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## New IFAC Journal Editors: Changes in 2024

IFAC and Elsevier are delighted to begin the new year by welcoming two new Editors-in-Chief to the journals *Annual Reviews in Control* and *Control Engineering Practice*.

We are pleased to announce that in January 2024 Professor Hervé Panetto (FR) took over as Editor-in-Chief of *Annual Reviews in Control*, while at *Control Engineering Practice*, previous Deputy Editor-in-Chief Professor Knut Graichen (DE) became the new Editor-in-Chief. Both editors have extensive experience and knowledge of the journals, and we very much look forward to working with them!

Meanwhile, we wish to sincerely thank the Editors-in-Chief stepping down at the end of 2023: Françoise Lamnabhi-Lagarigue (ARC) and Biao Huang (CEP). They have given outstanding service to their respective journals as Editors-in-Chief (Françoise since 2015 and Biao since 2018), both of which have grown and developed at an incredibly fast rate under their editorship, in terms not only of size but also in quality. They are thanked for all their tireless hard work and initiatives, their care for and understanding of their communities, including early career scholars, as well as their support to the publisher; we hope to continue engaging with them through the journals for many years to come.

All the best of luck to Hervé and Knut for 2024 and beyond as they begin their new roles!

Submitted by: Kay Tancock, Senior Publisher, Elsevier

### Introducing the new EiCs



**Hervé Panetto**

Hervé Panetto is a Professor of Enterprise Information Systems at University of Lorraine. He teaches Information Systems modelling and development at TELECOM Nancy and conducts research at CRAN (Research Centre for Auto-

matic Control), Joint Research Unit with CNRS where he is managing a research project on the use of neuro-symbolic AI for formalising models related to the interoperability of cyber-physical-social systems and human-centric systems. He is a member of the Academia Europaea and a Fellow of the AAIA (Asia-Pacific Artificial Intelligence Association).

He received his PhD in production engineering in 1991. He has strong experience in information systems modelling, semantics modelling and discovery, and database development. His research field is based on information systems modelling for enterprise applications and processes interoperability. Panetto is working on the cyber-physical systems smart interoperability with neuro-symbolic techniques and cognitive digital twins. He is expert at AFNOR (French National standardisation body), CEN TC310 and ISO TC184/SC4 and SC5.

He participated in many European projects including IMS FP5-IST Smart-fm project (awarded by IMS) and the FP6 INTEROP NoE (Interoperability Research for Networked Enterprises Applications and Software). He is serving as expert-evaluator for the European Commission, FNR, AERES and ANR in the domain of ICT. He was visiting Professor in 2013-2015 in the frame of a Science Without Borders PVE project with PUC Parana, Brazil and visiting Professor in 2016 at the UTFPR, Curitiba, Brazil.

Hervé is editor or guest editor of books and special issues of international journals. He is author or co-author of more than 200 papers in the field of Automation Engineering, Enterprise Modelling and Enterprise systems integration and interoperability. From 2020 to 2023, he was IFAC Chapter Chair of SAGIP, the IFAC French National Member Organization. After being Chair of the IFAC Technical Committee 5.3 "Enterprise Integration and Networking" from 2008 to 2014 and Chair of the IFAC Coordinating Committee 5 on "Manufacturing and Logistics Systems" from 2014 to 2020, he is now Vice-Chair of the IFAC Technical Committee 9.3 "Control for Smart Cities". He received the IFAC France Award 2013, the INCOSE 2015 Outstanding Service Award and the IFAC 2017 Outstanding Service Award. He is Editor-In-Chief of the IFAC Annual Reviews in Control (ARC, Elsevier) and member of the board of some journal including the IFAC En-

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### The IFAC Journals

#### Automatica

[journals.elsevier.com/automatica](http://journals.elsevier.com/automatica)

#### Control Engineering Practice

[journals.elsevier.com/control-engineering-practice](http://journals.elsevier.com/control-engineering-practice)

#### Engineering Applications of Artificial Intelligence

[journals.elsevier.com/engineering-applications-of-artificial-intelligence](http://journals.elsevier.com/engineering-applications-of-artificial-intelligence)

#### Journal of Process Control

[journals.elsevier.com/journal-of-process-control](http://journals.elsevier.com/journal-of-process-control)

#### Annual Reviews in Control

[journals.elsevier.com/annual-reviews-in-control](http://journals.elsevier.com/annual-reviews-in-control)

#### Journal on Mechatronics

[journals.elsevier.com/mechatronics](http://journals.elsevier.com/mechatronics)

#### Nonlinear Analysis: Hybrid Systems

[journals.elsevier.com/nonlinear-analysis-hybrid-systems](http://journals.elsevier.com/nonlinear-analysis-hybrid-systems)

#### IFAC Journal of Systems & Control

[journals.elsevier.com/ifac-journal-of-systems-and-control](http://journals.elsevier.com/ifac-journal-of-systems-and-control)

#### IFAC-PapersOnLine

[journals.elsevier.com/ifac-papersonline](http://journals.elsevier.com/ifac-papersonline)

gineering Applications of Artificial Intelligence (EAAI, Elsevier). He is a supporter of ELLIS, and member of DAIRO, TAILOR and CLAIRE Networks.



**Knut Graichen**

Knut Graichen received the Ph.D. (Dr.-Ing.) degree from the University of Stuttgart (Germany) in 2006. Afterwards, he held postdoc positions at MINES ParisTech (France) and at TU Vienna (Austria) before he was appointed a professorship at the University of Ulm (Germany) in 2010. Since 2019, he is full professor and head of the Chair of Automatic Control at the Friedrich-Alexander University Erlangen-Nürnberg (Germany).

