2020-2023 IFAC Fellows and Major Awards: Calls Now Available

Calls are now published on the IFAC website and in this issue of the IFAC Newsletter for the 2020-2023 IFAC Fellows and Major Awards (Nichols, Thoma, and Quaqua Medals, and the High Impact Paper and Industrial Achievement.) Please note that the IFAC Fellows and Major Awards are awarded on a triennial (NOT yearly) basis.

Call for 2020-2023 IFAC Fellow Nominations

IFAC is seeking nominations for 2020-2023 IFAC Fellows. The IFAC Fellow award provides a distinction of excellence in the Federation and is conferred on a small number of outstanding scientists or engineers by the IFAC Council, based on the proposal of the Fellow Selection Committee. With the appointment as an IFAC Fellow, IFAC honors outstanding contributions with a high impact in the fields of interest of IFAC in the role as a Scientist, Engineer, Technical Leader or Educator. These contributions may be technical publications, patents, control solutions, products, software, and leadership in research, development and education.

Any control scientist or engineer (with the exceptions listed below) can be a candidate for the title of an IFAC Fellow. Past involvement in IFAC activities, publications and events is desirable and an asset but not absolutely mandatory. For a list of IFAC Fellows elected so far, please go to the IFAC website at: https://www.ifac-control.org/awards/ifac-fellows.

Current members of the IFAC Council, Fellow Search Committee or the Fellow Selection Committee are not eligible to be considered as Fellow Candidates. https://www.ifac-control.org/structure/council

IFAC Fellow candidates must be proposed by a separate nominator.

Nominators

Any person is eligible to serve as a nominator with the exception of members of the IFAC Council, Fellow Search Committee or Fellow Selection Committee. The nominator is responsible for the information provided about the candidate. The nominator is asked to read the Nominator Information, complete the Nomination Form according to the requirements given below, and inform the persons indicated as referees that they have been named as such.

If you plan to submit an IFAC Fellow Nomination Form, please find instructions below to assist you in this nomination process. Strict adherence to this procedure is essential; otherwise, a candidate may be placed at a serious disadvantage and possibly excluded from consideration this triennium.

Fellow Nominations should be uploaded electronically at: https://ifac.papercept.net/conferences/scripts/submissionwizard.pl?ConfID=467 by

February 1, 2022

References

Each nomination must be supported by at least three, but no more than five referees from internationally reputed experts in the field who are aware of the candidate’s contributions. These referees need not be IFAC Fellows themselves. Note that the choice of referees is important for the success of the candidate’s nomination. Members of the IFAC Council, Fellow Search Committee or the Fellow Selection Committee are not eligible to serve as referees. If you have been asked to act as a referee, please read the Reference Information and complete the Reference Form.

Fellow References should be uploaded electronically at https://ifac.papercept.net/conferences/scripts/submissionwizard.pl?ConfID=467 by

March 1, 2022

The Call for Nominations, the Nominator Information, as well as the Reference Information are available at the IFAC website at: https://www.ifac-control.org/awards/fellow-nominations-2023
Fellow Announcement
The announcement of the newly elected Fellows will be made shortly after the completion of the vote taken by the IFAC Council in July 2022. IFAC will inform all successful candidates and their nominators of the election results by e-mail. Nominators of unsuccessful candidates will be notified by e-mail. The new elected IFAC Fellows will be honored in a ceremony at the 2023 IFAC World Congress (scheduled to take place in Yokohama, Japan from 9-14 July 2023).

Calls for 2020-2023 IFAC Major Award Nominations
Call for Nominations for the IFAC Major Awards: Giorgio Quazza Medal, Nathaniel B. Nichols Medal, Manfred Thoma Medal, Industrial Achievement Award, and High Impact Paper Award

According to the provisions as outlined for the IFAC Major Awards, the IFAC NMOs and the IFAC Technical Committee Chairs as well as other individuals are invited to nominate a candidate (candidates) for one or more of these awards. The nomination should be uploaded electronically at https://ifac.papercept.net/conferences/scripts/submissionwizard.pl?ConfId=467 no later than

February 15, 2022

The nominations should in general contain a curriculum vitae of the candidate, a summary of his/her major contributions, a proposed citation and the names of three referees. Specific details for the awards are listed below. Nominations should be submitted as a single pdf file through PaperCept, by following the submission instructions provided at: https://ifac.papercept.net/conferences/scripts/submissionwizard.pl?ConfId=467

It is the nominator's role to inform the people listed as referees to send in an electronic reference form with an assessment of the candidate(s). The reference form should be uploaded to PaperCept by

March 15, 2022

Reference forms are available at https://www.ifac-control.org/awards/major-awards-reference-forms.

