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## Who's Who in IFAC: IFAC Distinguished Lecturer Program Lecturers

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. 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 lecturers serve a term of one triennium during which time they are expected to give at least one lecture. As in the 2020-2023 triennium no lecture took place, those lecturers will serve for another term, along with the 2023-2026 slate of lecturers.

The lectures must be given in 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.

In this continuation of a series Newsletters readers have the opportunity to learn more about the IFAC Distinguished Lecture Program lecturers, topics, and area/s of technical interest.

**Na Li**



Na Li is a Winokur Family Professor of Electrical Engineering and Applied Mathematics at Harvard University. She received her Bachelor's degree in Mathematics from Zhejiang University in 2007 (CN) and the Ph.D. degree in Control and Dynamical Systems from California Institute of Technology (US) in 2013. She was a postdoctoral associate at the Massachusetts Institute of Technology (US) 2013-2014. She has held a variety of short-term visiting appointments including the Simons Institute for the Theory of

Computing, MIT, and Google Brain. Her research lies in the control, learning, and optimization of networked systems, including theory development, algorithm design, and applications to real-world cyber-physical societal systems. She has been an associate editor for IEEE Transactions on Automatic Control, Systems & Control Letters, IEEE Control Systems Letters, and served on the organizing committee for a few conferences. She received the NSF Career Award, AFSOR Young Investigator Award, ONR Young Investigator Award, Donald P. Eckman Award, McDonald Mentoring Award, IFAC Distinguished Lecture, and IFAC Manfred Thoma Medal, along with other awards.

Her lecture topic is: *Representation-based Learning and Control for Dynamical Systems*

### Abstract:

The explosive growth of machine learning and data-driven methodologies have revolutionized numerous fields. Yet, adapting these successes to the domain of dynamical physical systems remains a significant challenge. Closing the loop from data to actions in these systems faces many difficulties, stemming from the need for sample efficiency and computational feasibility, along with many other requirements such as verifiability, robustness, and safety. In this talk, we bridge this gap by introducing innovative representations to develop nonlinear stochastic control and reinforcement learning methods. The key in the representation is to represent the stochastic, nonlinear dynamics linearly onto a nonlinear feature space. We present a comprehensive framework to develop control and learning strategies that achieve efficiency, safety, robustness, and scalability with provable performance. We also show how the representation could be used to close the sim-to-real gap. Lastly, we will briefly present some concrete real-world applications, discussing how domain knowledge

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### The IFAC Journals

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

**Control Engineering Practice**  
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**Engineering Applications of Artificial Intelligence**  
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**Journal of Process Control**  
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**Annual Reviews in Control**  
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**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)

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is applied in practice to further close the loop from data to actions.

### Larry Stapleton



Larry Stapleton is a longstanding member of the IFAC family, having chaired or vice-chaired the Technical Committee TC 9.5 for over twenty years and acting as CC 9 (Social Effects of Automation and Control) chair from 2017-2023. He is on various boards and bodies within IFAC and IEEE. Amongst his many accolades, in 2020 he became the first Irish person to be awarded the International Federation of Automation “Outstanding Achievement Award” at the 2020 IFAC World Congress. His technical background is in advanced, large scale systems development and deployment.

He is CEO of “Knewfutures Consulting”, a successful professional services business supporting public and private sector organisations all over the world, including commercial companies, international agencies, national governments and agencies, regulators, labour unions and NGOs. Through his research and professional practice, he has worked with hundreds of organisations in Europe, Asia, Africa and Australia in digital transformation and sustainable development.

Amongst his various international roles, he is a visiting professor at prestigious institutions such as the Technical University of Vienna Academy for Executive Education (ACE), London School of Economics RiiNvest College, the Irish Management Institute, the Insittue of Banking and others, where he has shaped the leadership capabilities of CSuite and public sector leaders in AI strategy, digital transformation and leadership. He has received many awards for executive education, including the “best international professor” award at ACE on five occasions.

Stapleton’s commitment to a sustainable and equitable digital future is evident in his two-decades of engagement in developing and post-conflict regions, leveraging digital technologies to enhance economic activity and social conditions. His contributions to ESG initiatives include significant publications on digital environmental sustainability and leadership strategies for reducing the carbon footprint of international markets and public services as well as on the impact of technological proliferation on marginalised groups, including LG-BTQ+ communities.

As the founder of the INSYTE Centre for technology research and education at South-East Technology University in Ireland, he has fostered postgraduate education and research in advanced automation and intelligent systems.

Stapleton’s editorial roles in leading journals including serving as editor of the journal “*Artificial Intelligence and Society*”. Most recently his organization of the United Nations and World Peace Studies community sponsored “AI and New Diplomacy” conference in 2024 highlight his current thought leadership on the impact of transformational technology.

