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Reports from IFAC Conferences

IFAC operates on a triennial (three year cycle) system, with each triennium concluding in an IFAC World Congress, which is IFAC's flagship conference. The next IFAC World Congress is planned for July 2023 in Yokohama, Japan.

In non-Congress years there are typically many (40+) conferences (IFAC Conferences, IFAC Symposia, and IFAC Workshops), and indeed this is the situation in 2022, with many events taking place in hybrid, in-person, and online formats.

In this issue IFAC Newsletter readers have the opportunity to learn more about the exciting conferences taking place amongst the world-wide IFAC community.

7th ACDOS/IFAC Conference on Advances in Control and Optimization of Dynamical Systems (ACODS 2022) 22-25 February 2022 Assam, IN (online)

National Institute of Technology Silchar, Assam, has recently conducted the International Conference on Advanced Control and Optimization of Dynamical Systems (ACODS 2022) in online mode at NIT Silchar from 22-25 February 2022. The conference attracted 160 research papers on control and optimization areas. Participants came from several countries including Germany, France, Hungary, USA, UK, Canada, Algeria, Malaysia, China, Russia, India, Japan, Romania, etc., to present their papers.

In addition to the technical presentation, a robotics competition for the school children of North-East India was organized where 30 teams from 15 schools participated in the event.

The conference was jointly organized with the Indian Institute of Technology Guwahati and technically supported by seven NITs of North East India. The conference received a grant from North East Council, Govt. of India, to organize the event. The event was organized in online and hybrid modes using a virtual conference management system to give the conference participants better engagement and networking opportunities. The conference organizers displayed the rich cultural diversities and tourism opportunities of all the northeastern states of India during these four days to all the participants present from all parts of India and abroad through this virtual conference platform.



On 23 February 2022, among several other dignitaries, the Director of NIT Silchar, Prof. Sivaji Bandyopadhyaya (IN) and Director of IIT Guwahati Prof. T. G. Sitharam (IN), as well as Prof. Hajime Asama (JP, IFAC President 2020-23), were present at the inauguration function. All the dignitaries stressed the need for interdisciplinary research, translating the research into valuable intellectual property, and creating a global network for academics and researchers. It is worth mentioning that several acclaimed professors and scientists including Prof. Hajime Asama, Prof. Dawn Tilbury from the University of Michigan (US) and Dr. S. Somanath, Chairman of the Indian Space Research Organization (ISRO, IN), delivered plenary talks at the conference.

On the concluding day of the conference a panel on the topic "Implementation issues of the New Education Policy (NEP) 2020 for the Centrally Funded Technical Institutes (CFTIs) of North-East (NE) India" was organized where the Directors of almost all the CFTIs of NE region participated in the discussion and made some observations and suggestions on the various issue.

The Director of NIT Silchar, Prof. Sivaji Bandyopadhyay, asserted in his valedictory speech that the conference was a grand success by observ-

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IFAC Council- and Related Meetings 2022

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



ing the report and facts presented by the organizers of the conference, Prof. B.K. Roy, the General Chair and Dr. Rajeeb Dey, the Program Chair.

Submitted by: Dr. Rajeeb Dey (IN), ACDOS 2022 Program Chair & Prof. B K Roy (IN), ACDOS 2022 General Chair

14th IFAC Workshop on Intelligent Manufacturing Systems (IMS 2022) 29-30 March 2022 Tel-Aviv, IL (online)

The 14th IFAC Workshop on Intelligent Manufacturing Systems (IMS 2022) took place from March 29-30. It included 94 paper presentations in 19 sessions, organized in three parallel tracks. The presented papers involved 304 authors and co-authors from 28 different countries.