His research interests include nonlinear and model predictive control of dynamical and networked systems in combination with machine learning with applications in the automotive domain, mechatronics, robotics and process control.

Previously Knut served as Deputy Editor-in-Chief of *Control Engineering Practice* since 2019.

### IFAC Cartoon Archive is available!

[ifac-control.org/publications/cartoons](http://ifac-control.org/publications/cartoons)

### The IFAC Conference App is available!

The App is paid for by IFAC and can be used free of charge by IFAC conference organizers and attendees.

How to download:  
App Store [apple.co/3mpaER7](https://apple.co/3mpaER7)  
Google Play [bit.ly/3lazFjx](https://bit.ly/3lazFjx)  
Web version [ifac.floq.live](http://ifac.floq.live)

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

New! Log in is shared with the IFAC Affiliates Portal. There is no need for double registration.

### IFAC is on social media!

#### Facebook

[facebook.com/groups/632582025190533](https://facebook.com/groups/632582025190533)

#### LinkedIn

[linkedin.com/groups/13400016/](https://linkedin.com/groups/13400016/)

#### Twitter

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

#### YouTube

[www.youtube.com/@ifacyoutube3132](https://www.youtube.com/@ifacyoutube3132)

## What can I do (or not) with papers published on IFAC-PapersOnLine?

All papers from IFAC conferences (where IFAC is the main sponsor) are published, in partnership with Elsevier in the IFAC-PapersOnLine series hosted at the ScienceDirect web service.

IFAC-PapersOnLine articles undergo a peer review selection process according to the IFAC rules, and are published in journal format on ScienceDirect (like any other IFAC title). Papers are abstracted and indexed in major databases, including Scopus and Web of Science. However, they recognise IFAC PaperOnLine as "conference proceedings publication" and, therefore, presents it as such.

The copyright of papers submitted to IFAC events before 1 October 2019, belongs to IFAC, and their full texts are publicly available on ScienceDirect. Nevertheless, from that date, the main features of IFAC-PapersOnLine series include:

- Diamond Open Access free of charge both for authors and readers. This means that IFAC pays the open access fee, authors do not have to pay any fee, and all published articles can immediately be accessed and permanently free for everyone to read, download, copy and distribute.
- Copyright belongs to the authors, while IFAC gets exclusive publication rights. This means that, for open access publishing, the authors grant exclusive publication rights or sub-license commercial use to IFAC, but they retain all patent, trademark and other intellectual property rights (including research data).

- Papers are published under a Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND) license. This means that articles can be shared in many flexible ways by users.

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### From the IFAC President

Dear IFAC Friends and Colleagues,

I extend my best wishes for a happy and prosperous new year to all IFAC affiliates. In this edition, I will describe the Executive Committees within the IFAC organization. IFAC has three Boards: the Technical Board, the Conference Board, and the Publication Board, whose functions are more or less well-known. Thousands of individual IFAC affiliates participate in various aspects of the Boards' operations. In addition, IFAC has the following six Executive Committees:

- Awards Committee
- Membership Committee
- Activity Fund Committee
- Distinguished Lecturer Program Committee
- Diversity and Inclusion Committee
- Education Activities Committee

The Awards Committee and the Membership Committee are the oldest among the six Executive Committees. The Membership Committee, typically chaired by the Immediate Past IFAC President, is responsible for assessing new NMO applications and reviewing existing NMOs for compliance with IFAC's aims, mission, and vision. The Awards Committee aims to recognize individuals who have made outstanding contributions to IFAC and the field of control science and engineering in general. This committee comprises more than twenty sub-committees, with sub-committee chairs and members selected from a pool of recognized researchers across all areas of automatic control.

The Activity Fund Committee and the Diversity and Inclusion Committee were established in 2020, while the Education Activities Committee was created in 2023. These committees are closely interconnected and aim to directly benefit all IFAC NMOs and Affiliates by providing financial support for both local and global activities, promoting control education, and working towards diversifying all aspects of IFAC's operations. The Distinguished Lecturer Committee, also established in 2020, specifically supports IFAC's NMOs in developing regions, with IFAC partially supporting the invitation of an IFAC Distinguished Lecturer to a local conference.

For more detailed descriptions of these committees, please visit our webpage and consider submitting proposals from your NMO to take advantage of the opportunities. These four Executive Committees welcome initiatives for respective activities, and we eagerly await your innovative ideas.

Thank you very much for your participation and support.

With best regards,

Dong-Il "Dan" Cho,  
IFAC President 2023-2026

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Submitted by: José Luís Díez Ruano (ES), IFAC Papers-OnLine Editor-in-Chief

## IFAC Distinguished Lecturer Report

Lucy Pao

*"The Power of Wind"*

November 2023

Pretoria & Stellenbosch, ZA

In November of 2023, Lucy Pao from the University of Colorado- Boulder (US) became the first IFAC Distinguished Lecturer to visit South Africa. She presented two excellent talks on the challenges and opportunities to enable a clean energy future using efficient wind energy systems.

Her first talk was hosted by Derik le Roux at the University of Pretoria (UP), and the second by Tobi Louw at Stellenbosch University (SU). The talks were attended by a wide audience - including members from industry, faculty, and students - who had the opportunity to engage with Lucy for questions and answers after each talk.