### Lei Guo



Lei Guo received his B.S. degree in mathematics from Shandong University in 1982 and a Ph.D. degree in control theory from the Chinese Academy of Sciences (CAS) in 1987. He was a postdoctoral fellow at the Australian National University from 1987 to 1989. He has been a full professor of the Institute of Systems Science at CAS since 1992, has been the President of the Academy of Mathematics and Systems Science at CAS during 2003-2012, and has been the Director of the National Center for Mathematics and Interdisciplinary Sciences at CAS since 2010.

Guo is a Fellow of IEEE, Member of CAS, Fellow of the Academy of Sciences for the Developing World (TWAS), Foreign Member of the Royal Swedish Academy of Engineering Sciences, and Fellow of IFAC. He received the 1993 IFAC World Congress Young Author Prize, the IFAC Outstanding Service Award, and an honorary doctorate from the Royal Institute of Technology (KTH), Sweden. He delivered plenary lectures at the IFAC World Congress in 1999 and 2014, respectively. In 2019, he was awarded the Hendrik W. Bode Lecture Prize by the IEEE Control Systems Society “for fundamental and practical contributions to the field of adaptive control, system identification, adaptive signal processing, stochastic systems, and applied mathematics”.

He has served as a Council member of IFAC (2005-2011), General Co-Chair of the 48th IEEE Conference on Decision and Control (CDC’2009), President of the Asian Control Association (2022-2024), and President of the China Society for Industrial and Applied Mathematics (CSIAM, 2008-2016). He has also served as a member of editorial boards of several professional journals in systems, control and mathematics.

Research Interests: Guo’s research interests include stochastic systems, adaptive control, system identification, machine learning, adaptive filtering, distributed estimation, control of nonlinear and uncertain systems, PID control theory, maximum capability of feedback, multi-agent systems, game-based control systems, and related applications.

### From the IFAC President

Dear IFAC Friends and Colleagues,

At the 2020 General Assembly, it was decided to split the selection of the World Congress host and the IFAC President into two separate decisions, starting with the 2026-2029 triennium. Subsequently, at the 2022 London Council Meeting, Amsterdam (NL) was chosen as the host for the 2029 Congress, and Maria Prandini (IT) was selected as the President for 2026-2029.

The separate selection process has been discussed in detail by the Executive Officers, taking into account various comments received about the 2022 London Meeting procedures. For the 2032 Congress, the host NMO will be selected in two rounds conducted in 2024 and 2025. In the first round, held at the 2024 Stockholm Council Meeting, five NMOs presented their bids, each given 8 minutes for presentation and 8 minutes for Q&A. The Council voted to invite the Brazilian and USA NMOs to make the final bid at the 2025 Council Meeting to be held in Paris. The final proposal should consider: the venue for hosting a large Congress, convenient transportation options, IFAC contributions and leadership from the host NMO, the impact of hosting at a particular location on IFAC’s growth and sustainability, and the effects it will have on the hosting NMO.

The timeline for the selection of the 2029-2032 IFAC President is as follows: in September 2024, invitations will be sent to all NMOs to propose a candidate, with a deadline of March 1, 2025. This presidential proposal should be a short summary that includes the candidate’s past experiences and contributions to IFAC, vision and goals for IFAC concerning technical and social growth and sustainability, plans to realize the vision and goals, as well as the support and commitment of the NMO. This summary should be no more than three pages. In addition, a one-page CV outlining the candidate’s general scholarly achievements and demonstrated society leadership, should be submitted. In April, the Executive Officers will invite qualified individuals and NMOs to present their candidacies at the 2025 Council Meeting. At that time, these applications will be disclosed to all Council Members.

Thus, at the 2025 Council Meeting, the final host for the 2032 World Congress and the 2029-2032 IFAC President will be selected by two separate votes. The Congress and the President may not be from the same NMO. Candidate NMOs for the Congress and the President must commit to making their best efforts regardless of which NMO wins which proposal.

It should be noted that this separate selection process is tried for two triennia: 2026-2029 and 2029-2032. In 2026, the Council and the General Assembly will discuss and decide whether this split process will continue.

With best regards,

Dong-Il “Dan” Cho,  
IFAC President 2023-2026

Lei Guo's lecture topics are:

- 1) Learning and feedback in the control of uncertain dynamical systems
- 2) On game-based control systems
- 3) On PID control theory of nonlinear uncertain systems
- 4) Synchronization of flocks with large population
- 5) Distributed adaptive estimation

**Geoff Chase**



Geoff Chase received his B.S. from CWRU (US) in 1986, with M.S. and PhD from Stanford University (US, 1991, 1996). He spent 6 years working for General Motors and 5 years in Silicon Valley, including Xerox PARC, ReSound, Hughes Space and Communications, and Infineon Technologies, before joining the University of Canterbury, where he is its inaugural Distinguished Professor.

