NEWSLETTER

IFAC
INTERNATIONAL FEDERATION
OF AUTOMATIC CONTROL

IFAC 2020 Update
IFAC World Congress Goes Virtual

No.3
June 2020

Curious on how IFAC-V 2020 goes virtual?

Dear colleagues and friends around the globe, We could never imagine when selecting this IFAC 2020 cover image a few years ago that it would perfectly describe the format of the 21st IFAC World Congress: a global and virtual event, warmly welcoming the global automation and control community "in Germany" on the global podium of the World Wide Web. And, also the IFAC 2020 motto "Meeting Societal Challenges" is now more timely than ever.

The COVID-19 pandemic abruptly changed it all. Several years of laborious preparations by a large organizing team to be able to warmly welcome guests from all five continents to Berlin: all to no avail. Thousands of members from our automation and control community excitedly looking forward to visiting the tickling town of Berlin with its unique scientific tradition, rich culture, versatile history, and electrifying lifestyle: only a project for the future.

There, there. We now can look forward to the second-best thing: The 1st IFAC Virtual World Congress IFAC-V 2020!

IFAC-V 2020 is now approaching its home stretch. Only a short time to go and the NOC, IPC, and all volunteers together with professional partners for virtual events are preparing an exciting program around the IFAC-V 2020 backbone: the Global Live Track. In the framework of this track that will run during the five congress days July 13-17, all main events with live character will be featured concurrently in a daily 4-6 hour time slot. A time slot that is chosen such that it is at a (more or less) acceptable time of day in all global time zones. Events of the Global Live Track, like the opening and closing ceremonies of the congress, plenaries, semi-plenaries, industrial keynotes, awards, tutorials, competitions, demonstrators and panel discussions will offer screencasts supplemented by live components.

The exciting top notch topics of the plenary and semi-plenary lectures are complemented by a special session dedicated to the hottest societal challenge in these days: The COVID-19 pandemic. World-class experts from different disciplines will give insights into the SARS-CoV-2 virus, the COVID-19 disease, and its epidemiology and will relate all this to the systems and control field.

The scientific body of IFAC-V 2020 is built from your 2950 final contributions that will be presented in Virtual Sessions. All presentations will be made available for on-demand download as pre-recorded screencasts/videos in addition to the PDFs of the papers. Interactive discussions for each contribution by means of online forums will give you opportunities for lively public and individual discussions.

The scientific program is complemented by a Workshop Day on Saturday, July 11, offering a series of workshops with a broad scope of topics. Booking of workshops can be made independently of participation in the congress. Yes, and what about the social aspects of this congress? We are fully aware that this indispensable element of an IFAC World Congress is the most difficult to build up virtually. Besides the forums for mutual scientific discussions we will offer registered participant to exchange with other participants. And another cultural element will be contributed by our community itself: the IFAC (Virtual) Control Orchestra. And, yes, social events are also meant to bring some fun and easy time together -- and we are preparing for this too …

Please stay tuned, follow the information given on the IFAC-V 2020 website www.ifac2020.org … and please keep the beer coaster ready that you received at IFAC 2017 in Toulouse!

We are all excitedly looking forward to meeting you at the www-podium of the IFAC-V 2020 World Congress.

In the name of the IFAC-V 2020 organizing team,

Frank Allgöwer (IFAC President 2017-2020,) Klaus Janschek (IFAC 2020 General Chair), and Sandra Hirche and Rolf Findeisen (IFAC 2020 IPC Co-Chairs)

Submitted by: Klaus Janschek (DE), IFAC 2020 General Chair

The IFAC Journals

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

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

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

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

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

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

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

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

IFAC-PapersOnLine

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

IFAC Foundation
"Girls in Control" Workshop
13 July 2020

Girls in Control Goes Virtual

'Girls in Control' is a workshop that will take place at the same time as the IFAC World Congress and like the World Congress has now moved to a virtual format. Plans include online hands-on activities, talks and discussions to explain and experience the fundamentals of control. The activities are aimed at 10 to 15-year-old girls. The participants will be emailed an access code to participate in the event.

Girls in Control Online Workshop in German and English

For Girls Aged 10–15
To Register Contact:
Prof. Steffi Knorn, Germany
Email: steffi.knorn@ovgu.de
or
Prof. Margret Bauer, South Africa, Email: margret.bauer@up.ac.za

13 July 2020, 14:00 CET
Now for FREE online!

IFAC 2020 GERMANY

The workshop will be held in two separate language streams to accommodate both girls in Germany and internationally. To register, email Prof. Steffi Knorn, Otto-von-Guericke-Universität Magdeburg, Germany, (Steffi.knorn@ovgu.de) or Prof. Margret Bauer, University of Pretoria, South Africa (Margret.bauer@up.ac.za).