The United Nations includes "Affordable and Clean Energy" as one of the 17 sustainable development goals to achieve by 2030. The use of wind energy is especially relevant to ensure countries can transition towards a renewable and zero-emission energy mix. In her talk, Lucy highlighted the opportunity within South Africa for the use of wind energy to provide efficient and reliable power. As one of the fastest growing sources of clean energy, commercial wind turbines which can provide up to 15 MW of power are already available. These wind turbines use blades which are easily more than 100 m long and their construction can become very expensive. Pao and her research group investigate how to reduce the cost of the blades without compromising the efficiency and power generation capacity of the turbines. They also consider the influence of the control actions to ensure the optimal power is generated compared to the structural longevity of the wind turbine. Pao discussed the development of large off-shore wind turbines, especially turbines floating in deep water with depths exceeding 60 m. Since these wind turbines do not have a fixed foundation, it is necessary that the floating struc-

ture remains stable and reliable even in stormy conditions. More generally, Lucy elaborated on the benefits of control co-design. Contrary to the traditional sequential design of engineered systems, control co-design emphasizes an iterative approach, where the capabilities of the control system (typically the last element to be considered in traditional approaches) could be leveraged to improve, for example, structural designs. Using wind turbines as an example, she discussed how the ability of a control system to effectively mitigate vibrations enabled mechanical engineers to design lighter, more flexible blades, thereby driving down material requirements and costs.



Lucy Pao giving her Distinguished  
Lecturer talk in Pretoria, ZA

As part of the visit, Lucy also participated in two social events to celebrate women in engineering. The events were held at UP and SU respectively. She shared some of her experiences travelling the globe as a female engineer and academic, and encouraged lecturers to motivate students, especially young female students, to take risks and trust their own abilities. Once a student experiences the sense of accomplishment solving a complex problem using new tools and methods, it is often the fuel they require to reach new heights in their engineering careers.

The South African Council for Automation and Control (SACAC, which is the South African IFAC National Member Organization) provided support for the talks by Lucy. On behalf of SACAC, we would like to thank her and her family for travelling to South Africa, for her excellent talks, and for her generous interaction with everyone she met. It was an honour.

Submitted by: Derik le Roux and Tobi Louw (ZA)

## IFAC Council- and Related Meetings 2024

**IFAC Officials: Please note that the 2024 meetings will take place from 24-26 June 2024 in conjunction with the European Control Conference in Stockholm, SE! The constantly updated draft schedule is available at:**

[ifac-control.org/news/stockholm-schedule](https://ifac-control.org/news/stockholm-schedule)

## IFACx Events in 2024

The following IFACx events were approved for 2024. Detailed information about these conferences as well as the IFACx program in general is available at: [ifac-control.org/conferences/copy\\_of\\_ifacx-labeled-conferences-2024](https://ifac-control.org/conferences/copy_of_ifacx-labeled-conferences-2024)



### BRAZIL

Congresso Brasileiro de Automática (CBA 2024), Rio de Janeiro, Brazil, October 15-18, 2024

Type of event: Conference

Website [cba2024.eventos.ufrj.br/](https://cba2024.eventos.ufrj.br/)

### CHILE

2024 IEEE International Conference on Automation / XXVI Congreso de la Asociación Chilena de Control Automático, ACCA (IEEE ICA- ACCA 2024)

Location: Universidad de Santiago de Chile,

The following technical lecture will take place in Vienna, Austria on Thursday, 18 April 2024. Information about attending in-person and via Zoom will be available on the IFAC website closer to the date.

**Lecturer: Richard D. Braatz, Massachusetts Institute of Technology (MIT, US), IFAC Vice-President, Conferences**



**Title: Machine Learning-based Lifetime Prediction and Charging Optimization of Lithium-ion Batteries**

**Abstract:** This presentation describes advances in machine learning-based techniques for addressing systems problems that arise for lithium-ion batteries. The specific systems problems include the prediction and classification of battery cycle lifetime (aka remaining useful life), the determination of optimal charging protocols, and the identification of fundamental physicochemical expressions for electrochemical kinetics, thermodynamics, and mass transfer from real-time video imaging. The development of the techniques and their application are in collaboration with materials science, applied physics, and computer science researchers at Stanford University, Toyota Research Institute, and MIT.



Santiago Chile, (CEPEC-USACH, Cruz del Sur # 77, Las Condes, Metro Escuela Militar, Santiago, Chile), October 20-23, 2024

Type: Conference

Website: [ieee-ica-acca-2024.cl/](http://ieee-ica-acca-2024.cl/)

### FRANCE

SAGIP 2024, Lyon, France, May 29-31, 2024

Type of event: National Conference

Website: [sagip2024.sciencesconf.org/](http://sagip2024.sciencesconf.org/)

### GERMANY

1) the annual German AUTOMATION congress VDI Congress AUTOMATION, Congress Center Baden-Baden, July 2 and 3, 2024 (annually)

Type of event: Conference

Website: [vdi-wissensforum.de/automatisierungskongress/](http://vdi-wissensforum.de/automatisierungskongress/)

2) annual scientific workshop

Joint workshop of technical committees "Modeling, identification and simulation in automation" and "Systems theory and control", Anif near Salzburg, Austria, September 2024 (annually)

Type of event: Scientific Workshop

Website: [tu-dresden.de/ing/elektrotechnik/rst/das-institut/gma-fa-1-40](http://tu-dresden.de/ing/elektrotechnik/rst/das-institut/gma-fa-1-40)

### JAPAN

67<sup>th</sup> Japan Joint Automatic Control Conference (JJACC), Himeiji, Japan, November 23-24, 2024

Type of event: Conference

Website: [rengo67.iscie.or.jp/](http://rengo67.iscie.or.jp/)

### KOREA, REP. OF

The 39<sup>th</sup> ICROS Annual Conference (ICROS 2024)

Location: Daejeon Convention Center, Daejeon, Korea

Dates: July 2~4, 2024

Type of event: Conference

Website: [2024.icros.org](http://2024.icros.org)

### MEXICO

1) (Conference) Name: Congreso Nacional de Control Automático, CNCA 2024.

