFAC Conference App is now available!

The App is paid for by IFAC and can be used free of charge by IFAC conference organizers and attendees. Many IFAC conferences to be included soon!

How to download:

App Store <a href="http://bit.ly/2ID8v0h">http://bit.ly/2ID8v0h</a> Google Play <a href="http://bit.ly/2IRT8RZ">http://bit.ly/2IRT8RZ</a>

You can also search for 'IFAC' in the Apple App Store or in the Google Play Store.

## 17th IFAC Symposium on Information Control Problems INCOM 2021 7-9 June 2021 Budapest, HU

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2021, a year of the triennially organized IFAC Symposium on Information Control Problems in Manufacturing (INCOM), has severely been affected by the COVID-19 pandemic which imposed massive restriction for the INCOM steering committees and obliged the community to hold the symposium fully on-line. Even organized on-line by the Institute for Computer Science and Control and the Centre of Excellence in Production Informatics and Control in Budapest, Hungary, the 17th edition of INCOM (INCOM 202)1, provided a great forum for exchanging knowledge, reviewing, and discussing theoretical advances, research results and industrial experiences in this exciting and highly relevant field of smart manufacturing and logistics systems.



Authors from academia and industry joined the event and shared their research results and empirical insights focusing among others on: digitalization for modelling and controlling smart manufacturing systems and networks, simulation, control, and monitoring of resilient production systems and networks, operations management in production systems and logistics, lifecycle management, product-service systems and technologies, newest developments in Al and machine learning applications in production and logistics, new advances in robotics and autonomous systems or advanced reliability, maintenance and safety engineering and technologies.

At INCOM 2021 three outstanding keynote talks were delivered:

- Prof. François B. Vernadat (FR), "Integration and Interoperability in Automated and Smart Manufacturing Systems"
- Prof. Jürgen Beyerer, Fraunhofer-IOSB (DE), "How to Optimize Production Processes Systematically based on methods of Artificial Intelligence and Machine Learning?"
- Prof. Soundar Kumara, Prof. Penn State University (US), "Al and ML in Manufacturing – Is there Life after Deep Learning?"

Regarding the statistics of the INCOM 2021 Symposium, all together 301 submissions were reviewed, out of which 208 were accepted and presented at the Symposium (acceptance rate: 69,1%). The papers were presented by authors from 34 countries in front of an audience of 295 people.

The proceedings are in preparation at IFAC Papers Online, which stores all the papers presented during the INCOM 2021 on-line symposium (as well as the other IFAC technical events), showing the current evolution towards Information Control for Smart Manufacturing Systems in the cyber-physical era. The organizing committee, with IFAC CC 5 as the main sponsor of INCOM 2021 and the editorial board unanimously hope that the papers presented in the symposium and collected in the proceedings significantly contribute to research's subject of IFAC Coordinating Committee on Manufacturing and Logistics Systems (IFAC CC5).

Submitted by: Botond Kádár, INCOM 2021 NOC Co-chair, Institute for Computer Science and Control, Hungary

Check out IFAC's YouTube channel for new and historical
IFAC video materials!
https://www.ifac-control.org/

### IFAC World Congress 2023 Update 9-14 July 2023 Yokohama, JP

## IFAC 2023 in Yokohama: Preparation in progress despite the pandemic

The IFAC 2023 National Organizing Committee (NOC) has been working on the preparation of the World Congress to be held in Yokohama, holding monthly meetings. At this stage, clearly, our biggest concern is the situation of COVID-19 in the world and its influence on international conferences, which we continue to carefully watch. Our primary goal and wish are to host the congress fully in-person in Yokohama and to provide an exciting meeting place for everyone in the general area of automatic control. To this end, we are making plans to welcome many of you to travel to Yokohama and have enough rooms and space at the venue for the full congress. Online participation will also be available, but as a secondary option especially for those where travel overseas is not possible. At the same time, in case the COVID-19 situation significantly worsens, we will be prepared to switch to a hybrid conference for more remote participants and even to a fully online conference in due time.