His research focuses on the intersection of engineering and clinical medicine, primarily in intensive care, metabolic disease, and cardio-pulmonary diseases. These efforts have led to a range of model-based systems to improve care and outcomes, and reduce costs, which are in clinical trials or standard of care use. Dr. Chase has published over 1600 journal and conference papers and 20 US and European patents. He founded three startup companies, and is a Fellow of the Royal Society of NZ (FRSNZ) and American Society of Mechanical Engineers (FASME), and Distinguished Fellow of Engineering NZ (DistFEngNZ).

## IFAC Council and Related Meetings 2024

24-26 June 2024  
Stockholm, SE

The 2024 edition of the annual IFAC Council and Related Meetings took place in Stockholm, SE from 24- 26 June at the KTH and was held in conjunction with the European Control Conference (ECC) 2024. The meetings took place shortly after the Swedish Midsommar holiday and participants could enjoy the beautiful environs of Stockholm and the Swedish sunlight, which lasted nearly the entire day during the time of the meetings.

In advance of the meetings the IFAC Executive officers gathered on Sunday afternoon (23 June) in-person to prepare for the week, as well for ongoing discussions and brainstorming. The officers gather in-person once a year in Austria (where the IFAC Secretariat is based), and again at the annual IFAC meetings, in addition to Zoom sessions throughout the year.

Meetings at the KTH kicked off on Monday morning in the open space of the Digital Futures, beginning with the Technical Board in the morning, followed by the Publications Board in the afternoon. The TB is looking into possible restructuring of the respective CCs and TCs, taking new trends in the field and changing needs of the respective communities into consideration. They are also interested in merging conferences so that there are still high-quality technical events, but fewer of them. The PB heard reports about the various IFAC publications, including excellent journal impact factors despite a calculation change, IFAC PapersOnline, IFAC social media, IFAC's YouTube channel, and the IFAC Newsletter. Newsletter readers who have not yet connected to the IFAC portal are kindly requested to do so as at some point within the year individuals who do not connect to the portal and at least confirm their information will be deleted from the system, even if they have been registered as IFAC affiliates under the old system for many years.

The Conference Board started off Tuesday morning. Due to various complications and after receiving legal advice it is not going to be possible to provide conference loans as originally hoped for. However, there are positive trends going on in the CB, including the work of the new liaison working with Conference Compass on issues relating to the IFAC Conference app, as well as quality control checks of conferences.

Tuesday evening many participants attended the ECC opening, which took place at the Stockholm City Hall and was led by the deputy mayor of the city of Stockholm. This took place in the premises there where the Nobel Prize banquet is held, and participants were able to experience the grandeur of the Blue Hall (which attendees learned was never painted blue as first planned!) and the upstairs Golden Hall.

IFAC Council was the meeting scheduled for the entirety of Wednesday, beginning just after the ECC opening morning speech by IFAC President Dan Cho. Reports from the respective committee and board chairs are posted on the IFAC Cloud in advance of council meetings and members are encouraged to show up having read the material to supplement what the various presenters are able to present at this meeting. Due to the number of IFAC activities to be reported on it was a tight agenda to get through in the limited time allotted.

After lunch the five NMOs who were making first round bid presentations for the 2032 IFAC World Congress made their presentations. In English alphabetical order these NMOs were Brazil, China, Finland, India, and the United States (US). After closed-Council discussion and voting the decision was made to invite Brazil and the US to make more detailed second round presentations at the 2025 Council meeting, where the final decision will be made. China, Finland, and India were thanked for their efforts as IFAC was happy to have five bids in the first round.

On Wednesday evening Council members and other guests were invited to partake in a cruise on an antique ship to see the sights around the Stockholm archipelago. It was a great opportunity for old friends to gather, as well as to make new contacts.

IFAC Executive Officers met again on Thursday morning (27 June) at Digital Futures to dissect the week's meetings and plan for further action and discussion, including a Zoom meeting to take place in the coming months (not easy to schedule a meeting of many busy people and varying time zones!)

Special thanks go to IFAC Council member Karl Johansson (SE), the team at KTH Digital Futures, and the ECC 2024 organizers who were the perfect hosts of the meetings!