For each of the Major Awards, a selection committee has been appointed. All awards will be presented by the IFAC President at the Opening Ceremony of the 2023 IFAC World Congress in July 2023 in Yokohama, Japan.

Every individual can act as nominator or referee, with the exception of members of the corresponding Major Award Selection Committee, the Major Awards Search Committee, IFAC Executive Officers and members of the IFAC Council. Self-nominations are not allowed.

Please note that it is possible to resubmit a nomination that was made in the past.

A more detailed description of the several Awards, including selection criteria, follows below:

GIORGIO QUAZZA MEDAL
(Created 1979)

This IFAC award recognizes lifetime achievements in science and engineering in any of the technical fields covered by IFAC. The contributions should be manifested in technical publications. A nominee should have served IFAC in some capacity, formally or informally. The selection criteria are:

- Quality of publications
- Impact of publications
- Engineering significance
- Service to IFAC
- International recognition

Nominations should contain a curriculum vitae of the candidate, a summary of his/her major contributions and an account of their impact, a proposed citation and the names of three referees.

NATHANIEL B. NICHOLS MEDAL
(Created 1996)

This IFAC award recognizes industrial leadership, outstanding contributions of an individual to design methods, software tools and instrumentation, or significant projects in major applications and advancement of control engineering. The award is given for contributions in any of the technical fields of IFAC. The contributions should be manifested in technical publications, patents or reports documenting completed projects or developed products. The selection criteria are:

- Quality of publications
- Impact of publications
- Innovation level of patents
- Impact of patents
- Engineering significance of products and projects
- International recognition

Nominations should contain a curriculum vitae of the candidate, a summary of his/her major contributions and an account of their impact, a proposed citation and the names of three referees.

MANFRED THOMA MEDAL
(Created 2015)

This is an IFAC award for early career achievements that 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. For the award to be given at the 2023 World Congress candidates...
Nominations should contain a curriculum vitae of the candidate, a summary of the major achievements in terms of the selection criteria above, a proposed citation and the names of three referees.

INDUSTRIAL ACHIEVEMENT AWARD
(Created 2000)

The IFAC Industrial Achievement Award is given to an individual, or a team of individuals, who has made significant contributions to industrial applications of control in any of the technical fields covered by IFAC. The award can be given for a single achievement (an invention or the leadership of a major project) or a record of achievements over a period of time. There is no requirement that the nominated candidates must have been involved in IFAC. The selection criteria are:

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

Nominations should contain a curriculum vitae of the candidate(s), a summary of the major achievements in terms of the selection criteria above, a proposed citation and the names of three referees.

HIGH IMPACT PAPER AWARD
(Created 2009)

This award is to acknowledge the impact of a paper published in any of the official IFAC journals on the broad areas of automatic control theory and applications. At most two such awards will be made in any triennium.

Eligible papers must have been published in any of the official IFAC Journals (Automatica, Control Engineering Practice, Annual Reviews in Control, Journal of Process Control, Engineering Applications of Artificial Intelligence, Mechatronics, Nonlinear Analysis: Hybrid Systems). For the award(s) to be given at the 2023 Congress, only papers published within the time period from 1 January 1993 through 31 December 2014 are eligible.

The selection criteria are:

• Evidence of high number of citations, as obtainable from either (or both) the engineering databases: Thompson ISI’s Web of Science and Elsevier’s SCOPUS.
• Evidence that the work under consideration has been actually used by others in their research/professional activity.
• Opinions expressed by three references from internationally reputed experts in the field who are personally aware of the contributions of the nominated paper.

Nominations should include:

• A statement specifying the number of citations, as obtainable from either (or both) the engineering databases: Thompson ISI’s Web of Science and Elsevier’s SCOPUS;
• Excerpts of technical papers documenting work and progress made possible due to the prior contributions of the nominated paper. Papers (co)authored by one of the authors of the nominated paper cannot be used for this purpose.
• A description (if appropriate) of industrial achievements made possible due to the prior contributions of the nominated paper.
• The names of three internationally reputed experts that can serve as referees.