Congress Venue: PACIFICO Yokohama

Yokohama is part of the Greater Tokyo area, but the city has its own history since it was the first port in Japan that opened to the world in the mid-19th century, towards the end of the Edo period. It is a unique city where one can enjoy both modern and old tastes at the same time. The congress venue Pacifico Yokohama is on the shore at the city center. It is the top convention complex in Japan, with large halls for plenaries and exhibitions, and a conference center with 50 meeting rooms of different sizes. The area around the venue, known as



Yokohama Minato-Mirai District (literary, "the harbor for the future"), is a bright and breezy place, with many hotels, shopping malls, museums, and subway and train stations within walking distance. It is adjacent to the so-called Red Brick Warehouse area, which retains the atmosphere from the time the port opened.





Yokohama is convenient to reach from the two international airports in Tokyo. By train, it takes only one hour from Haneda Airport and 90 minutes from Narita Airport. Many of Tokyo's popular spots, such as Shibuya, Tokyo Sky Tree, and Asakusa, can be reached in about an hour. As other excursion options, you can visit Kamakura, which is the ancient capital from the 13th century, famous for the great statue of Buddha or the hot spring resort of Hakone at the foot of Mt.Fuji.

On the technical side, IFAC 2023 will have many highlights especially centered around the congress vision "Control for Solving Societal Problems and Creating Societal Values". Through this congress, we would like to place emphasis on the future directions of control science and technology towards solving worldwide crucial issues related to energy, environment, disasters, pandemic, and SDGs in general. Today, the application domains to which the control community can contribute is expanding and include transportation, power systems, smart cities and medical and social services.

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We encourage electronic distribution of this Newsletter, as well as reprinting in national and local automatic control periodicals.

Acknowledgement to IFAC would be appreciated.

Within the NOC we have launched the "Industry Group" to establish close partnerships between the industry and the academia. This group consists of more than 100 scientists and engineers from companies and universities, divided into 17 sub-committees, roughly corresponding to different application areas and IFAC Technical Committees. The goal is to identify current societal problems that the industry is facing, to find control oriented solutions, and then to provide the opportunities to showcase the state-of-the-art and potential new directions at the congress.

Continuing with the tradition of recent congresses, we will have different paper categories including Regular papers, Invited papers, Open Invited Track papers, as well as Extended Abstracts. Another category is the Demonstrator papers, to promote research or educational oriented devices, innovative prototypes and attractive transfer of technologies towards hightech enterprises. Moreover, two new categories will be introduced: (1) Discussion papers are for discussing specific topics within the scope of automatic control especially for participants from the industry as well as government and education sectors, possibly in separate sessions. (2) Dissemination papers will provide opportunities to authors whose papers recently became accepted by IFAC journals to present their research outcomes to a broader audience at the congress. Submissions of papers and session/workshop proposals will be accepted through the IFAC Submission Management System (PaperCept), starting in the spring until the fall in 2022.

For more details, please visit our congress website: <a href="https://www.ifac2023.org/">https://www.ifac2023.org/</a>

The Japanese team will do our best to organize an exciting IFAC World Congress and we very much look forward to welcoming all of you in Yokohama in July 2023!

Submitted by: Jun-ichi Imura, General Chair and the IFAC 2023 National Organizing Committee (JP)

# 2020-2023 IFAC Fellow and Major Award Calls: COMING SOON!

Plans are underway for the publication of the nomination calls for the 2020-2023 IFAC Fellows and Major Awards. The calls will be published in the next issue of this Newsletter (October 2021), as well as on the IFAC website. Janan Zaytoon is serving as IFAC Awards Committee Chair for 2020-2023. Diversity & Inclusion issues have and are being considered throughout all of the IFAC Awards, including but not limited to the composition of the respective award search and selection committees.

The IFAC Fellow Award is given to persons who have made outstanding and extraordinary contributions in the field of interest of IFAC, in the role as an Engineer/Scientist, Technical Leader, or Educator. The first Fellows were elected at the IFAC World Congress in Prague in July 2005. Please note that the Fellows are

awarded on a triennial basis! he Fellow Selection Committee (FSC) for the 2020 - 2023 triennium is chaired by Christos G. Cassandras. The Fellow Search Committeeis is chaired by Anders Rantzer. The role of this committee is to help finding suitable candidates to nominate as Fellows.