The event was held online and participation was excellent. For example, the Web App platform for attendees accumulated more than 23,000 minutes of liveviews. This excludes active participation in the Eureka platform (with minimal 90 minutes to each of the 94 speakers, and the 40 session chairs and co-chairs). IMS 2022 included two plenary speeches. On March 29, Prof. Jay Lee from the University of Cincinnati (US) gave a plenary talk about: *"Industrial AI and Resilient Manufacturing Systems — Technologies, Challenges and Research Issues"*.



On March 30, Prof Andrew Kusiak from the University of Iowa (US) gave a plenary talk about: *"Intelligent Manufacturing: A Future Outlook Perspective"*. IMS 2022 had a rigorous formal award selection method that included both the formal paper reviews and the presentation evaluation by session chairs and co-chairs, and a committee of three distinguished professors. Three awards were given: (1) Best Paper Award, (2) Best Industrial Application Paper, (3) Young Researcher Best Paper Award.

Submitted by: Prof. Yuval Cohen/Afeka Tel-Aviv College of Engineering, IMS 2022 NOC Chair

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-

tration

16th IFAC Symposium on Large Scale Complex Systems (LSS 2022) 23-24 April 2022 Xi'an, CN (online)

The 16th IFAC LSS was held in virtual format from 23-24 April 2022. The symposium had 53 presentations in the program, two keynote speakers, three invitation groups, four regular groups and a poster group.

The 16th IFAC Symposium on Large Scale Complex Systems: Theory and Applications (IFAC LSS 2022) is a core triennial event of IFAC Technical Committee on Large Scale Complex Systems (TC 5.4). The Symposium is to discuss new developments in methodologies and techniques useful in handling complexity in analysis, modelling, control and optimization of large scale complex systems. A number of application areas will be addressed, such as urban traffic systems, autonomous systems, water systems, environmental systems, power supply systems, etc. IFAC LSS 2022, organized by the Northwestern Polytechnical University (NWPU) was originally scheduled to be held in Xi'an, Shaanxi, China, but was moved online due to the impact of COVID-19.



The symposium was mainly sponsored by the IFAC TC 5.4 on Large Scale Complex Systems and the School of Automation at Northwestern Polytechnical University and co-organized by IFAC TC 1.5 on Networked Systems, IFAC TC 5.2 on Manufacturing Modelling for Management and Control, IFAC TC 5.3 on Enterprise Integration and Networking, IFAC TC 6.4 on Fault Detection. Supervision & Safety of Technical Processes-SAFEPROCESS, IFAC TC 7.4 on Transportation Systems and IFAC TC 8.4 on Biosystems and Bioprocesses. At the same time, the symposium organized a number of topics which are of interest to industry and strengthened contacts and discussions with industry.

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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.

From the IFAC President

Dear IFAC Friends and Colleagues,

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One of the many ways you can interact with and keep updated concerning developments with the worldwide IFAC community is through the various IFAC social media channels. Linda Bushnell (US) serves as IFAC's Social Media Editor, with assistance from Elske Haberl & Katharina Willixhofer in the IFAC Secretariat. We are on Twitter, Facebook, YouTube, and LinkedIn. There is no charge to access or participate in IFAC social media.

For example, the recent technical lectures given by Dan Cho (KR, IFAC President-Elect) and Sarah Surgeon (UK, IFAC Vice President, Publications) are both available on the IFAC YouTube channel. Other materials on YouTube include the IFAC World Congress plenaries (2020, 2017, 2014 and 2011), keynotes from many IFAC conferences, Industry Connect webinars, TC webinars, historical videos, and many more. Chantal Lapins (US) is the IFAC YouTube channel editor.

Facebook: This is a great place where you can find out about the latest IFAC conference approvals. Currently the IFAC Facebook page is undergoing some reorganization but it should be ready again as a resource for information and interaction for members of the IFAC community.

LinkedIn: This is a place to network with other professionals in your area/s of technical interest and learn about happenings in the area of control worldwide. IFAC's LinkedIn group is increasing its numbers by the day.

Twitter: Here many members of the IFAC community are sharing their thoughts on control and beyond.