IFAC Distinguished Lecturer Program:
Update from the Chair

This article is an update concerning IFAC’s inaugural triennium of the Distinguished Lecturer Committee, with the eight distinguished lecturers appointed for 2020-2022. The worldwide Covid-19 pandemic has affected the progress of this new activity.

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. (Editor’s Note: The Pawel J Nowacki name is in honor of the IFAC president from Poland who served as the federation’s president from 1966-1969.)

These Distinguished Lecturers are appointed by the IFAC Council Executive on recommendation from the IFAC Distinguished Lecturer Committee. The aim of the program is for IFAC to enable researchers working in developing countries to hear lectures from the top researchers in our field. The eight Pawel J Nowacki Distinguished Lecturers for the current triennium are

• Hideaki Ishii, Tokyo Institute of Technology (JP)
• Mustafa Khammash, ETH (CH)
• Na Li, Harvard University (US)
• Kirsten Morris, University of Waterloo (CA)
• Bruno Siciliano, University of Naples Federico II (IT)
• Lucy Pao, University of Colorado (US)
• Eduardo Sontag, Northeastern University (US)
• Feiyue Wang, Chinese Academy of Sciences, Beijing (CN)

The lecturers serve a term of one triennium during which time they are expected to give at least one lecture. The lectures must be given in or for a developing country, often in conjunction with a local conference. IFAC provides a contribution towards the travel expenses for each lecture. Potential hosts of distinguished lectures in developing countries are encouraged to contact the lecturers directly about the possibility of hosting a lecture. Due to COVID-19 travel restrictions, non-person distinguished Lectures have yet been held for this triennium but 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. Due to the current pandemic situation where international travel is limited such lectures can be held online.

Submitted by: Ian Petersen (pictured above)
Chair, IFAC Distinguished Lecturer Committee.

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 http://bit.ly/2ID8v0h
You can also search for “IFAC” in the Apple App Store or in the Google Play Store.

Reports from IFAC Conferences (formerly known as IFAC Technical Events)

At their July 2021 meeting the IFAC Council voted to change the name of IFAC Technical Events to IFAC Conferences.

Although the overall name has changed, the various types (IFAC Workshop, IFAC Symposium, IFAC Conference, and the flagship IFAC World Congress) have not changed. The change also does not affect the names of each conference such as ADCHEM, SYSID etc.

In this and future IFAC Newsletters we will continue to bring you reports about some of IFAC’s many conferences, which are bringing together the worldwide control community even in a time where much of this activity is forced to take place on a screen instead of in-person with colleagues and friends old and new.

https://www.ifac-control.org/conferences
11th IFAC Symposium on Advanced Control of Chemical Processes  
ADCHEM 2021  
13-16 June 2021  
Venice, IT

Held in virtual format, 119 presentations in the program, three plenary speakers, pre-conference workshop, Young Author Award.

The 11th IFAC Symposium on Advanced Control of Chemical Processes (ADCHEM 2021) was originally scheduled to be held in Venice. However, due to COVID-19 pandemic, it was held as a virtual conference. As one of the triennial meetings of the International Federation of Automatic Control, ADCHEM 2021 brought together 159 researchers and practitioners to discuss recent developments in the control of chemical, biochemical, and related process systems. Based on a rigorous review process, the International Program Committee (IPC) selected 119 papers for presentation. Taking advantage of inherent benefits of the virtual platform, all the sessions were oral sessions; the program consisted of 17 regular sessions, 12 keynote lectures (all selected from the contributions), three plenary sessions. In order to allow the interaction among the participants, the plenary and keynote sessions were broadcast live and their recorded videos were made available since the day of the talk. Archived pre-recorded presentations were also provided on-demand for the other technical sessions from the first day of the symposium.