Location: Ciudad de México, México. Dates: October 2-4, 2024.

Website: [amca.mx/congresos/cnca2024/](http://amca.mx/congresos/cnca2024/)

2) (Summer School) Name: Escuela de Verano de Control Automático. Location: Ciudad de México, Mexico. Dates: June 13-14, 2024.

Website: [amca.mx/escuelas/](http://amca.mx/escuelas/)

### SPAIN

JORNADAS DE AUTOMÁTICA, MALAGA,

Type: Conference

Website: [jautomatica.es/](http://jautomatica.es/)

Short description: This is the annual event organized by CEA and which has the participation of a large number of its members. The event presents scientific works but also addresses issues of interest to the community.

### UNITED KINGDOM

The 14<sup>th</sup> UK Automatic Control Council International Conference (Control 2024) will be held from 10-12 April 2024 in Winchester, UK.

Type of event: International conference

Website: [control2024.uk/](http://control2024.uk/)

## IFAC Affiliates portal

### The portal gives access to IFAC services:

- Share with and consult information about other Affiliates
- Receive the IFAC Newsletter
- Receive alerts about the IFAC Conferences in your field/s of interest
- Get reduced registration fees at IFAC Conferences. Conferences are typically 10€ (or the local equivalent) less expensive for IFAC Affiliates, than for non-affiliates
- Participate in IFAC Technical Activities
- Organize IFAC Conferences
- Participate in IFAC Journals
- Be nominated to IFAC Awards
- Apply to the IFAC Activity fund
- More to come in the future!

New! Log in is shared with the IFAC Conference App. There is no need for double registration.

Any individual interested in Control Engineering should sign up at [affiliates.ifac-control.org/](http://affiliates.ifac-control.org/)

### How do I connect?

- If you are not yet connected to IFAC and wish to join for free, select 'Sign-Up' and then 'Register for an IFAC Account'. Meanwhile you may also browse the Web public data.

- If you receive this Newsletter in your mailbox, this means you are already connected to IFAC and listed in our database. To create your access to the portal for the first time, please select 'Sign-Up' and then 'Register for an IFAC Account' as above. In order to link your access to your existing data and save some time, please complete the form with the exact email address at which you receive the Newsletter.

Detailed instructions are available at: [ifac-control.org/about/affiliate-registration](http://ifac-control.org/about/affiliate-registration)

### Free and Exclusive

Signing in as an IFAC Affiliate is free and you keep of the control of the shared data which shall not be used for commercial or non IFAC purpose.

Signing in as IFAC Affiliate is mandatory to benefit from IFAC services and to participate in IFAC activities. Affiliates who do not connect to the portal within a year will have their data removed from the database. They will still have the possibility to become an affiliate again, but it may temporarily prevent access to services.

For any additional information, or if you require any assistance, please contact [secretariat@ifac-control.org](mailto:secretariat@ifac-control.org)

## IFAC Activity Fund Committee Update

Control is everywhere but nowhere. Readers of this newsletter don't need to be convinced that control is ubiquitous. After all, isn't virtually every engineered, biological, and physical system dynamical in nature, and isn't control science and engineering the one and only discipline dedicated to the understanding, design, and operation of all things dynamical?

Yet, in Karl Aström's memorable phrase, control is a hidden technology. Tell someone you meet at a party that you're a control engineer and, more likely than not, you'll need to explain to them what control systems are and how the field underpins everything around us, not to mention our selves. (They'll be polite but incredulous.) But it's not only that control is a hidden technology; control scientists and engineers tend to be hidden too. We won't go out of our way to promote what we do, we're content working on our mathematical papers, and we've been known to conflate our models with the real world!

This lack of visibility and recognition has been a cause of concern for the control community, especially professional organizations dedicated to control. Questions such as the following have often been debated: How can such organizations encourage their members and stakeholders to take a more expansive view of their discipline? How can they attract more, and more diverse, people to the field? How can they help the broader public understand the crucial importance of our knowledge and skills? Some notable steps have been taken. For example, over a decade ago, IEEE Control Systems Society launched its Outreach Fund (disclosure: this author considers the Outreach Fund a major accomplishment of his CSS presidency in 2009).

The IFAC Activity Fund is the outcome of similar discussions in the next-to-last IFAC triennium, under the presidency of Frank Allgower. The Activity Fund was formalized and launched in 2020, with Margret Bauer as the founding chair. The objective of the Activity Fund is to provide financial support to individuals and groups for initiatives that foster and promote public engagement and outreach for the control community. The Activity Fund Committee shall normally take care of the IFAC Activity Fund, the call of proposals, their evaluation and selection. It shall report to the Executive Officers for final approval. Of particular interest are initiatives that

- Maximize control community engagement;
- Promote inclusion and diversity in alignment with the IFAC guidelines;
- Increase control engineering influence in public discourse and decision-making.

It should be noted that research-oriented projects are not eligible—numerous sources for research funding are already available. About

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**Acknowledgement to IFAC would be appreciated.**

twenty projects were approved in the first triennium of the Fund's operation.

Calls for applications for Activity Fund grants are announced biannually, with deadlines in April and October. A letter of support from an IFAC organization (typically an NMO or TC) is required for all applications. Funding amounts range from € 2,500 € to 12,500, although higher amounts can be proposed for exceptional projects. The annual budget for the Fund is € 50,000.