The workshop is sponsored by the IFAC Foundation.

Submitted by: Margret Bauer (ZA)

Editor's Note: The IFAC Foundation is a separate entity from the IFAC Federation. The Foundation was created to foster the scientific and social goals of the International Federation of Automatic Control, IFAC.

The IFAC Foundation solicits and funds innovative control engineering activities which promise to improve the state of knowledge of individuals and groups.

An important role of the IFAC Foundation is to offer support to the control communities in developing countries.

Further information about the IFAC Foundation and its activities can be found on the website https://foundation.ifac-control.org/ or by emailing: foundation@ifac-control.org

IFAC Blog is available at:

http://blog.ifac-control.org/

Check out the latest blog posts on relevent and exciting control topics!

6th Advances in Control and Optimization of Dynamical Systems (ACODS 2020)
16-19 February 2020
Chennai, IN

The 6th edition of Advances in Control and Optimization of Dynamical Systems (ACODS) was conducted at the Indian Institute of Technology Madras in Chennai, India from 16-19 February 2020. ACODS is a biennial conference organized by the Automatic Control & Dynamic Optimization Society (ACDOS) under the auspices of the International Federation of Automatic Control (IFAC). The aim of this event was to create a vibrant platform for the sharing and dissemination of ideas and knowledge among researchers, scientists and industry practitioners of control, modelling and optimization of dynamical systems in different disciplines of engineering and science.

A total of 172 papers in the broad fields of control, optimization, modelling and data-science applications to process systems engineering were received, of which 115 papers were selected after a full peer-review process. The papers included contributions from a diverse set of disciplines including aerospace, biochemical, chemical, electrical, mechanical and systems & control engineering as well as a few cross-disciplinary fields. The selected papers were presented across 21 parallel session spread across three days from February 17-19, 2020. A large number (75+) of student and early career researchers presented their research findings at the conference. Four best student paper and one best session presentation (by students) per session awards were instituted to encourage young researchers.

The conference also featured four pre-conference tutorials on the modern topics of control, optimization, global navigation and systems biology. These tutorials were attended in large numbers and were widely appreciated by the attendees. We had seven outstanding seven plenary talks by world renowned speakers on a diverse set of topics including space exploration, biomimetics, identification, flow clustering and control systems. The speakers were:

Prof. Dong-il "Dan" Cho, IFAC Vice-President (Technical Board Chair 2017-2020) Seoul National University (KR) on *"Biomimetic Robots: Current Status and Future Directions".*

21st IFAC World Congress

https://www.ifac2020.org/

Berlin, Germany on 13th to 17th July 2020

IFAC 2020 GERMANY

bring this coaster and get 1 beer free

From the IFAC President

Dear Friends and Colleagues,

It's okay to be disappointed. The organizing team, systems and control researchers and practitioners from all over the world, IFAC officials,… we all were so looking forward to an in-person World Congress in Berlin. And I must admit – with a virtual congress, we cannot really make up for that cocktail at the bar of the conference hotel with some colleagues or new acquaintances, or for tasting some great German beers (the best really) with some research collaborators in Berlin's beer gardens. I do wish there would be a simple solution for beating the Corona virus as some people with fancy titles and important jobs claim – but unfortunately, there isn't, and especially not by injecting disinfectants or by taking agricultural tractors for a ride ;-)

Once our organizing team had overcome the initial disappointment, we saw the opportunities and the many, many options a virtual congress can offer, and so should you. It would really go beyond the constraints of this column to just list all initiatives and formats connected to the virtual IFAC World Congress but let me at least tease some ideas and special features. For example, the plenaries and semi-plenaries taking place during streaming sessions (Mon-Fri: 1pm-4pm Berlin time) are all accompanied by some live format: either a panel discussion, a live demonstration or a discussant who scrutinizes the contents of the talks. You will also hear two pieces of music performed by the first IFAC control orchestra ever (now even the first-ever virtual IFAC control orchestra!) during the virtual opening and closing ceremonies. Furthermore, there will be a special session on the spread of COVID-19 with a focus on modeling, data science and control, as well as at least some of the Berlin sights on screen. To encourage social interactions, there will be quizzes that are to be solved in teams and platforms where it's possible to get together and chat and interact with your colleagues and friends. Looking at the bright side of things, there are not only these cool new formats possible through a virtual congress but so much more. For example, the registration fees are much lower (e.g. the workshops are only €40 for students). Or in the (certainly rare) event of a boring talk you can leave without being noticed and take your Bermuda shorts to a visit to the refrigerator ;-)

Anyways, it will certainly be an extraordinary and memorable World Congress, and I can promise you new and exciting experiences! Join the fun!