Following the tradition of ADCHEM and considering different time zones of the attendees from around the world, each day began with a plenary talk around 2:00 PM (CET) followed by four keynote talks in series. Three plenary sessions were held at the symposium, presented by Thomas A. Badgwell from Collaborative Systems Integration (USA), Riccardo Scattolini from Politecnico di Milano (Italy), and Chunhui Zhao from Zhejiang University (China). On the first day, Dr. Badgwell talked about the bright future of chemical process control, where he highlighted economic model predictive control (EMPC) and deep reinforcement learning (DRL) as promising control technologies. In addition, he plenary and keynote process automation as a new opportunity for the future of industrial process control. On the second day, Prof. Scattolini talked about a set of recurrent neural networks approaches formulated with experimental modeling, signal processing and adaptive control, ranging from theoretical, methodological and scientific developments to a large variety of application areas.

The International Program Committee, which was co-chaired by Prof. Roy Smith (ETH Zurich, Switzerland) and Prof. Paul Van den Hof (Technical University of Eindhoven, the Netherlands) received 191 papers out of which 144 were selected after a thorough review process handled by the International Program Committee, representing 15 countries.

Due to COVID-19 pandemic, the conference has been organized in a fully virtual format. In order to facilitate the participation of attendees from so different time zones, the scientific program has been stretched to four days, with one plenary session followed by six parallel sessions on each day, for a total of 30 sessions (including six invited and one software invited session), 144 papers presented, 242 delegates from as many as 30 countries attended the conference.

All regular presentation have been pre-recorded, played live as scheduled in the program, followed by questions asked by attendees via a chat-based system and answered live by the presenters. Recording of the sessions have been made available to registered participants on the virtual platform for a duration of one month after the event. All the program ran smoothly with not a single no-show.

Four distinguished plenary speakers have contributed to the success of SYSDI. Thomas Schönh (Uppsala University) discussed his recent work on flexible probabilistic models for system identification. Alf Isaksson (ABB Corporate Research) discussed the role of learning, physical based-modeling and their interplay from an industrial perspective. Tianshi Chen (The Chinese University of Hong Kong) shared his views and experience on incorporating prior knowledge in system identification using regularization. Mihaela van der Saar (University of Cambridge and UCLA) gave an inspirational talk on studying knowledge, how it can be improved and better exploited using machine learning tools.

The scientific program was closed with the Award Ceremony, where both the first IFAC TC 1.1. Award on System Identification and the Young Author Award were presented.

The IFAC TC 1.1 Award on System Identification 2021 has been awarded by the selection committee chaired by Prof. Håkan Hijmaersson to Prof. Torsten Söderström for the book “Error-in-Variables System Identification” with the citation "For a deep and broad analysis of EIV modeling of linear dynamic systems, treating identifiability, model selection and (parameter-) estimation procedures together with their statistical properties”.

The Young Author Award committee chair, Prof. Tomas McKelvey (University of Chalmers), announced the winner, Fabio Bonassi (Politecnico di Milano), for the paper “Stability of Discrete-Time Feed-Forward Neural Networks in NARX Configuration” co-authored with Marcello Farina and Riccardo Scattolini. The other finalists were Antonio Horta Ribeiro (Uppsala University) and Luca Zancato (University of Padova).

The scientific program was complemented with social gatherings which took place virtually every day after the sessions, including a welcome and closing reception. The gathering gave a good opportunity to chat and share ideas, and have been well attended by students and young researchers.

The SYSDI organisers express their utmost gratitude to everyone that contributed to make SYSDI 2021 a successful event: first of all Authors and Speakers for their scientific contribution, all participants for the lively discussions, the International Program Committee and the reviewers for their contribution in shaping the program. The Mathworks for its support as sponsor, the sponsoring TCs TCs 1.1., 1.2., 1.3., and 1.4., Technical co-sponsor IEEE Control Systems Society, the Department of Statistical Sciences (University of Padova) which, in