During the pandemic there have been limitations on seeing and interacting with many IFAC friends and colleagues in-person, and this situation still isn't over. Social media gives you the opportunity to interact with friends and colleagues in the IFAC community when in-person interactions and discussions aren't possible.

However there is a bit of light at the end of the pandemic tunnel as IFAC prepares for its' first in-person since 2019 annual Council and- Related Meetings 2022 in London, UK in July, which are being held with the option for virtual participation in conjunction with the ECC 2022 at Imperial College. I look forward to seeing many members of the IFAC community in London, both in-person and onscreen.

In the next issue of this Newsletter we will be able to report on the many developments and decisions coming out of the London-based meetings.

Best regards,

Hajime Asama, IFAC President 2020-2023 IFAC

The topics presented were the following:

-Structural analysis of large scale complex systems

-Complex network systems

-Methodologies and tools for analysis of complexity

-Modelling and control of discrete event and hybrid systems

-Application of estimation and control to aerospace engineering

-Navigation and control of unmanned autonomous vehicles

... and many others!

The biggest highlights of the program were Prof. Guanrong Chen and Prof. Ming Cao who gave relevant keynote speeches. The conference host Prof. Yu Zhao impressed the audience with exciting presentations on the abovementioned topics.

Despite the fact that the entire conference was held online, a very positive atmosphere was created with the help of a professional tool for exactly this purpose, because participants turn on their cameras as much as possible to participate in the meeting. Thus, despite the severe COVID-19 situation, the participants had the feeling of being at a"real"/in-person conference.

Submitted by: Yu Zhao, LSS 2022 NOC Chair

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

The IFAC Story E-book is available! ISBN 978-3-902823-73-1

https://www.ifac-control.org/about/theifac-story

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 are to be included soon!

How to download:

App Store https://apple.co/3mpaER7 Google Play https://bit.ly/3lazEjx You can also search for 'IFAC' in the Apple App Store or in the Google Play Store.

Spammers and Scammers Targeting the IFAC Community: A Word of Warning from the IFAC Secretariat

It has come to our attention in the IFAC Secretariat that scammers are finding more and more "creative" ways to target members of the worldwide IFAC community. Conference speakers, organizers, IFAC officials, IFAC National Member Organizations, etc. have in recent months and years been targeted by scammers who have tried to take advantage of the convivial, collegial climate of the IFAC community where people tend to trust each other and want to reach out to help colleagues, even those that they don't know as well as others.

On one hand it is heartening to know that members of this community care about each other and will go the extra mile to help. However, it is sad and frustrating when we find out that scammers have taken advantage of the situation and the kindheartedness and generosity of members of our "IFAC family".

In IFAC we have taken steps to make things more difficult for scammers, such as removing the email addresses of IFAC officials from our webpage. We have published warnings on the website, in this Newsletter, and through many emails when we have been alerted to scam action. However, we cannot react to each and every such attempt, nor can we anticipate what such scam artists will attempt to do now and in the future in order to warn the IFAC community about every possible scam scenario.



Graphic from istockphoto.com

If you need to contact an IFAC official you can contact the Secretariat to put you in touch with the relevant person. If you receive a request (such as for funds) from an email address you think might possibly belong to an IFAC friend/ colleague please ignore it and contact the person directly at a trusted email address (some scammers have in the past created email addresses to impersonate IFAC officials that closely resemble their real addresses).

If you are part of an IFAC Conference and you are unsure about arrangements, please contact the organizers directly to double-check. We suggest that conference organizers contact the various speakers concerning accommodation and other speaker-related arrangements in advance of the conference being advertised, as sadly we have been informed of scammers targeting conferences and their speakers.

In general, when in any doubt that IFAC and/ or IFAC Conference-related contact, correspondence, etc. is legitimate, please do not be afraid to ask questions and double-check, especially if it involves any kind of financial arrangement, payment, etc.). Of course, the IFAC Secretariat can be contacted at any time if you receive some "IFAC-related" correspondence that might not be legitimate. The only "dumb" question is the one that is not asked!