#### The IFAC Major Awards are:

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. Chair: Tamer Basar

The **Nichols Medal**, created in 1996, 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 engineering. 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 at the IFAC World Congress to the recipient together with the medal. Chair: Maria D. Di Benedetto

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 M. 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. Chair: Anu Annaswamy

Industrial Achievement Award: 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, and international recognition. Chair: Iven Mareels

High Impact Paper Award: 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. Chair: Carlos Canudas-de-Wit

Further information is available at: <a href="https://www.ifac-control.org/awards">https://www.ifac-control.org/awards</a>



IFAC Council and Related Meetings 2021 July 2021 Online

The IFAC Council and Related Meetings 2021 were held in mid-July 2021. These meetings are traditionally held once a year and give friends and colleagues old and new in IFAC activities the opportunity to gather together in one location to conduct IFAC business. Due to the pandemic and the various related restrictions it was decided via a Council e-vote in late 2020 that the 2021 meetings would take place online, as they did in 2020.

Despite the unusual and sad circumstances IFAC business as usual was able to proceed with a full schedule of meetings. The various meetings were well-attended by participants in many countries. While there were some challenges such as time zones the format did allow for people to attend without any travel-related bureaucracy or other travel issues which can be a deterrent for some participants when meetings are held in a traditional in-person format. As suggested by the Sustainability Task Force, Council adopted the principle of having hybrid (in-person and online) meetings in the future.

As the meetings had to be held online the participants (IFAC officials and the IFAC affiliates for whom most sessions are open and links provided in the news section of the IFAC website) were scattered across many time zones. For this reason, the meetings were spread over the course of several days so that the various sessions were held during a few hours in the afternoon CEST. Unfortunately this meant that there were participants who had to be awake very early or very late due to the difference in time between their locations and the Europebased time of the meetings. The IFAC community is grateful to and appreciative of the many officials who were willing to participate at times beyond what would be typical working hours, and who had to juggle IFAC meetings with other professional and personal responsibilities.

The meetings were bookended by meetings of the IFAC Executive Officers. This was the first year in which all of the meetings reflected the new structure which was implemented with the constitutional changes voted on by the IFAC General Assembly (the National Member Organizations) in 2020.

Meetings that took place (with their chairs listed) were:

Distinguished Lecturer Program (Ian Petersen), Activity Fund Committee (Margret Bauer), Awards Committee (Janan Zaytoon), Industry Committee (Tariq Samad), Diversity & Inclusion Committee (Mary Doyle-Kent), Technical Board (Carlos Eduardo Pereira), Conference Board (Maria Prandini), Publications Committee (Sarah Spurgeon), PUMB (Tamer Basar), as well as the IFAC Council (led by Hajime Asama, IFAC President 2020-2023.)

The NMOs had been invited to submit Expressions of Interest for the location of the IFAC World Congress 2029. Initial bid presentations were made in open Council by six NMOs: Canada, China, India, Italy, the Netherlands, and the USA. Council members from non-bidding NMOs discussed and deliberated the bids in a separate closed session, and they voted to ask Italy, the Netherlands and the USA to prepare and deliver a second presentation in 2022, when a final decision will be made concerning the 2029 location. IFAC is grateful to all six NMOs who put in hard work preparing the bids and who all gave great presentations.

In addition to the first round of IFAC 2029 location decision-making the Council heard updates concerning the current arrangements for two upcoming IFAC World Congresses: IFAC 2023 in Yokohama, JP and IFAC 2026 in Busan, KR. At this point both congresses are planning for mostly in-person attendance with the hybrid option for those who are not able to travel to the congress location for various reasons, but these options are still being studied and developed.

Another important decision was made during the agenda item for the IFAC Technical Board. After much discussion it was decided that IFAC will retire the use of the term "IFAC Technical Events" and instead call them "IFAC Conferences." Further explanation of the new naming will follow in the coming months



## Conferences

IFAC publications are going well, with increasing impact factors, expanded indexing, positive actions and agreements regarding open access issues, and many other exciting developments that are greatly appreciated by the IFAC Publications Board and community at-large. In the IFAC Publications Management Board (PUMB) both IFAC and Elsevier are very happy with the direction and strength of the IFAC publications portfolio! Several IFAC journals will have new Editors-in-Chief in 2021 and 2022 due to the terms of their current EiCs ending. Outreach webinars have taken place for two IFAC journals, with the possibility of additional webinars (see the EAAI Outreach Workshop report on page 2). A standard procedure is in place in which proposals for additional journals can be submitted (for further details please contact Sarah Spurgeon, VP of Publications). Such proposals are always welcomed and appreciated.