Readers of this Newsletter are kindly requested to keep their contact details updated with the IFAC Secretariat.
The technical program, and other info can be
arrangements needed for the virtual platform,
press his gratitude to the program co-chairs for
the jury. An award certificate was delivered to
motion in our field, an “IFAC Young Author Award”
and engineers in IFAC, as well as to recognize
hybrid dynamic systems”
ability problems in aperiodic control”
Computing team, CRIStAL, Lille, France:
tures were given by Dr Laurentiu Hetel, CNRS
papers were done on real time. The plenary lec
18 countries. The presentations of the accepted
lar sessions and one open invited track for a to
consisted of three plenary lectures, seven regu
(3.2) and Telematics: Control via Communica
tical companies across the world. More precisely,
academics (97 engineering and 51 medical sci
butions and scientific discussions from 148
This landmark event brought together contri
bents and scientific discussions from 148
societal, economic, or simply instrumentation,
to be essential in service of humanity. Whether
technology and its best application, has proved
More than ever, control, as the invisible thread of
lives and tamed our ambitions – even if only for
official IFAC approval, yet human nature (as a
said and learned from the years following the
ent plan altogether. There is a great deal to be
one of the greatest events of our main sponsor
three plenary speakers, one Open Invited Track, Young Author Award.
About three years ago when the decision had
been made to organize the 11th IFAC Symposium
on Biological and Medical Systems in Ghent, Belgium, our ambition was to make it
one of the greatest events of our main sponsoring
TC 8.2. It turned out the world had a differ-
ent plan altogether. There is a great deal to be
said and learned from the years following the
official IFAC approval, yet human nature (as a
biological system with perfect control) has the
ability to embrace the challenging, sensational,
and inspiring times that have taken over our
lives and tamed our ambitions – even if only for
a while.
More than ever, control, as the invisible thread of
technology and its best application, has proved
to be essential in service of humanity. Whether
societal, economic, or simply instrumentation,
control was always there. IFAC – The Interna-
tional Federation of Automatic Control – once
again, feels like the beating heart of millions of
people across the world. Our researchers respond to
the pandemic has again demonstrated the es-
sential role played by inter-disciplinarity should
never be ignored or underestimated in its po-
tential to overcome the biggest challenges. Fol-
lowing the previous editions in Berlin (2015) and
Sao Paulo (2018), the 11th IFAC Symposium on
Biological and Medical Systems stands under
the sign of inter-disciplinarity.
This landmark event brought together contri-
butions and scientific discussions from 148
academics (97 engineering and 51 medical sci-
cences), 20 research institutions and nine medi-
cal companies across the world. More precisely,
# Calendar of IFAC Conferences