Looking forward to seeing you (virtually) in one of the many different formats and online attractions during the first virtual IFAC World Congress 2020!

With best regards from Stuttgart
Frank Allgöwer

PS: You've still got that Berlin 2020 coaster from the World Congress in Toulouse promising a free beer? We want proof! Since a free beer is unfortunately off the table, by sending in your picture with the coaster you take part in a tombola with the chance to win a way better prize… More details will soon be available on the World Congress webpage. Good luck!

Dr. V. Lalithambika, Indian Space Research Organisation (ISRO, IN) on *"Challenges in Space Exploration"*.

Prof. P.M.J. Van den Hof, IFAC Vice-President (Executive Board Chair 2017-2020) Eindhoven University (NL) on *"Data-driven Model Learning in Linear Dynamic Networks"*.

Prof. Babatunde Ogunnaike, University of Delaware (US) on *"Biological Control Systems: The Future of Engineering in Medicine"*.

Prof. Srinivasan Parthsarathy, Ohio State University (US) on *"Stochastic Flow Clustering: Consolidation, Renewed Bearing and Applications"*.

Prof. Shankar Narasimhan, IIT Madras (IN) on *"Extracting Interpretable Information from Data through Behavioural Model Identification"*

Prof. Sebastian Engell, TU Dortmund (DE) on *"Plenary 6: Robust Performance Optimizing NMPC by Multistage Optimization"*.

The conference also invited four semi-plenary talks on control and systems theory applications by eminent researchers / practitioners from academia (Dr. Maruthi Akella, University of Texas, Austin, US) and industry (Dr. Kallol Roy, BHAVINI, IN; Mr. Naga Chakrapani Pemmaraju, MathWorks India; and Dr. Yogendra Jeppu, Honeywell Inc., IN). The conference culminated with an excellent panel discussion on *Control Engineering at Crossroads of AI: Present and Future.* All the panel members, representing academia, research labs and industry, offered thought-provoking pointers for the future of AI and control coming together as augmented intelligence.

Radhakant Padhi (IN, IFAC Council Member) with IFAC Vice-Presidents Dong-il "Dan" Cho (KR) and Paul Van den Hof (NL)

The technical events of the ACODS program were aptly complemented by a set of cultural programs on Indian classical music and dance and a visit to the South Indian Heritage Museum in Chennai. The city of Chennai is known for its rich cultural and traditional heritage while

also for its educational and industrial outlook in the modern era. Therefore, the technical and cultural programs were in synchrony with the history and modernity of its venue. IIT Madras took great pride and honour in hosting this conference and looks forward to hosting future IFAC events.

We take this opportunity to thank the technical and financial sponsors, as well as the entire team of reviewers and associate editors for their remarkable effort in ensuring the high quality of papers for ACODS 2020. In closing, we sincerely hope that the IFAC Newsletter readership will benefit from the online proceedings in IFAC PapersOnLine (POL) and extend their support to all upcoming editions of ACODS.

Submitted by: Prof. Arun K. Tangirala, IIT Madras (IN), ACODS 2020 General Chair.

13th IFAC Workshop on Adaptive and Learning Control Systems (ALCOS 2019)
4-6 December 2019
Winchester, UK

The 13th IFAC Workshop on Adaptive and Learning Control Systems (ALCOS 2019) was successfully held in The Guildhall, Winchester, UK from 4-6 December 2019. This workshop is a successor to the long standing IFAC ALCOSP (Adaptation and Learning in Control and Signal Processing) workshops, starting in San Francisco, CA, US in 1983 and proceeding in 3-year intervals, with the last one held in Eindhoven, NL in 2016.

Winchester is a city and the county town of Hampshire, England. Winchester developed from the Roman town of Venta Belgarum, which in turn developed from an Iron Age oppidum. Winchester's major landmark is Winchester Cathedral, one of the largest cathedrals in Europe, with the distinction of having the longest nave and overall length of all Gothic cathedrals in Europe. The workshop venue was Winchester Guildhall, a municipal building in the High Street that has a long and interesting history. The workshop was primarily organised by the IFAC Technical Committee on Adaptive and Learning Systems (TC 1.2) with generous support from thirteen other IFAC technical committees.