The second triennium of the Activity Fund is now under way, with a committee comprising Paul Goulart (UK), Charlotta Johnsson (SE), Ayoung Kim (KR), Carlos Pereira (BR), and Tariq Samad (US, chair). The first call of this triennium was issued in October, 2023, and resulted in a record twenty applications. After deliberations by the committee, eight projects have been selected for funding, as follows (names of project leaders and the sponsoring IFAC organization are included):

- IFAC Latin American Women in Control Engineering (IFAC LA-WICE) meeting.  
Project leader: Karina A. Barbosa (CL)  
IFAC organizational sponsor: ACCA (Chile IFAC NMO)

- Empowering Tomorrow's Innovators: Unleashing the Potential of Girls in Control Engineering in South Africa  
Project leader: Syamala Krishnannair (ZA)  
IFAC organizational sponsor: SACAC (South Africa IFAC NMO)

- ROV-based treasure hunts for attracting students towards control and robotics  
Project leader: Giulia Michieletto (IT)  
IFAC organizational sponsors: TC 7.5 (Intelligent Autonomous Vehicles) and TC 9.2 (Systems and Control for Societal Impact)

- The Control Engineering Exercises Journal – IT infrastructure costs for the startup period  
Project leader: Damiano Varagnolo (NO)  
IFAC organizational sponsors: TC 9.4 (Control Education) and Education Committee

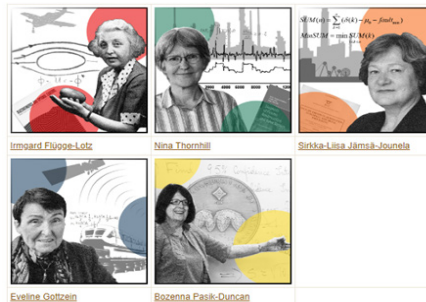
- Developing children's tridimensional ordinality through control systems and robots  
Project leader: Erivelton Nepomuceno (IE)  
IFAC organizational sponsor: Ireland IFAC NMO

- Seminar Series and Workshop on Biological Control Systems  
Project leader Christian Cuba Samaniego (US)  
IFAC organizational sponsor: TC 2.1 (Control Design)

- Female Historical Influencers in Automatic Control – Part 3  
Project leader: Margret Bauer (DE)  
IFAC organizational sponsor: TC 9.4 (Control Education)

- Build, Control and Fly mini drone activities  
Project leader: Junaid Ahmed Memon (UK)  
IFAC organizational sponsor: TC 9.4 (Control Education)

For more information about the Activity Fund, including guidance on submitting applications and details of past projects, see [sites.ifac-control.org/activityfund](https://sites.ifac-control.org/activityfund). We expect to announce the next call for applications in March 2024, and all IFAC Affiliates will receive an e-mail notification when the call is open. Meanwhile, think of an exciting project you could propose that would make control less of a hidden technology!



The IFAC Activity Fund has supported the development of portraits of influential historical women (retired or emeritus female professionals) in automatic control. Clockwise from top left: Irmgard Flugge-Lotz, Nina Thornhill, Sirkka-Liisa Jamsa-Jounela, Eveline Gottzein, Bozenna Pasik-Duncan. For more information please see [control.lth.se/external-engagement/historical-female-influencers-in-automatic-control/](https://control.lth.se/external-engagement/historical-female-influencers-in-automatic-control/)

Submitted by: Tariq Samad (US), Chair, IFAC Activity Fund

### About the Activity Fund Committee Chair



**Tariq Samad (US)**

Tariq Samad holds the Honeywell/W.R. Sweatt Chair and is a Senior Fellow at the Technological Leadership Institute at the University of Minnesota (US). He joined TLI in 2016 after a 30-year career with Honeywell, retiring as Corporate Fellow with Honeywell Automation and Control Solutions and the Global Innovation Leader for the business. During his career with Honeywell, he contributed to and led automation and control technology developments for applications in clean energy, electric power systems, building management, the process industries, automotive engines, unmanned aircraft, and advanced manufacturing.

Tariq is a past president of the American Automatic Control Council, the U.S. IFAC NMO, and IEEE Control Systems Society. He is a Fellow of IEEE, IFAC, and AAIA and the recipient of a few awards including the IEEE CSS Control Systems Technology Award, an Outstanding

Service Award from IFAC, and inclusion in Control Global's Process Automation Hall of Fame. He was the founding chair of the IFAC Industry Committee and currently chairs the IFAC Activity Fund. His book publications include the Encyclopedia of Systems and Control (co-editor-in-chief, Springer, 2014; 2nd edition 2021). He was editor-in-chief of IEEE Press and is currently the founding editor of the Wiley/IEEE Press book series on "Technology Management, Innovation, and Leadership."

Tariq serves on the board of Clean Energy Economy Minnesota and is Vice President of Publications for IEEE Technology and Engineering Management Society. He holds a B.S. degree in Engineering and Applied Science from Yale University and M.S. and Ph.D. degrees in Electrical and Computer Engineering

## Transition: Eveline Gottzein

### Eveline Gottzein – a Pioneer in Aerospace Control

Challenging control systems in aerospace for satellites and rockets, but also for magnetic levitation trains fascinated Eveline Gottzein a life long. Together with her teams she elaborated groundbreaking solutions and provided a role model for women in engineering honored by many awards at highest level, including her selection as first female IFAC fellow. She passed away on 24.12.2023 in Höhenkirchen near Munich (DE).