**The IFAC Council and IFAC Secretariat at the 2024 IFAC Council meeting in Stockholm, SE on 26 June 2024**

The IFAC Council decided to hold the 2025 edition of the annual meetings in Paris, FR in mid-July in conjunction with joint conferences (Mechatronics and Robotics) taking place there. It is also planned that Zoom/remote participation will be possible for those unable to travel to Paris for in-person presence at the meetings. IFAC Council members are especially encouraged to be there in-person and attend additional meetings besides only the Council as observers. More detailed information and exact dates for 2025 will be provided in the coming months on the IFAC website and through emailed calls. Committee chairs are asked to keep their members informed.

Written by: Elske Haberl, IFAC Secretariat

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

Acknowledgement to IFAC would be appreciated.

## IFAC Papers-OnLine numbering

Due to an error outside of the control of IFAC, IFAC officials, etc. the numbering of IFAC Papers-OnLine will be slightly different. Volume 57 consists of a single issue. Volume 58 will contain all other 2024 issues, and next year will start with Volume 59 for the whole year.

Please contact the IFAC Secretariat if you have questions regarding this matter.

## IFAC Fellows and Major Awards: Calls Coming Soon!

Plans are underway for the publication of the nomination calls for the 2023-2026 IFAC Fellows and Major Awards. The calls will be published in the next issue of this Newsletter (October 2024), as well as on the IFAC website. Frank Allgöwer is serving as IFAC Awards Committee Chair for 2023-2026.

The IFAC Fellow Award is given to persons who have made outstanding and extraordinary contributions in the field of interest of IFAC, in the role as an Engineer/Scientist, Technical Leader, or Educator. The first Fellows were elected at the IFAC World Congress in Prague in July 2005. Please note that the Fellows are awarded on a triennial basis! The Fellow Selection Committee (FSC) for the 2023 - 2026 triennium is chaired by John Baillieul.

The IFAC Major Awards are:

The **Giorgio Quazza Medal** recognizes outstanding lifetime contributions of a researcher and/or engineer to conceptual foundations in the field of systems and control. This IFAC award, created in 1979, is a memorial to the late Giorgio Quazza, a leading Italian electrical and control engineer who served IFAC in many capacities in a most distinguished manner. The medal is presented by the President at each IFAC Triennial Congress at the Opening Ceremony. A prize is presented to the recipient together with the medal. Chair: Tamer Basar

The **Nichols Medal**, created in 1996, recognizes outstanding contributions of an individual to design methods, software tools and instrumentation, or to significant projects resulting in major applications and advancement of control engineering. The spirit is captured by the name of Nathaniel Nichols, one of the pioneers of control engineering. The medal is awarded by the IFAC Council on the recommendation of a selection committee. A monetary prize is presented at the IFAC World Congress to the recipient together with the medal. Chair: Masayochi Tomizuka

The **Manfred Thoma Medal**, created in 2015, recognizes outstanding contributions of a young researcher and/or engineer under the age of 40 to the field of systems and control in its widest sense. It is named after Manfred M. Thoma, a leading contributor to the field of control and to IFAC, and supporter of the careers of many young scientists. The medal is awarded by the IFAC Council on the recommendation of a selection committee. A monetary prize is presented to the recipient together with the medal. Chair: Silviu Nikulescu.

**Industrial Achievement Award:** This is an IFAC award to an individual, or a team of individuals, who has made a significant contribution to industrial applications of control. The award is given in technical fields covered by IFAC. The selection is based on industrial achievements measured in terms of: Inventions in the control area, engineering significance of

products and projects, industrial leadership promotion of control technology in industry, Impact of patents, and international recognition. Chair: Francesco Borrelli.

**High Impact Paper Award:** This IFAC Award was introduced in 2009 and first awarded in 2011. It acknowledges the impact of a paper published in any of the official IFAC journals on the broad areas of Automatic Control theory and application. A monetary prize is presented to the recipient together with a plaque. Chair: Li-Chen Fu.

Further information is available at: [www.ifac-control.org/awards](http://www.ifac-control.org/awards)

Submitted by: Frank Allgöwer (DE), IFAC Awards Committee Chair

## Transition: David Mayne 1930-2024

David Quinn Mayne, born on 23 April 1930 in Germiston, ZA, passed away on 27 May 2024 in Oxford, UK at the age of 94.

David obtained the BSc.(Eng) in Electrical Engineering at the University of Witwatersrand (Wits) after which he lectured there from 1950 to 1954. He subsequently worked for two years as an electrical engineer at the British Thomson-Houston Company, Rugby, England, before returning to Wits. Back at Wits, David developed a course on automatic control and completed the MSc.(Eng) degree. He then applied for a research position at Imperial College London, and impressed by his MSc thesis, John Westcott appointed him as a lecturer in 1959.