The technical program consisted of two plenary talks and 10 regular sessions. Around 70 participants across four continents (Americas, Asia, Africa and Europe) attended the workshop and presented their work on a wide range of areas in adaptive and learning control from theory to algorithm development to applications. The plenary talks were delivered by Lennart Ljung (Linkoping University, Sweden, lecture title `Data Science: From System Iden-

tification to (deep) Learnign and Big Data and Professor James Taylor (Lancaster University UK), lecture title `Mobile Robots for Unstructured Nuclear Environments'. The first of these plenary lectures covered a general area of major interest in many communities at present, i.e, machine learning and AI and formed the setting for the third plenary session in the form of a round table discussion moderated by Bing Chu with panelists Lennart Ljung and Mahesan Niranjan from the School of Electronics and Computer Science, University of Southampton who has a control PhD but now focuses on machine learning theory and applications. There was very strong audience participation in the form of challenging questions for the panel. The plenary by James Taylor provided insight into a relatively new and challenging areas for control systems.

Left to right: Lennart Ljung (SE, plenary speaker), Bing Chu (UK, session chair and co-workshop organiser), and Mahesan Niranjan (UK, plenary speaker)

During the workshop there was a meeting of the sponsoring IFAC TC (TC 1.2 Adaptive and Learning Systems), including the announcement that the winner of the 2019 IFAC TC award on Adaptive and Learning Systems is Professor Han-Fu Chen from the Chinese Academy of Sciences, Beijing (CN). One session in the conference consisted of PhD students who had been nominated for the Best Student Paper Award.

We would like to thank all members of the International Programme Committee and the National Organising Committee for their work in the organisation of the workshop. We also would like to thank our employers The University of Southampton and our colleagues in the School of Electronics and Computer Science for their help and advice in matters related to the organisation of this workshop. We hope that ALCOS 2019 will be the first in a series of successful IFAC ALCOS workshops.

Submitted by: Eric Rogers (UK), ALCOS 2019 General Chair

13th IFAC Conference on Technology, Culture and International Stability (TECIS 2019)
26-28 September 2019
Sozopol, BG

The 19th IFAC Conference on Technology, Culture and International Stability (TECIS 2019, formerly "SWIIS") was organized by the Bulgarian IFAC NMO. It took place at the Villa List Hotel in Sozopol, a beautiful ancient town located on the southern Bulgarian Black Sea coast from 26-28 September 2019.

Control and automation technologies can be used to improve the conditions in less developed regions by helping to create jobs and improving inflows of wealth. They can be also used to improve agriculture and to provide medical services in unstable regions. Technology development leads to dramatic changes in international stability. It has never been so important to examine system stability.

IFAC TECIS 2019 provided a forum for professionals, researchers, experts, and practitioners from industry, non-governmental organizations (NGOs) and academia to give an overview of the state of the art, to present new research results and to exchange ideas and experiences in the field of the role of control and automation technologies in promoting international stability. During recent years social international and national systems of control have been shown to be inadequate and prone to be fundamental and most basic instable. Many basic assumptions are no longer certain and are questioned. The imposed goals of IFAC TECIS 2019 were to systematically examine topics associated with these issues. Whilst TECIS 2019 accepted papers within the entire broad scope of the event the conference was particularly concerned with the role of Cost Oriented Automation as a way of improving international stability, through its applications, technologies, processes and as part of larger systems contexts.

The 120 contributions included six plenary talks, 23 invited papers organized in six invited sessions and 91 regular papers in 14 regular sessions. A very broad field of subjects were covered including: Control and Automation Applications Designed to Improve Stability, Social Networks, Managing the Introduction of Technological Change to Improve Stability, Technological Applications in Post-Conflict Regions, Architecture and Software Tools for Enterprise Integration and Networking, Cost Oriented Automation: Modularity, Flexibility, Cost Reduction with E-Maintenance Systems, SME-oriented Automation and Decision Support Systems, Control of Biotechnological Processes, Semi-Automated Assembly and Disassembly, Cost Oriented Automation in Mining, Agriculture and Transportation, Efficient Use of Intelligent Machinery, Advances in Embedded Control Systems, Methods for Cost Effective Operation and Maintenance, Advances in Mechatronic Systems and Robotics, Retrofitting Old Control Systems and Robots, Efficient Control of Hybrid Energy Systems (Wind, Solar, Biogas, Waterpower), Ecological Systems, Engineering Ethics, Tele-Medical Systems and Cross-Cultural Aspects of Engineering.