Written by Elske Haberl on behalf of: Dimitri Peaucelle (IFAC Secretary), Elske Haberl & Katharina Willixhofer (IFAC Secretariat)

inControl Podcast: Podcast Covering Control Theory and Related Topics Now Available

inControl is one of the IFAC funded activities. Learn more about the IFAC Activity Fund at: <u>https://sites.ifac-control.org/ac-</u> tivityfund

Podcast consumption is booming. According to Edison Research, weekly podcast listenership has increased about 230% over the last decade, with more than 100 million people in the US alone listening to at least one podcast each month. Science podcasts cover widely different topics, like physics, chemistry and biology as well as artificial intelligence, robotics and neuroscience, among others.

Yet, podcasts with a control-theoretic focus are still missing from the digital audio landscape. "inControl" aims to narrow this gap by providing a global communication channel for the control community.



inControl is the first podcast entirely dedicated to control theory and neighboring topics, ranging from both classical and modern feedback control to artificial intelligence, decision making, robotics, and much more. The show is broadly designed for control enthusiasts as well as general audiences with an interest in scientific matters, regardless of background or training. Episode formats range from oneto-one interviews with prominent figures in the field to in-depth historical accounts as well as informal discussions with both insiders and outsiders on state-of-the-art control-theoretic research.



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The first three episodes of the *inControl* podcast are already available online. The first episode breaks the ice with a bit of pre-history of control theory. The second episode features an interview with Florian Dörfler from the Automatic Control Laboratory at ETH Zürich, covering topics like his personal research trajectory, the influence of machine learning on control, future challenges in control theory, among others. The third episode features an interview with Ben Recht from the University of California Berkeley, covering topics like Ben's tour of reinforcement learning, as well as his passion and talent for music.

inControl can be found on all major podcast sharing platforms (e.g. Spotify, Apple Podcasts, Google Podcast) and all major social media platforms (e.g. Twitter, Instagram, Facebook). For all relevant links and more information, please check out the website: <u>www.incon-</u> <u>trolpodcast.com</u>

Please feel free to reach out to Alberto Padoan, creator and host of inControl, with ideas, comments, questions, suggestions about potential themes and speakers, and (of course) feedback at: <u>alberto@incontrolpodcast.com</u>.



Alberto Padoan, inControl podcast host

The podcast is supported by the National Centre of Competence in Research on «Dependable, ubiquitous automation» at ETH Zürich (link: <u>https://nccr-automation.ch/nccr-automation</u>) and by the International Federation of Automatic Control (IFAC) via the Activity Fund (link: <u>https://www.ifac-control.org/areas/activity-fund</u>).

More episodes will follow soon... stay tuned!

REMINDER: IFAC Council- and Related Meetings 2022 (London, UK)

The IFAC annual 2022 Council- and Related meetings will take place in conjunction with the ECC 2022 (London, UK): <u>https://ecc22.euca-ecc.org/</u>

The TB will take place on July 11 (morning), the PB meeting on July 11 (afternoon), the CB meeting on July 12 (morning), and the Council meeting on July 13 (whole day).

The updated meeting schedule is posted at: <u>https://www.ifac-control.org/news/ifac-coun-</u> <u>cil-meeting-schedule-2022-london</u>

IFAC Distinguished Lecture Program Update

The IFAC Distinguished Lecturer Program was approved by IFAC Council at its meeting during the 2020 IFAC World Congress. This program provides for the appointment of eight Pawel J Nowacki Distinguished Lecturers for each triennium.