Eveline Gottzein was born in 1931 in Leipzig (DE) to a family who encouraged her interests in technology and nature. Located in eastern Germany it was difficult to pursue her professional visions in science and technology. Thus in 1957 she decided to leave for Western Germany to study Mathematics and Control at TU Darmstadt. Despite difficult study conditions, always interrupted by industrial work to earn related costs of living, she graduated with a Diploma 1962 in Mathematics. This was thanks to her talent in engineering and her motivation to work extremely hard.



Eveline Gottzein demonstrating to experts the model of the ASTRIS-propulsion system, the 3rd stage of the European rocket ELDO (around 1970, source: HORM Archiv).

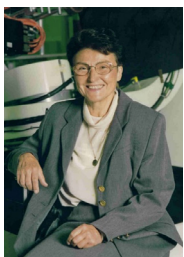
In 1959 she joined the company Bölkow AG in Ottobrunn, where the challenging and motivating tasks in the emerging aerospace sector attracted her attention. Her boss Ludwig Bölkow recognized her talents and at age of 32 she was already appointed as head of the vehicle control and simulations department. New



control challenges for rockets and satellites required interdisciplinary knowledge for mathematical modelling of complex physical processes, which she and her team mastered in an excellent way. Based on excellent engineering skills, vigor, and diligence she was well prepared to address the opportunities in this new challenging engineering field. Thus her department grew very fast to about 100 people and she demonstrated, what woman can achieve in engineering. Thus she became a paragon for the next generation of female engineers.

Europe's entry to telecommunication via space was paved by the two French-German satellites „Symphonie“ (launched in 1974 and 1975). Her team received responsibility for orientation and stabilisation of these satellites and achieved a technology breakthrough by realizing the innovative 3-axes attitude control system, which became the worldwide standard replacing the spin-stabilized principles used before. A complete infrastructure to test related characteristics on ground had to be invented, leading to the realization of innovative dynamic test benches, exported by the company MBB worldwide to space industry. In this way her department grew steadily. Eveline Gottzein liked challenges and was characterized by her collaborators as a realistic visionary. She was ambitious and worked extremely hard with her collaborators to become one of the worldwide leading control departments.

In parallel, in the 1970s the magnetic levitation trains raised significant control challenges, which were transferred to her department. She summarized the groundbreaking solutions after a hard working day in her leisure time in the dissertation „The ‚Magnetic Wheel‘ as autonomous functional unit of modern carrier and control systems for magnetic levitation trains“, submitted in 1983 at Technical University Munich. Based on these contactless, distributed, robust electromagnetic principles 1987 TRAN-SRAPID reached the world speed record for trains at 460 km/h.



Eveline Gottzein was honored with the Werner-von-Siemens-Ring in 1993 as „mastermind and realizer of groundbreaking control systems for magnetic levitation trains, satellites and space vehicles“. (source: Stiftung Werner-von-Siemens-Ring)

Even after formal retirement in around 1990 Eveline Gottzein continued to pursue her visions and initiated innovative use of GPS receivers for navigation of geostationary satellites. She also followed the „New Space“ developments during the last decennium and was very glad to see the new role of her early dynamic simulators in the new context of formations composed of small satellites. This closed the loop on distributed, networked control systems also in the context of attitude and orbit control of satellites.



In 2018 Eveline Gottzein visited the new installation of her dynamic simulators at S4 / ZfT in Würzburg for tests of multi-satellite systems in „New Space“ context (source: S4 –Smart Small Satellite Systems).

In recognition of her outstanding achievements in science and technology, but also her inspiring leadership capabilities and her pioneering role for female engineers, she was selected for highest awards: 1993 Werner-von-Siemens-Ring, 1996 Bavarian Medal of Merit, 1998 Maximilians-Medal, 2000 Order of Merit of the Federal Republic of Germany, 2007 AIAA Fellow, and 2008 IFAC Fellow (she was the first female IFAC Fellow).

Beyond these technology challenges she emphasized international collaboration in space technology and supported bridges between science and industry in international professional institutions as IFAC and AIAA. She participated from the beginning in the 1960s in the IFAC Symposia on Aerospace and had chairwoman positions from the 1970s until 2002.

Eveline Gottzein was a key person for IFAC's visibility in the Aerospace sector. She organized impressive IFAC Symposia on „Automatic Control in Aerospace“: 7<sup>th</sup> in Rottach-Egern (1976), and 12<sup>th</sup> in Ottobrunn (1992). Legendary are her excursions in the accompanying social programs on

mountain climbing, as well as the conferences including session breaks for skiing challenges. Well-remembered are her impressive plenary presentations at the 10<sup>th</sup> IFAC World Congress in July 1987 in Munich on „Control challenges of space planes, stations, and platforms“ and at the 19<sup>th</sup> Symposium on Automatic Control in Aerospace in September 2013 in Würzburg on „The origin of satellite technology in Europe“. She had the ability to inspire young people for her space visions and transferred her experience as well as her fascination in the space technology programs at the Universities Stuttgart and Würzburg to motivated students.

IFAC recognizes Eveline Gottzein's contributions with the highest respect to scientific breakthroughs in control engineering for satellites, rockets, and magnetic levitation trains. The success of the IFAC TC on Aerospace is based on her advice and leadership for a period of more than 40 years.



The outstanding scientific contributions of Eveline Gottzein in control engineering were acknowledged 2008 by awarding the IFAC Fellow at the 17<sup>th</sup> IFAC World Congress in Seoul, KR. Also pictured: IFAC Advisors Brian Anderson (AU) and Wook-Hyun Kwon (KR).