The IFAC Conference Board is in its inaugural triennium and is led by Maria Prandini, IFAC VP of Conferences. Quality control is one of the

major issues being implemented by this board. There are also initiatives in attempting to lower and in general keep the costs of conferences down.

Diversity and inclusion are very important topics in IFAC to make the community generally better and more welcoming and representative, and is being emphasized across all IFAC activities, initiatives, etc. For example, the various search and selection committees for the IFAC Fellows and Major Awards all have several female members. It has been noted that many women in control are very busy, and there were women who were invited to participate but respectfully declined the invitation due to time constraints. Measures are being put in place to increase the participation and visibility of females and minorities in IFAC.

Membership Committee conducted reviews of three diverse NMOs from three continents. Through this process the committee learned a lot of positive developments about very different NMOs and received valuable information about how IFAC can better serve the control communities in the respective countries. Six NMOs will go through the membership review process in 2022, and this is generally expected to be positive for all of the interested parties. Plans are also in place to incorporate new associate organizations into IFAC from countries countries that have no active NMO.

Task forces are in place regarding many aspects of IFAC. One task force is planning videos to promote IFAC and control engineering, both for the general public and for control professionals. Others are working on proposals for a new and improved IFAC database, conference website hosting, education issues, sustainability, student activities, and the IFAC Newsletter. The hard work and deliberations over the past months from all of the chairs and their members is greatly appreciated and their efforts will contribute to IFAC's continued development and success!

IFAC's finances continue to be healthy, thanks to the careful management by VP of Finances John Lygeros. Funding was approved by the Council for many of the developments, projects, etc. that were reported on in the Council meeting.

At this time plans are underway to hold the 2022 IFAC Council and Related Meetings sessions in-person. Traditionally the annual meetings are held in conjunction with an IFAC Conference. The IFAC Council had three invitations for 2022 to select from. They voted to hold their meetings in July 2022 in London, UK, which will be in conjunction with the ECC 2022. Thanks go to all three conferences which were willing to host the IFAC meetings. Further details, exact dates and schedules of the 2022 meetings will be made available as the time gets closer.

To register as an IFAC affiliate or to update your information please use the IFAC affiliate registration form. ifac-control.org/about/ifac-affiliate-regis-

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# **Calendar of IFAC Conferences**