The eight Pawel J Nowacki Distinguished Lecturers for the current triennium are:

- Hideaki Ishii, Tokyo Institute of Technology, ishii ATdis.titech.ac.jp
- Mustafa Khammash, ETH, mustafa. khammash AT bsse.ethz.ch
- Na Li, Harvard University, nali AT seas. harvard.edu
- Kirsten Morris, University of Waterloo, kmorris AT uwaterloo.ca
- Bruno Siciliano, University of Naples Federico II, siciliano AT unina.it
- Lucy Pao, University of Colorado, pao AT colorado.edu
- Eduardo Sontag, Northeastern University, sontag AT gmail.com
- Feiyue Wang, Chinese Academy of Sciences, Beijing, feiyue AT ieee.org, feiyue AT gmail.com

To contact a lecturer directly via email please kindly replace the AT with @ and remove the space before and after!

The lecturers serve a term of one triennium during which time they are expected to give at least one lecture. So far, no Distinguished Lectures have yet been held for this triennium and so all of the lecturers should be available to give a lecture.

The lectures must be given in a developing country and can be held in conjunction with a local conference. IFAC will provide up to 1,250 Euros towards the travel expenses for each lecture.

Organisers of local conferences and potential hosts of distinguished lectures in developing countries are encouraged to contact a lecturer directly about the possibility of giving a lecture. We are hoping that all of the lecturers will be able to present at least one lecture between now and the next IFAC World Congress.

https://www.ifac-control.org/areas/ifac-distinguished-lecturer-program

Submited by: Ian Petersen Chair, IFAC Distinguished Lecturer Committee

IFAC is on social media! Direct links to IFAC's presence on Facebook, LinkedIn, and Twitter can be found on the IFAC website.

Call for Nominations for the Harold Chestnut Control Engineering Textbook Prize

The Harold Chestnut Control Engineering Textbook Prize is presented at each triennial IFAC World Congress for the best control engineering textbook for which the first edition(s) occurred not later than the Congress just prior to the one at which the award is presented. It recognizes the author(s) of the textbook(s) judged to have most contributed to the education of control engineers.

The prize consists of a monetary prize and a certificate. This prize was created in 1986 and renamed the Harold Chestnut Control Engineering Textbook Prize in 2002, in honor of IFAC's first president.

Each nomination must be made by a nominator who is responsible for providing full and accurate information. Any person is eligible to serve as a nominator, with the exception of the chair/s and members of the Harold Chestnut Control Engineering Textbook Prize Selection Committee (Chair: Bozenna Pasik-Duncan, Vice-Chair: Antonio Visioli; Members: Ruth Bars, Bonnie Ferri, Miroslav Krstic, Iven Mareels, Henk Nijmeijer) and the IFAC Awards Chair (Janan Zaytoon). Please note that selfnominations are not allowed.

The Harold Chestnut Control Engineering Textbook Prize Selection Committee of the International Federation of Automatic Control (IFAC) calls for nominations for the Triennial Harold Chestnut Prize.

The Prize is awarded to the author(s) of a control engineering textbook that has most contributed to the education of control engineers. The Prize, consisting of a monetary award and a certificate, will be presented at the 22nd IFAC World Congress that will be held in Yokohama, Japan from 9-14 July 2023.

To be considered, nominations must relate to books that are:

1. Written in English (the official IFAC working language)

2. Published between 1 September 2014 and 31 July 2020.

3. No more than one IFAC Control Engineering Textbook Prize may be given for any particular textbook.

4. Textbooks (co-) authored by the chair/s and members of the Harold Chestnut Control Engineering Textbook Prize Selection Committee and by the IFAC Awards Chair are not eligible.

Nominations should include:

a) A nomination letter that states the full title, name(s) and address of the author(s), name of

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the textbook, date of publication, and name and address of the textbook's publisher;

b) Evidence of the contribution/s of the textbook to the education of control engineers; and

c) Any additional information that may support the judging process, as per the selection criteria listed below. It is important to note that only those book reviews in IFAC journals (Automatica, Control Engineering Practice, Annual Reviews in Control, Engineering Applications of Artificial Intelligence, Journal of Process Control, Mechatronics, Nonlinear Analysis: Hybrid Systems, IFAC Journal of Systems and Control) and journals of IFAC NMOs, as well as other reputable academic journals (e.g. IEEE Transactions) will be considered.