Submitted by: Klaus Schilling (DE)  
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[https://www.ifac-control.org/conferences/@@conference\\_view](https://www.ifac-control.org/conferences/@@conference_view)


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Energie, Mobilität,  
Innovation und Technolog

## Calendar of IFAC Conferences

Title	2024	Place	Further Information
8 <sup>th</sup> ACDOS Conference on Advances in Control and Optimization of Dynamical Systems ACODS 2024	March 12 – 15	Delhi NCR India	<a href="http://acods-conference.org/">acods-conference.org/</a> <a href="mailto:naveen.babu@snu.edu.in">naveen.babu@snu.edu.in</a>
17 <sup>th</sup> IFAC Workshop on Discrete Event Systems WODES 2024	April/May 29 – 01	Rio de Janeiro Brazil	<a href="http://wodes2024.eventos.ufrj.br/">wodes2024.eventos.ufrj.br/</a> <a href="mailto:wodes2024@dee.ufrj.br">wodes2024@dee.ufrj.br</a>
8 <sup>th</sup> IEEE/IFAC et al. International Conference on Control, Automation and Diagnosis ICCAD 2024	May 15 – 17	Paris France	<a href="http://iccad-conf.com/">iccad-conf.com/</a> <a href="mailto:contact@iccad-conf.com">contact@iccad-conf.com</a>
3 <sup>rd</sup> IFAC Workshop on Integrated Assessment Modeling for Environmental Systems IAMES 2024	May 29 – 31	Savona Italy	<a href="http://iames.unige.it/">iames.unige.it/</a> <a href="mailto:iames2024@dibris.unige.it">iames2024@dibris.unige.it</a>
22 <sup>nd</sup> IFAC Conference on Technology, Culture and International Stability TECIS 2024	May 29 – 31	Waterford Ireland	<a href="http://conferences.ifac-control.org/tecis2024">conferences.ifac-control.org/tecis2024</a>
12 <sup>th</sup> IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes SAFEPROCESS 2024	June 04 – 07	Ferrara Italy	<a href="http://safeprocess2024.eu/">safeprocess2024.eu/</a> <a href="mailto:silvio.simani@unife.it">silvio.simani@unife.it</a>
7 <sup>th</sup> IFAC Conference on Analysis and Control of Nonlinear Dynamics and Chaos ACNDC 2024	June 05 – 07	London United Kingdom	<a href="http://acndc2024.org/">acndc2024.org/</a>
8 <sup>th</sup> IFAC Workshop on Lagrangian and Hamiltonian Methods for Nonlinear Control LHMNC 2024	June 10 – 12	Besançon France	<a href="http://conferences.ifac-control.org/lhmnc24">conferences.ifac-control.org/lhmnc24</a>
4 <sup>th</sup> IFAC Conference on Advances in Proportional-Integral-Derivative Control PID 2024	June 12 – 14	Almería Spain	<a href="http://arm.ual.es/pid2024/">arm.ual.es/pid2024/</a>
6 <sup>th</sup> IFAC Workshop on Advanced Maintenance Engineering, Services and Technology AMEST 2024	June 12 – 14	Cagliari Italy	<a href="http://sites.unica.it/amest2024/">sites.unica.it/amest2024/</a> <a href="mailto:amest2024@unica.it">amest2024@unica.it</a>
18 <sup>th</sup> IFAC Conference on Programmable Devices and Embedded Systems PDES 2024	June 19 – 21	Brno Czech Republic	<a href="http://pdes-conference.eu/">pdes-conference.eu/</a> <a href="mailto:pdes@pdes-conference.eu">pdes@pdes-conference.eu</a>
EUCA Conference on European Control Conference (in cooperation with IFAC) 25 – 28 ECC 2024	June 25 – 28	Stockholm Sweden	<a href="http://ecc24.euca-ecc.org/">ecc24.euca-ecc.org/</a> <a href="http://ecc24@euca-ecc.org">ecc24@euca-ecc.org</a>
17 <sup>th</sup> IFAC Symposium on Control of Transportation Systems CTS 2024	July 01 – 03	Ayia Napa Cyprus	<a href="http://ifaccts2024.wixsite.com/ifac-cts2024">ifaccts2024.wixsite.com/ifac-cts2024</a> <a href="mailto:ifac.cts2024@gmail.com">ifac.cts2024@gmail.com</a>
8 <sup>th</sup> IFAC Conference on Analysis and Design of Hybrid Systems ADHS 2024	July 01 – 03	Boulder, CO USA	<a href="http://colorado.edu/conference/adhs2024">colorado.edu/conference/adhs2024</a> <a href="mailto:majid.zamani@colorado.edu">majid.zamani@colorado.edu</a>
Conference on American Control Conference (in cooperation with IFAC) 08 – 12 ACC 2024	July 08 – 12	Toronto Canada	<a href="http://acc2024.a2c2.org/">acc2024.a2c2.org/</a>
12 <sup>th</sup> IFAC Conference on Fractional Differentiation and its Applications ICFDA 2024	July 09 – 12	Bordeaux France	<a href="http://icfda2024.sciencesconf.org/">icfda2024.sciencesconf.org/</a>
12 <sup>th</sup> IFAC Symposium on Control of Power and Energy Systems CPES 2024	July 10 – 12	Rabat Morocco	<a href="http://cpes2024.org/">cpes2024.org/</a> <a href="mailto:cpes2024@unicaen.fr">cpes2024@unicaen.fr</a>
12 <sup>th</sup> IFAC Symposium on Advanced Control of Chemical Processes ADCHEM 2024	July 14 – 17	Toronto Canada	<a href="http://adchem2024.org/">adchem2024.org/</a>
20 <sup>th</sup> IFAC Symposium on System Identification SYSID 2024	July 17 – 19	Boston, MA USA	<a href="http://conferences.ifac-control.org/sysid2024/">conferences.ifac-control.org/sysid2024/</a>