Title	2021	Place	Further Information
6 <sup>th</sup> IFAC Workshop on Mining, Mineral and Metal Processing MMM 2021	September 01 – 03	Nancy France	http://mmm2021.cran.univ-lorraine.fr/ mmm-2021@univ-lorraine.fr
IFAC Workshop on Aerospace Control Education 2021	September 08 – 10	Milan Italy	http://ascl.daer.polimi.it/events/ifac- workshop-on-aerospace-control-education
20 <sup>th</sup> IFAC Conference on Technology, Culture and International Stability TECIS 2021	September 14 – 17	Moscow Russian Federation	http://www.tecis2021.com/
3 <sup>rd</sup> IFAC Conference on Modelling, Identification and Control of Nonlinear Systems MICNON 2021	September 15 - 17	Tokyo Japan	http://micnon2021.org/
11 <sup>th</sup> IFAC Symposium on Biological and Medical Systems BMS 2021	September 19 – 22	Ghent Belgium	https://bms2021.ugent.be/ bms2021@ugent.be
13 <sup>th</sup> IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles CAMS 2021	September 22 – 24	Oldenburg (virtually) Germany	https://cams-2021.com
6th IFAC Conference on Analysis and Control of Chaotic Systems CHAOS 2021	September 27 – 29	Catania Italy	http://chaos2021.unict.it/ chaos2021@unict.it
16 <sup>th</sup> IFAC Workshop on Time Delay Systems TDS 2021	Sept./Oct. 29 – 01	Guangzhou China	https://tds2021.ee.cityu.edu.hk/ tds2021@ee.cityu.edu.hk
7 <sup>th</sup> IFAC Workshop on Lagrangian and Hamiltonian Methods for Nonlinear Control LHMNC 2021	October 11 – 13	Berlin Germany	https://lhmnc21.org contact@lhmnc21.org
AACC Conference on Modeling, Estimation and Control MECC 2021	October 24 – 27	Austin, TX USA	https://mecc2021.a2c2.org/
15 <sup>th</sup> International Workshop on Enterprise Integration, Interoperability and Networking EI2N 2021	October 25 – 27	online Portugal	http://www.in4pl.org/El2N.aspx in4pl.secretariat@insticc.org
NCACI, IFAC et al. Conference on Australian and New Zealand Control Conference ANZCC 2021	November 25 – 26	Gold Coast Australia	https://anzcc.org.au/ANZCC2021
1st ACA Symposium on Data-driven Control andComputer Vision ACA-SDCCV 2021	November 25 – 26	Gold Coast Australia	http://not yet available
Conference on Control Conference Africa (in cooperation with IFAC) CCA 2021	December 07 – 08	Magalies South Africa	https://cca2021.org/
Title	2022	Place	Further Information
Vienna International Conference on Mathematical Modelling MATHMOD 2022	February 16 – 18	Vienna Austria	https://www.mathmod.at/ mathmod@acin.tuwien.ac.at
7 <sup>th</sup> ACDOS/IFAC Conference on Advances in Control and Optimization of Dynamical Systems ACODS 2022	February 22 – 25	Silchar, Assam India	http://acods2022.nits.ac.in/ bkr@ee.nits.ac.in
14 <sup>th</sup> IFAC Workshop on Intelligent Manufacturing Systems IMS 2022	March 28 – 30	Tel-Aviv Israel	https://ws.eventact.com/IMS2022/ yuvalc@afeka.ac.il
ACA, ICROS, SICE, IFAC et al. Conference on Asian Control Conference (in cooperation with IFAC) ASCC 2022	May 04 – 07	Jeju Island Republic of Korea	http://ascc2021.org/



# **Calendar of IFAC Conferences**

Title	2022	Place	Further Information
17 <sup>th</sup> IFAC Conference on Programmable Devices and Embedded Systems PDES 2022	May 17 – 19	Sarajevo Bosnia and Herzegovina	http://pdes-conference.eu/ dejan.jokic@ibu.edu.ba
2 <sup>nd</sup> IFAC Workshop on Integrated Assessment Modelling for Environmental Systems IAMES 2022	June 01 – 03	Tarbes France	http://not yet available
11th IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes SAFEPROCESS 2022	June 07 – 10	Pafos Cyprus	https://safeprocess2021.eu/
Conference on American Control Conference (in cooperation with IFAC) ACC 2022	June ) 08 – 10	Atlanta, GA USA	https://acc2022.a2c2.org/
13 <sup>th</sup> IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems DYCOPS 2022	June 14 – 17	Busan Republic of Korea	http://dycops2022.org/ secretariat@dycops2022.org
6 <sup>th</sup> IFAC Symposium on Telematics Applications TA 2022	June 15 – 17	Nancy France	http://not yet available
11 <sup>th</sup> IFAC Symposium on Control of Power and Energy Systems CPES 2022	June 21 – 23	Moscow Russian Federation	https://cpes2021.com/ cpes2021@ipu.ru
10th IFAC Conference on Manufacturing Modelling, Management and Control MIM 2022	June 22 – 24	Nantes France	http://not yet available
IFAC Workshop on Control for Smart Cities CSC 2022	June 27 – 30	Sozopol Bulgaria	http://not yet available
14 <sup>th</sup> IFAC Workshop on Adaptive and Learning Control Systems ALCOS 2022	June/July 29 – 01	Casablanca Morocco	http://not yet available
9 <sup>th</sup> IFAC Conference on Networked Systems NECSYS 2022	July 05 – 07	Zürich Switzerland	https://necsys22.control.ee.ethz.ch/
6 <sup>th</sup> IFAC Conference on Intelligent Control and Automation Sciences ICONS 2022	July 13 – 15	Cluj-Napoca Romania	http://not yet available
Conference on European Control Conference (in cooperation with IFAC ECC 2022	July ) 13 – 15	London United Kingdom	https://ecc22.euca-ecc.org/ ecc22admin@euca-ecc.org
18 <sup>th</sup> IFAC Workshop on Control Applications of Optimization CAO 2022	July 18 – 22	Gif sur Yvette France	https://cao2022.sciencesconf.org/
13 <sup>th</sup> IFAC Symposium on Advances in Control Education ACE 2022	July 24 – 27	Hamburg Germany	https://ace2022.org/ info@ace2022.org
5 <sup>th</sup> IFAC Workshop on Advanced Maintenance Engineering, Services and Technologies AMEST 2022	July 26 – 29	Bogotá Colombia	http://not yet available