- All nominations will be evaluated using the selection criteria:
 - Originality and innovation
 - General content in terms of the topics covered
 - Clear applications to real problems
 - Style:

- Presentation, readability and clarity in relation to the content

• Meeting educational objectives:

- Clear statement of what students should be able to do

- Worked examples and exercises
- Software support

-Multi-disciplinary examples (cross-boundary applications of control)

- Use by practicing engineers

To be considered, nominations must be received by 1 February 2023. All submissions should be sent via e-mail as a single PDF file containing all required information.

If the prize-winning textbook is written by more than one author, the monetary component of the prize will be equally split among the authors with each author receiving a certificate.

The winner(s) will be notified well in advance to allow for planning their attendance in Yokohama. Winner/s are kindly requested to not inform anyone of the win prior to the Congress, in particularly the textbook's publisher.

Please submit nominations to: Prof. Bozenna Pasik-Duncan (University of Kansas, US), <u>bozenna@ku.edu</u>

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

IFAC Workshop on Aerospace Control Education (WACE 2021) 9-10 September 2021

Milan, IT (online)

The IFAC Workshop on Aerospace Control Education was held online based in Milan, IT from 9-10 September 2021. The event, the first one on this topic organised under the auspices of IFAC, developed around the methods, tools, and experience in the education on control engineering of aerospace engineering students.

The main sponsoring IFAC TC of this workshop was TC 7.3 (Aerospace), while the co-sponsors were TC 9.4 (Control Education) and the Associazione Italiana di Aeronautica e Astronautica (AIDAA). Due to the COVID-19 pandemic, the workshop was held fully online.



Sixteen papers were presented in 4 technical sessions: one session on "Teaching models and practice", one session on "Tools for aerospace control education" and two sessions on experimental and project activities ("Experimental and project activities 1" and "Experimental and project activities 2").

Given the innovative nature of the workshop as well as the necessity to implement it on online format, time slots for demonstrations of hardware and software tools were allocated in the technical program and were used by some of the authors to further illustrate their results and remote discussion among the participants.

Submitted by: Marco Lovera, Politecnico di Milano, WACE 21 NOC Chair

17th IFAC Conference on Programmable Devices & Embedded Systems (PDES 2022) 17-19 May 2022

Sarajevo, Bosnia & Herzegovina

The 17th IFAC PDES gathered 133 participants. The program consisted of four keynote presentations and 65 papers organized in 11 sessions (three parallel tracks).

The IFAC Conference on Programmable Devices and Embedded Systems (PDES 2022) was organized by the Department of Electrical and Electronics Engineering at International Burch University (IBU) in Sarajevo, Bosnia and Herzegovina from 17- 19 May 2022. Participants came from many countries including the Czech Republic, Bosnia and Herzegovina, Slovakia, Germany, and Poland.

PDES conferences had been previously held mostly in the Czech Republic and Poland, organized by Technical University of Brno, Technical University of Ostrava and Institute of Electronics, Silesian University of Technology (SUT). In Ostrava, at the 15th PDES, it was decided to include other countries in order to increase visibility of the conference, so in 2019 it took place for the first time outside of the Czech Republic and Poland. Slovak University of Technology in Bratislava welcomed the participants that year. During the International program committee meeting Sarajevo was proposed as a new location for PDES which was accepted and recognized as an excellent opportunity to include papers from West Balkan countries.



Unfortunately, during the conference organization many problems arose from the situation caused by COVID-19 pandemic. It was difficult to make any decisions at the time, but the choice was made to postpone the conference for the following year. In my opinion, holding the conference in online mode was not an option because one of the primary aims of conferences is meeting new colleagues, establishing new collaborations and projects, in other words - networking. It is important to note that during the open call for papers it was the last wave of COVID and, as a consequence, there was a very low number of submitted papers. only 95. However, the whole situation with the pandemic significantly improved a few months before the conference dates and we had a lot of participants, more than papers, thanks to accompanying persons.