<table>
<thead>
<tr>
<th>Title</th>
<th>2021</th>
<th>Place</th>
<th>Further Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th IFAC Workshop on Lagrangian and Hamiltonian Methods for Nonlinear Control LHMNC 2021</td>
<td>October 11 – 13</td>
<td>Berlin, Germany</td>
<td><a href="https://lhmnc21.org/contact@lhmnc21.org">https://lhmnc21.org/contact@lhmnc21.org</a></td>
</tr>
<tr>
<td>AACC Conference on Modeling, Estimation and Control MECC 2021</td>
<td>October 24 – 27</td>
<td>Austin, TX, USA</td>
<td><a href="https://mecc2021.a2c2.org/">https://mecc2021.a2c2.org/</a></td>
</tr>
<tr>
<td>15th International Workshop on Enterprise Integration, Interoperability and Networking EI2N 2021</td>
<td>October 25 – 27</td>
<td>online, Portugal</td>
<td><a href="http://www.in4pl.org/EI2N.aspx">http://www.in4pl.org/EI2N.aspx</a> <a href="mailto:in4pl.secretariat@insticc.org">in4pl.secretariat@insticc.org</a></td>
</tr>
<tr>
<td>Conference on Control Conference Africa (in cooperation with IFAC) CCA 2021</td>
<td>December 07 – 08</td>
<td>Magalies, South Africa</td>
<td><a href="https://cca2021.org/">https://cca2021.org/</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title</th>
<th>2022</th>
<th>Place</th>
<th>Further Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vienna International Conference on Mathematical Modelling MATHMOD 2022</td>
<td>February 16 – 18</td>
<td>Vienna, Austria</td>
<td><a href="https://www.mathmod.at/mathmod@acin.tuwien.ac.at">https://www.mathmod.at/mathmod@acin.tuwien.ac.at</a></td>
</tr>
<tr>
<td>7th ACDOS/IFAC Conference on Advances in Control and Optimization of Dynamical Systems ACODS 2022</td>
<td>February 22 – 25</td>
<td>Silchar, Assam, India</td>
<td><a href="http://acods2022.nits.ac.in/bkr@ee.nits.ac.in">http://acods2022.nits.ac.in/bkr@ee.nits.ac.in</a></td>
</tr>
<tr>
<td>14th IFAC Workshop on Intelligent Manufacturing Systems IMS 2022</td>
<td>March 28 – 30</td>
<td>Tel-Aviv, Israel</td>
<td><a href="https://ws.eventact.com/IMS2022/yyvalc@afeka.ac.il">https://ws.eventact.com/IMS2022/yyvalc@afeka.ac.il</a></td>
</tr>
<tr>
<td>16th IFAC Symposium on Large Scale Complex Systems: Theory and Applications LSS 2022</td>
<td>April 22 – 24</td>
<td>Xi’an, China</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>ACA, ICROS, SICE, IFAC et al. Conference on Asian Control Conference (in cooperation with IFAC) ASCC 2022</td>
<td>May 04 – 07</td>
<td>Jeju Island, Republic of Korea</td>
<td><a href="http://ascc2021.org/">http://ascc2021.org/</a></td>
</tr>
<tr>
<td>17th IFAC Conference on Programmable Devices and Embedded Systems PDES 2022</td>
<td>May 17 – 19</td>
<td>Sarajevo, Bosnia and Herzegovina</td>
<td><a href="http://pdes-conference.eu/dejan.jokic@ibu.edu.ba">http://pdes-conference.eu/dejan.jokic@ibu.edu.ba</a></td>
</tr>
<tr>
<td>2nd IFAC Workshop on Integrated Assessment Modelling for Environmental Systems IAMES 2022</td>
<td>June 01 – 03</td>
<td>Tarbes, France</td>
<td><a href="https://iames2022.sciencesconf.org/francois.peres@enit.fr">https://iames2022.sciencesconf.org/francois.peres@enit.fr</a></td>
</tr>
<tr>
<td>Conference on American Control Conference (in cooperation with IFAC) ACC 2022</td>
<td>June 08 – 10</td>
<td>Atlanta, GA, USA</td>
<td><a href="https://acc2022.a2c2.org/">https://acc2022.a2c2.org/</a></td>
</tr>
<tr>
<td>13th IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems DYCOPS 2022</td>
<td>June 14 – 17</td>
<td>Busan, Republic of Korea</td>
<td><a href="http://dyco2020.org/secretariat@dyco2020.org">http://dyco2020.org/secretariat@dyco2020.org</a></td>
</tr>
<tr>
<td>6th IFAC Symposium on Telematics Applications TA 2022</td>
<td>June 15 – 17</td>
<td>Nancy, France</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>11th IFAC Symposium on Control of Power and Energy Systems CPES 2022</td>
<td>June 21 – 23</td>
<td>Moscow, Russia</td>
<td><a href="https://cpes2021.com/cpes2021@ipu.ru">https://cpes2021.com/cpes2021@ipu.ru</a></td>
</tr>
<tr>
<td>10th IFAC Conference on Manufacturing Modelling, Management and Control MIM 2022</td>
<td>June 22 – 24</td>
<td>Nantes, France</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
</tbody>
</table>
## Calendar of IFAC Conferences