The IFAC Calendar of Conferences is constantly updated as addditional technical events (Workshops, Symposia, and Conferences) are approved. Due to the Covid-19 pandemic some conferences have had date changes, format changes, cancellations, etc. since their initial approval. Please check back often for the current status. The complete version of the IFAC Calendar of Conferences is available online at:



## Calendar of IFAC Conferences

Title	2022	Place	Further Information
19 <sup>th</sup> IFAC Symposium on Control, Optimization and Automation in Mining, Minera and Metal Processing MMM 2022	August I 15 – 18	Montreal Canada	http://ifacmmm2022.org/ ifac-mmm2022@conferium.com
9 <sup>th</sup> CACHE/IFAC Conference on Foundations of Systems Biology in Engineering FOSBE 2022	August 28 – 31	Boston (MA) USA	http://not yet available
10 <sup>th</sup> IFAC Symposium on Robust Control Design ROCOND 2022	August/Sept. 30 – 02	Kyoto Japan	http://rocond21.ee.t.kyoto-u.ac.jp/index.html rocond2021-secretariat@googlegroups.com
12 <sup>th</sup> IFAC Symposium on Nonlinear Control Systems NOLCOS 2022	September 6 – 8	Canberra Australia	http://not yet available
25 <sup>th</sup> International Symposium on Mathematical Theory of Networks and Systems (in cooperation with IFAC)	September 12 - 16	Bayreuth Germany	https://www.mtns2022.uni-bayreuth.de mtns2022@uni-bayreuth.de
2 <sup>nd</sup> IFAC Workshop on Control Methods for Water Resource Systems CMWRS 2022	September 22 – 23	Como Italy	http://not yet available
13th IFAC Symposium on Robot Control SYROCO 2022	October 17 – 20	Matsumoto Japan	https://syroco2021.com/
21st IFAC Conference on Technology, Culture and International Stability TECIS 2022	October 26 – 28	Prishtina Republic of Kosovo	http://not yet available
1st IFAC Workshop on Control of Complex Systems COSY 2022	November 24 – 25	Bologna Italy	http://not yet available

IFAC is on social media!

Direct links to IFAC's presence on

Facebook, LinkedIn, and Twitter can be found on the IFAC website.

In addition check out the IFAC Blog at blog.ifac-control.org/

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Das Sekretariat der IFAC befindet sich seit 1978 aufgrund eines Übereinkommens mit der Österreichischen Bundesregierung mit der Österreichischen Akademie der Wissenschaften in Laxenburg.

Der 'IFAC Newsletter' erscheint sechsmal jährlich in englischer Sprache unter der Redaktion des Generalsekretärs der IFAC, Dr. Dimitri Peaucelle (Frankreich). Die Zeitschrift dient der Information über die Aktivitäten der IFAC. Sie wird kostenlos an Abonnenten in 50+ Länder versandt. Die Kosten werden von der IFAC aus Beiträgen der derzeit 48 Mitgliedsländer getragen.

Präsident der IFAC für 2020-2023 ist Prof. Hajime Asama (Japan), Vizepräsidenten sind Prof. Dr. John Lygeros (Schweiz), Prof. Dr.-Ing. Carlos Eduardo Pereira (Brasilien), Dr. Dimitri Peaucelle (Frankreich), Prof. Maria Prandini (Italien), und Prof. Sarah K. Spurgeon (Vereinigtes Königreich). Alle Funktionen werden ehrenamtlich ausgeübt.

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