Even though we had only 65 accepted papers, the conference goals were achieved because we had very fruitful meetings and new collaborations established between researchers and universities across Europe. We hope that all participants enjoyed their stay in Sarajevo as much as we enjoyed welcoming them, and that they brought back home good impressions of 17th PDES.

Milos Krstic (DE) served as IPC chair, with Dejan Jokic (BA) as IPC co-chair) and Bojan Jokanovic (BA) as Vice Chair Industry). Dejan Jokic served as NOC Chair, with Srdjan Lale, as NOC Co-Chair and Mehrija Hasicic, Secretariat chair

Submitted by: Dejan Jokic, PDES NOC Chair and Editor



Calendar of IFAC Conferences

Title	2022	Place	Further Information
14 th IFAC Workshop on Adaptive and Learning Control Systems ALCOS 2022	June/July 29 – 01	Casablanca Morocco	http://www.alcos2022.org/ alcos2022@unicaen.fr
9 th IFAC Conference on Networked Systems NECSYS 2022	July 05 – 07	Zürich Switzerland	https://necsys22.control.ee.ethz.ch/
11 th IFAC Symposium on Intelligent Autonomous Vehicles IAV 2022	July 06 – 08	Prague Czech Republic	https://www.iav2022.eu/ iav2022@guarant.cz
15 th APCA International Conference Automatic Control and Soft Computing CONTROLO 2022	July 06 – 08	Caparica Portugal	https://controlo2022.deec.fct.unl.pt/ controlo2022@campus.fct.unl.pt
6 th IFAC Conference on Intelligent Control and Automation Sciences ICONS 2022	July 13 – 15	Cluj-Napoca Romania	https://icons2022.utcluj.ro/ icons2022@conference.utcluj.ro
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
19th INSTICC, IFAC, et al. International Conference on Informatics in Control, Automation and Robotics (in cooperation with IFAC) ICINCO 2022	July 14 – 16	Lisbon Portugal	https://icinco.scitevents.org icinco.secretariat@insticc.org
18 th IFAC Workshop on Control Applications of Optimization CAO 2022	July 18 – 22	Gif sur Yvette France	https://cao2022.sciencesconf.org/
13 th IFAC Symposium on Advances in Control Education ACE 2022	July 24 – 27	Hamburg Germany	https://ace2022.org/ info@ace2022.org
5 th IFAC Workshop on Advanced Maintenance Engineering, Services and Technologies AMEST 2022	July 26 – 29	Bogotá Colombia	https://amest2022.uniandes.edu.co/ amest@uniandes.edu.co
Vienna International Conference on Mathematical Modelling MATHMOD 2022	July 27 – 29	Vienna Austria	https://www.mathmod.at/ mathmod@acin.tuwien.ac.at
19 th IFAC Symposium on Control, Optimization and Automation in Mining, Minera and Metal Processing MMM 2022	August 15 – 18	Montreal Canada	http://ifacmmm2022.org/ ifac-mmm2022@conferium.com
9 th CACHE/IFAC Conference on Foundations of Systems Biology in Engineering FOSBE 2022	August 28 – 31	Boston, MA USA	http://fosbe.org/
10 th IFAC Symposium on Advances in Automotive Control AAC 2022	August 29 – 31	Columbus, OH USA	https://car.osu.edu/AAC2022
10 th 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
9 th IFAC Symposium on Mechatronic Systems MECHATRONICS 2022	September 6 – 9	Los Angeles, CA USA	https://ifacms-movic2022.seas.ucla.edu/ home/
4 th IFAC Workshop on Control of Systems Governed by Partial Differential Equations CPDE 2022	September 7 – 9	Kiel Germany	https://cpde2022.org/ noc@cpde2022.org
16 th IFAC Workshop on Discrete Event Systems WODES 2022	September 7 – 9	Prague Czech Republic	https://wodes2022.math.cas.cz/