The plenary papers were presented by Dr. Fahmida N. Chowdhury (National Science Foundation, US) "Toward a Broader Definition of Engineering Careers", Prof. Gancho Vachkov (AZ) "Detection of Changes and Performance Deterioration in Complex Machines and Industrial Systems", Dr. Christoph Jansen (DE) „Leveraging Academic Potentials for Socio-economic Demands: A Contribution to Regional Resilience", Prof. Karamjit S. Gill (UK) *"Designing Symbiotic Technological Futures"*, Prof. Peter Kopacek (AT) "Trends in Production Automation", Prof. Petko Petkov (BG) "Embedded Robust Control of Multivariable Plants". A panel discussion: *Sustainable Engineering for the 21st Century and Beyond* was also organized.

Many young researchers attended the event. From six finalists for the Young Author Award the paper of John Organ (INSYTE, Waterford Institute of Technology, IE) was selected for the award by the selection committee. A special award was also granted to the paper of Ms. Vassiliki Mpelogianni by Prof. Karamjit Gill, Editor-in-Chief of the Journal *AI & Society*, Springer.

TECIS 2019 participants at the closing ceremony

The TECIS 2019 social program included a welcome party and a banquet dinner at the Hotel Villa List restaurant including a program with traditional dancers. At the end of the conference there was a guided walking tour in the old town of Sozopol to give the international participants an impression of its history and the landscape.

We are extremely grateful to the members of the International Program Committee (IPC) for their valuable help with the reviewing of the papers, the members of the National Organizing Committee (NOC) for the successful organization of the event and especially to all attendees for participating in and contributing to this event. We hope all of the participants enjoyed the creative atmosphere that stimulated intensive and successful discussions.

Submitted by Prof. Peter Kopacek, IPC chair, Vienna University of Technology, (AT) and Prof. Andon V. Topalov, NOC Co-chair, TU of Sofia, Branch Plovdiv, (BG)

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

Readers of this Newsletter are kindly requested to keep their contact details updated with the IFAC Secretariat.

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

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

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Calendar of IFAC Events

Title	2020	Place	Further Information
14th International Conference on Automatic Control and Soft Computing CONTROLO 2020	July 01 – 03	Bragança, Portugal	https://controlo2020.ipb.pt/ controlo2020@ipb.pt
Conference on American Control Conference (in cooperation with IFAC) ACC 2020	July 01 – 03	Denver, CO USA	http://acc2020.a2c2.org/ e-mail: not yet available
21st IFAC World Congress WC 2020	July 12 – 17	Berlin Germany	http://www.ifac2020.org/ info@ifac2020.org
22nd European Conference on Power Electronics and Applications EPE'20 ECCE Europe	September 07 – 11	Lyon France	https://epe-ecce-conferences.com/epe2020/ epe2020@supergrid-institute.com
4th IFAC Workshop on Advanced Maintenance Engineering, Services and Technologies AMEST 2020	September 10 – 11	Cambridge United Kingdom	https://www.amest2020.eng.cam.ac.uk/ ifm-events@eng.cam.ac.uk
KIEE, ACA, IFAC et al. International Conference on Electric-Vehicle, Smart-Grid and Information Technology ICESI 2020	September 16 – 18	Jeju Island Republic of Korea	http://icesi2020.org/ yilee@seoultech.ac.kr
12th INSTICC, IFAC et al. Internat. Joint Conference on Computational Intelligence IJCCI 2020	November 02 – 04	Budapest Hungary	http://www.ijcci.org/ ijcci.secretariat@insticc.org
15th IFAC Workshop on Discrete Event Systems WODES 2020	November 11 – 13	Rio de Janeiro Brazil	https://wodes2020.eventos.ufrj.br/ e-mail: not yet available
ANZCC, IFAC, et al. Conference on Australian and New Zealand Control Conference (in cooperation with IFAC) ANZCC 2020	November 26 – 27	Gold Coast Australia	https://anzcc.org.au/ANZCC2020/ l.vlacic@griffith.edu.au
3rd IFAC Workshop on Cyber-Physical and Human Systems CPHS 2020	December 03 – 05	Shanghai China	http://www.cphs2020.org/ e-mail: not yet available
Title	2021	Place	Further Information
ACA, ICROS, SICE, IFAC et al. Conference on Asian Control Conference (in cooperation with IFAC) ASCC 2021	May 05 – 08	Jeju Island Republic of Korea	http://ascc2021.org/ e-mail: not yet available
17th IFAC Conference on Programmable Devices and Embedded Systems PDES 2021	May 18 – 20	Sarajevo Bosnia and Herzegovina	http://pdes-conference.eu/ dejan.jokic@ibu.edu.ba
Conference on American Control Conference (in cooperation with IFAC) ACC 2021	May 26 – 28	New Orleans, LA USA	http://acc2021.a2c2.org/ e-mail: not yet available
17th IFAC Symposium on Information Control Problems in Manufacturing INCOM 2021	June 07 – 09	Budapest Hungary	https://incom2021.org/ info@incom2021.org
11th IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes SAFEPROCESS 2021	June 08 – 11	Pafos Cyprus	https://safeprocess2021.eu/ e-mail: not yet available
11th IFAC Symposium on Control of Power and Energy Systems CPES 2021	June 22 – 24	Moscow Russian Federation	http://not yet available e-mail: not yet available
16th IFAC Symposium on Control in Transportation Systems CTS 2021	June 08 – 10	Lille France	http://not yet available e-mail: not yet available