# Calendar of IFAC Conferences

2 <sup>nd</sup> IFAC Workshop on Aerospace Control Education WACE 2024	July 22 – 24	Bertinoro (Forlì) Italy	<a href="http://wace2024.org/">wace2024.org/</a> <a href="mailto:info@wace2024.org">info@wace2024.org</a>
26 <sup>th</sup> International Symposium on Mathematical Theory of Networks and Systems (in cooperation with IFAC) MTNS 2024	August 19 – 23	Cambridge United Kingdom	<a href="http://mtns2024.eng.cam.ac.uk/">mtns2024.eng.cam.ac.uk/</a>
8 <sup>th</sup> IFAC Conference on Nonlinear Model Predictive Control NMPC 2024	August 21 – 24	Kyoto Japan	<a href="http://nmpc2024.org/">nmpc2024.org/</a> <a href="mailto:secretariat@nmpc2024.org">secretariat@nmpc2024.org</a>
18 <sup>th</sup> IFAC Symposium on Information Control Problems in Manufacturing INCOM 2024	August 28 – 30	Vienna Austria	<a href="http://incom2024.org/">incom2024.org/</a> <a href="mailto:incom2024@tuwien.ac.at">incom2024@tuwien.ac.at</a>
15 <sup>th</sup> IFAC Conference on Control Applications in Marine Systems, Robotics and Vehicles CAMS 2024	September 03 – 05	Blacksburg (VA) USA	<a href="http://ifac-cams2024.org/">ifac-cams2024.org/</a> <a href="mailto:cams2024@vt.edu">cams2024@vt.edu</a>
4 <sup>th</sup> IFAC Conference on Modelling, Identification and Control of Nonlinear Systems MICNON 2024	September 04 – 06	Lyon France	<a href="http://micnon2024.org/en">micnon2024.org/en</a> <a href="mailto:contact@micnon2024.org">contact@micnon2024.org</a>
7 <sup>th</sup> IFAC Workshop on Mining, Mineral and Metal Processing MMM 2024	September 04 – 06	Brisbane Australia	<a href="http://conferences.ifac-control.org/mmm2024">conferences.ifac-control.org/mmm2024</a>
10 <sup>th</sup> IFAC/CACHE Conference on Foundations of Systems Biology in Engineering FOSBE 2024	September 08-11	Corfu Island Greece	<a href="http://fosbe2024.iceht.forth.gr">fosbe2024.iceht.forth.gr</a> <a href="mailto:fosbe2024@iceht.forth.gr">fosbe2024@iceht.forth.gr</a>
12 <sup>th</sup> IFAC Symposium on Biological and Medical Systems BMS 2024	September 11 – 13	Villingen- Schwenningen Germany	<a href="https://www.bms-24.org/">https://www.bms-24.org/</a> <a href="mailto:bms2024@hfu.eu">bms2024@hfu.eu</a>
3 <sup>rd</sup> SACAC Control Conference Africa (in cooperation with IFAC) CCA 2024	September 16 – 17	Balacava Mauritius	<a href="https://cca2024.org/">https://cca2024.org/</a> <a href="mailto:info@cca2024.org">info@cca2024.org</a>
4 <sup>th</sup> IFAC Workshop on Internet Based Control Education IBCE 2024	September 18 – 20	Ghent Belgium	<a href="http://ibce24.ugent.be">ibce24.ugent.be</a>
18 <sup>th</sup> IFAC Workshop on Time Delay Systems TDS 2024	September 24 – 27	Udine Italy	<a href="http://tds2024.uniud.it">tds2024.uniud.it</a> <a href="mailto:tds2024@uniud.it">tds2024@uniud.it</a>
Univ. Stuttgart, IST / IFAC Symposium on Systems Theory in Data and Optimization SysDo 2024	Sept./Oct. 30 – 02	Stuttgart Germany	<a href="http://sysdo2024.de">sysdo2024.de</a>
4 <sup>th</sup> AACC, IFAC Conference on Modeling, Estimation and Control Conference MECC 2024	October 27 – 30	Chicago (IL) USA	<a href="http://mecc2024.a2c2.org">mecc2024.a2c2.org</a>
21 <sup>st</sup> INSTICC International Conference on (in cooperation with IFAC) Informatics in Control, Automation and Robotics, ICINCO 2024	November 18 – 20	Porto Portugal	<a href="https://icinco.scitevents.org">https://icinco.scitevents.org</a> <a href="mailto:icinco.secretariat@insticc.org">icinco.secretariat@insticc.org</a>
5 <sup>th</sup> IFAC Workshop on Cyber-Physical-Human Systems CPHS 2024	December 12 – 14	Antalya Turkey	<a href="http://cphs2024.org/">cphs2024.org/</a>
<b>Title</b>	<b>2025</b>	<b>Place</b>	<b>Further Information</b>
13 <sup>th</sup> IFAC Symposium on Nonlinear Control Systems NOLCOS 2025	July 09-11	Reykjavik Iceland	
<b>Title</b>	<b>2026</b>	<b>Place</b>	<b>Further Information</b>
23 <sup>rd</sup> IFAC World Congress WC 2026	August 23– 28	Busan Republic of Korea	<a href="http://ifac2026.org">ifac2026.org</a> <a href="mailto:ifac2026@ifac2026.org">ifac2026@ifac2026.org</a>