Calendar of IFAC Conferences

Title	2022	Place	Further Information
15 th IFAC Symposium on Analysis Design and Evaluation of Human Machine Systems HMS 2022	September 12 – 16	San Jose, CA USA	https://www.ifac-hms2022.org/ ifac.hms.2022@gmail.com
25 th 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
7th IFAC Conference on Sensing, Control and Automation Technologies for Agriculture AGRICONTROL 2022	September 14 – 16	Munich Germany	https://www.events.tum.de/frontend/index. php?folder_id=1147 ertug.olcay@tum.de
14th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles CAMS 2022	September 14 – 16	Kgs. Lyngby Denmark	https://www.ifac-cams2022.dk/
2 nd IFAC Workshop on Control Methods for Water Resource Systems CMWRS 2022	September 22 – 23	Milan Italy	https://cmwrs2022.deib.polimi.it/ cmwrs2022@polimi.it
8 th IFAC Symposium on System Structure and Control (held jointly) SSSC 2022	September 27 – 30	Montreal Canada	https://sssc2022.encs.concordia.ca/
17 th IFAC Workshop on Time Delay Systems (held jointly) TDS 2022	September 27 – 30	Montreal Canada	https://sssc2022.encs.concordia.ca/
5 th IFAC Workshop on Linear Parameter Varying Systems (held jointly) LPVS 2022	September 27 – 30	Montreal Canada	https://sssc2022.encs.concordia.ca/
2 nd AACC Conference on Modeling, Estimation and Control Conference MECC 2022	October 1 – 5	Jersey City, NJ USA	https://mecc2022.a2c2.org/
13 th IFAC Symposium on Robot Control SYROCO 2022	October 17 – 20	Matsumoto Japan	https://syroco2021.com/
16 th International Workshop on Enterprise Integration, Interoperability and Networking EI2N 2022	October 25	Valletta Malta	https://in4pl.scitevents.org/El2N.aspx in4pl.secretariat@insticc.org
21 st IFAC Conference on Technology, Culture and International Stability TECIS 2022	October 26 – 28	Prishtina Republic of Kosovo	http://tecis2022.ubt-uni.net/ otecis2022@ubt-uni.net
16 th European Workshop on European Advanced Control and Diagnosis ACD 2022	November 16 – 18	Nancy France	https://acd2022.cran.univ-lorraine.fr/ acd2022-contact@univ-lorraine.fr
22 nd IFAC Symposium on Automatic Control in Aerospace ACA 2022	November 21 – 25	Mumbai India	https://aca2022.com/ contact.aca2022@aero.iitb.ac.in
1 st IFAC Workshop on Control of Complex Systems COSY 2022	November 24 – 25	Bologna Italy	https://eventi.unibo.it/cosy2022 cosy2022@unibo.it
NCACI, IFAC et al. Conference on Australian and New Zealand Control Conference ANZCC 2022	November 24 – 25	Gold Coast Australia	https://anzcc.org.au/ANZCC2022

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
4 th IFAC Workshop on Cyber-Physical and Human Systems CPHS 2022	December 1 – 2	Houston, TX USA	http://not yet available
Title	2023	Place	Further Information
12 th IFAC Symposium on Nonlinear Control Systems NOLCOS 2022	January 4 – 6	Canberra Australia	https://nolcos2022.com/ contact@nolcos2022.com
Conference on American Control Conference (in cooperation with IFAC ACC 2023	May/June) 31 – 02	San Diego, CA USA	https://acc2023.a2c2.org/
22 nd IFAC World Congress 2023	July 09 – 14	Yokohama Japan	https://www.ifac2023.org/

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