<table>
<thead>
<tr>
<th>Title</th>
<th>2022</th>
<th>Place</th>
<th>Further Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFAC Workshop on Control for Smart Cities</td>
<td>June</td>
<td>Sozopol, Bulgaria</td>
<td><a href="https://csc2022.sai-bg.com/">https://csc2022.sai-bg.com/</a></td>
</tr>
<tr>
<td>CSC 2022</td>
<td>27 – 30</td>
<td></td>
<td><a href="mailto:csc2022bulgaria@gmail.com">csc2022bulgaria@gmail.com</a></td>
</tr>
<tr>
<td>14th IFAC Workshop on Adaptive and Learning</td>
<td>June/July</td>
<td>Casablanca, Morocco</td>
<td><a href="http://www.alcos2022.org/">http://www.alcos2022.org/</a></td>
</tr>
<tr>
<td>Control Systems (ALCOS 2022)</td>
<td>29 – 01</td>
<td></td>
<td><a href="mailto:alcos2022@unicaen.fr">alcos2022@unicaen.fr</a></td>
</tr>
<tr>
<td>9th IFAC Conference on Networked Systems</td>
<td>July</td>
<td>Zürich, Switzerland</td>
<td><a href="https://necsys22.control.ee.ethz.ch/">https://necsys22.control.ee.ethz.ch/</a></td>
</tr>
<tr>
<td>NECSYS 2022</td>
<td>05 – 07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th IFAC Symposium on Intelligent Autonomous</td>
<td>July</td>
<td>Prague, Czech Republic</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>Vehicles (IAV 2022)</td>
<td>06 – 08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6th IFAC Conference on Intelligent Control and</td>
<td>July</td>
<td>Cluj-Napoca, Romania</td>
<td><a href="https://icons2022.utcluj.ro/">https://icons2022.utcluj.ro/</a></td>
</tr>
<tr>
<td>Automation Sciences (ICONS 2022)</td>
<td>13 – 15</td>
<td></td>
<td><a href="mailto:icons2022@conference.utcluj.ro">icons2022@conference.utcluj.ro</a></td>
</tr>
<tr>
<td>Conference on European Control Conference (in</td>
<td>July</td>
<td>London, United Kingdom</td>
<td><a href="https://ecc22.euca-ecc.org/">https://ecc22.euca-ecc.org/</a></td>
</tr>
<tr>
<td>cooperation with IFAC (ECC 2022)</td>
<td>13 – 15</td>
<td></td>
<td><a href="mailto:ecc22admin@euca-ecc.org">ecc22admin@euca-ecc.org</a></td>
</tr>
<tr>
<td>18th IFAC Workshop on Control Applications of</td>
<td>July</td>
<td>Gif sur Yvette, France</td>
<td><a href="https://cao2022.sciencesconf.org/">https://cao2022.sciencesconf.org/</a></td>
</tr>
<tr>
<td>Optimization (CAO 2022)</td>
<td>18 – 22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13th IFAC Symposium on Advances in Control</td>
<td>July</td>
<td>Hamburg, Germany</td>
<td><a href="https://ace2022.org/">https://ace2022.org/</a></td>
</tr>
<tr>
<td>Education (ACE 2022)</td>
<td>24 – 27</td>
<td></td>
<td><a href="mailto:info@ace2022.org">info@ace2022.org</a></td>
</tr>
<tr>
<td>5th IFAC Workshop on Advanced Maintenance</td>
<td>July</td>
<td>Bogotá, Colombia</td>
<td><a href="https://amest2022.uniandes.edu.co/">https://amest2022.uniandes.edu.co/</a></td>
</tr>
<tr>
<td>Engineering, Services and Technologies (AMEST</td>
<td>26 – 29</td>
<td></td>
<td><a href="mailto:amest@uniandes.edu.co">amest@uniandes.edu.co</a></td>
</tr>
<tr>
<td>2022)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19th IFAC Symposium on Control, Optimization</td>
<td>August</td>
<td>Montreal, Canada</td>
<td><a href="http://ifacmmm2022.org/">http://ifacmmm2022.org/</a></td>
</tr>
<tr>
<td>and Automation in Mining, Mineral and Metal</td>
<td>15 – 18</td>
<td></td>
<td><a href="mailto:ifac-mmm2022@conferium.com">ifac-mmm2022@conferium.com</a></td>
</tr>
<tr>
<td>Processing (MMM 2022)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9th CACHE/IFAC Conference on Foundations of</td>
<td>August</td>
<td>Boston (MA), USA</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>Systems Biology in Engineering (FOSBE 2022)</td>
<td>28 – 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10th IFAC Symposium on Advances in Automotive</td>
<td>August</td>
<td>Columbus (OH), USA</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>Control (AAC 2022)</td>
<td>29 – 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROCOND 2022</td>
<td>30 – 02</td>
<td></td>
<td><a href="mailto:rocond2021-secretariat@googlegroups.com">rocond2021-secretariat@googlegroups.com</a></td>
</tr>
<tr>
<td>4th IFAC Workshop on Control of Systems</td>
<td>September</td>
<td>Kiel, Germany</td>
<td><a href="https://cpde2022.org/">https://cpde2022.org/</a></td>
</tr>
<tr>
<td>Governed by Partial Differential Equations</td>
<td>5 – 7</td>
<td></td>
<td><a href="mailto:noc@cpde2022.org">noc@cpde2022.org</a></td>
</tr>
<tr>
<td>CPDE 2022</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th IFAC Symposium on Nonlinear Control</td>
<td>September</td>
<td>Canberra, Australia</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>Systems (NOLCOS 2022)</td>
<td>6 – 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16th IFAC Workshop on Discrete Event Systems</td>
<td>September</td>
<td>Prague, Czech Republic</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>WODES 2022</td>
<td>7 – 9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The IFAC Calendar of Conferences is constantly updated as additional 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:

https://www.ifac-control.org/conferences
## Calendar of IFAC Conferences

<table>
<thead>
<tr>
<th>Title</th>
<th>2022</th>
<th>Place</th>
<th>Further Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>15th IFAC Symposium on Analysis Design and Evaluation of Human Machine Systems HMS 2022</td>
<td>September 12 – 16</td>
<td>Santa Clara County (CA), USA</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>25th International Symposium on Mathematical Theory of Networks and Systems (in cooperation with IFAC)</td>
<td>September 12 – 16</td>
<td>Bayreuth, Germany</td>
<td><a href="https://www.mtns2022.uni-bayreuth.de">https://www.mtns2022.uni-bayreuth.de</a> <a href="mailto:mtns2022@uni-bayreuth.de">mtns2022@uni-bayreuth.de</a></td>
</tr>
<tr>
<td>7th IFAC Conference on Sensing, Control and Automation Technologies for Agriculture AGRICONTROL 2022</td>
<td>September 14 – 16</td>
<td>Munich, Germany</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>2nd IFAC Workshop on Control Methods for Water Resource Systems CMWRS 2022</td>
<td>October 06 – 07</td>
<td>Como, Italy</td>
<td><a href="http://not">http://not</a> yet available</td>
</tr>
<tr>
<td>13th IFAC Symposium on Robot Control SYROCO 2022</td>
<td>October 17 – 20</td>
<td>Matsumoto, Japan</td>
<td><a href="https://syroco2021.com/">https://syroco2021.com/</a></td>
</tr>
<tr>
<td>1st IFAC Workshop on Control of Complex Systems COSY 2022</td>
<td>November 24 – 25</td>
<td>Bologna, Italy</td>
<td><a href="https://eventi.unibo.it/cosy2022">https://eventi.unibo.it/cosy2022</a> <a href="mailto:cosy2022@unibo.it">cosy2022@unibo.it</a></td>
</tr>
</tbody>
</table>

### Invitation: IFAC Technical Lecture 30 November 2021 ONLINE

International Federation of Automatic Control (IFAC) invites you on Tuesday, 30 November 2021 at 11:00 am (CET) to the lecture

**“High-performance nonlinear control method for servo systems in automation and robotics: theory to practice”**

Speaker: Prof. Dongil “Dan” Cho, Ph.D. IFAC President-Elect

The lecture will take place via Zoom video conference. The link will be distributed after registration.

Please RSVP to: IFAC SECRETARIAT https://www.ifac-control.org/survey/index.php/992246?lang=en

The registration deadline is 15 November 2021.

### ABSTRACT:

High-performance servo controllers are very important in modern robotics and automation systems. Most common control methods are based on the classical control techniques, but they demand much tuning from experienced engineers. Furthermore, controllers that are specifically tuned for given tasks do not perform well under varying operating conditions. Over the years, we have developed a robust recursive discrete-time sliding mode control method integrated with a novel decoupled disturbance observer and a novel saturation compensator. It is shown that the desirable properties of invariance, finite convergence, and robustness to external disturbances and parametric uncertainties of the continuous-time sliding mode control method can be preserved in the discrete time. Our developed control method has been applied to a plethora of robotics and automation systems to provide greatly improved performance for wide ranges of varying operating conditions without the typical arduous tuning process. This talk will show the development of the control method, as well as the processes that were involved in successful industrial implementations.

### PROGRAM

- **11:00** Introduction
  - Dr. Dimitri Peaucelle (FR) IFAC Secretary, VP Operations
- **11:05** High-performance nonlinear control method for servo systems in automation and robotics: theory to practice
  - Speaker: Prof. Dongil "Dan" Cho (KR), Ph.D. IFAC President-Elect
  - Seoul National University
- **11:45** Discussion/Q&A
  - Moderation: Dr. Dimitri Peaucelle

### IFAC Email Aliases are available!

Sign up with the address with which you are registered with IFAC at:

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

If you need any assistance to complete the process please contact the IFAC Secretariat via email at secretariat@ifac-control.org.