Calendar of IFAC Events

Event	Date	Location	Contact
11th IFAC Symposium on Advanced Control of Chemical Processes ADCHEM 2021	June 13 – 16	Venice Italy	https://www.adchem2021.org/ noc@adchem2021.org
Conference on European Control Conference (in cooperation with IFAC) ECC 2021	June/July 29 – 02	Rotterdam Netherlands	https://ecc21.euca-ecc.org/ e-mail: not yet available
7th IFAC Conference on Analysis and Design of Hybrid Systems ADHS 2021	July 07 – 09	Brussels Belgium	http://not yet available e-mail: not yet available
7th IFAC Conference on Nonlinear Model Predictive Control NMPC 2021	July 11 – 14	Bratislava Slovakia	https://www.nmpc2021.org/ martin.klauco@stuba.sk
19th IFAC Symposium on System Identification SYSID 2021	July 14 – 16	Padova Italy	http://not yet available e-mail: not yet available
4th IFAC Workshop on Linear Parameter Varying Systems LPVS 2020	July 19 – 20	Milan Italy	http://not yet available e-mail: not yet available
6th IFAC Conference on Engine and Powertrain Control, Simulation and Modeling E-COSM 2021	August 23 – 25	Tokyo Japan	http://not yet available e-mail: not yet available
3rd IFAC Conference on Modelling, Identification and Control of Nonlinear Systems MICNON 2021	August 25 – 27	Tokyo Japan	http://not yet available e-mail: not yet available
24th International Symposium on Mathematical Theory of Networks and Systems (in cooperation with IFAC) MTNS 2020	August 24 – 28	Cambridge United Kingdom	https://mtns2020.eng.cam.ac.uk/ erd30@eng.cam.ac.uk
13th IFAC Symposium on Robot Control SYROCO 2021	August/Sept. 30 – 02	Matsumoto Japan	http://not yet available e-mail: not yet available
6th IFAC Workshop on Mining, Mineral and Metal Processing MMM 2021	September 01 – 03	Nancy France	http://not yet available e-mail: not yet available
20th IFAC Conference on Technology, Culture and International Stability TECIS 2021	September 14 – 17	Moscow Russian Federation	http://not yet available e-mail: not yet available
11th IFAC Symposium on Biological and Medical Systems BMS 2021	September 19 – 22	Ghent Belgium	https://bms2021.ugent.be/ bms2021@ugent.be
10th IFAC Symposium on Robust Control Design ROCOND 2021	September 21 – 24	Kyoto Japan	http://rocond21.ee.t.kyoto-u.ac.jp/index.html e-mail: not yet available
6th IFAC Conference on Analysis and Control of Chaotic Systems CHAOS 2021	September 27 – 29	Catania Italy	http://not yet available e-mail: not yet available

The IFAC Calendar of Events is constantly updated as adddditional technical events (Workshops, Symposia, and Conferences) are approved. The online complete version of the IFAC Calendar of Events is available at:
https://www.ifac-control.org/events/

Bundesministerium
Klimaschutz, Umwelt,
Energie, Mobilität,
Innovation und Technologie