While lecturing at Imperial College London, David obtained the DSc (Eng) and PhD degrees from the University of London in 1967 under the supervision of John Westcott. He was a Research Fellow at Harvard in 1971, and upon his return to Imperial College, was appointed Professor of Control theory. He served as the head of the Department of Electrical Engineering at Imperial from 1984 to 1988, after which he joined the Department of Electrical and Computer Engineering at University of California, Davis, where he stayed until 1996. Subsequently, he returned to Imperial College as Professor Emeritus and Senior Research Investigator in the Control and Power Research Group of the Department of Electrical and Electronic Engineering. Recent tributes to David by his colleagues at Imperial College and UC Davis can be found here ([imperial.ac.uk/news/253973/professor-david-mayne-freng-frs-1930/](http://imperial.ac.uk/news/253973/professor-david-mayne-freng-frs-1930/)) and here ([ucdavis.edu/news/memorial-professor-emeritus-david-q-mayne](http://ucdavis.edu/news/memorial-professor-emeritus-david-q-mayne)).

David had an illustrious academic career that extended well beyond normal retirement age – he published his last journal paper at the age of 91! He received many accolades for his achievements, some of which are listed here ([https://en.wikipedia.org/wiki/David\\_Mayne](https://en.wikipedia.org/wiki/David_Mayne)). Awards related to IFAC include being appointed as an IFAC Fellow in 2006, receiving the first IFAC High Impact Paper Award in 2011, and

receiving the IFAC Giorgio Quazza Medal in 2014 for “seminal contributions to optimal estimation and control theory”. The Quazza Medal was awarded to David in the country of his birth at the 19th IFAC World Congress held in Cape Town, South Africa, in 2014 – the award hand-over can be viewed here (see video). [icloud.com/icloudrive/046V2uy1cCx62GLjQJeDQRqQQ#IFAC2014%5FQuazza%5FMayne](https://icloud.com/icloudrive/046V2uy1cCx62GLjQJeDQRqQQ#IFAC2014%5FQuazza%5FMayne)

David was an inspiring person whose research and humanity positively impacted the lives of a great many colleagues, students and friends related to IFAC and the broader control community. A small sample of memories is included here to celebrate David's legacy.

Ian K Craig (IFAC President 2011-2014)

“The news of David Mayne's passing fills me with deep sadness. David was not only a highly esteemed champion in the field of MPC, making groundbreaking contributions throughout its history, but also a wonderful person. I will greatly miss his advice, our discussions about MPC and the world, his mentorship, and especially his warm presence. The control field has lost one of its giants, and we have all lost a dear friend and mentor. Thank you so much, David, for everything. We will miss you dearly.”  
Frank Allgöwer (IFAC President 2017-2020)

“I first met David at the IFAC NOLCOS 1995 in Lake Tahoe. At the time, I was a PhD student at ETH. This was a turning point in my career and life. The NOLCOS was attended by “the fathers” of nonlinear control: my advisor Alberto Isidori, David Mayne, Petar Kokotovic, Art Krener, Jan Willems, to name a few. My meeting with David was instrumental to my move to London.

Incidentally, I also had my first encounter with what would become my most prolific co-author: Romeo Ortega. He was having a heated argument over an adaptive control issue with Riccardo Marino, with Art Krener acting as moderator.

Alberto Isidori introduced me to David. Apparently, the Control Group at Imperial College was considering appointing a “nonlinear control lecturer”. I very briefly talked with David – he was already a legend in my young eyes – but still remember his gentle ways. I interviewed in October at Imperial and was offered a post as Lecturer which I accepted. I then joined Imperial in March 1996. The interview day was surreal: I was greeted by Richard Vinter; then taken for a brisk technical walk across Hyde Park by David Limebeer; and then had lunch with them together with Martin Clark, and David. The formal proceedings were an actual interview – that David attended despite his Emeritus status – and a seminar. I can still see him at the far corner of the table reading my papers and

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smiling. For some unknown reason I was not worried: David smile was supportive, encouraging, and warm. After the seminar, I waited 20 minutes outside the HoD office and then was offered a job, which I accepted.

Being a member of the Control Group meant that immediate bonds of friendship were forged. Nothing was planned or organized, but we often had breakfast together at 8-ish; attended the Proms; had a quick Pizza in the evening; or spent part of the weekend in search of eccentric antiquities in the countryside.

Having been at Imperial for almost 30 years, most of which across the corridor from David, has left me many memories. David would always arrive very early in his office and was regularly busy at work. He would however always have time for a chat, suggestions, encouragements, and for providing support.

There were also a few awkward moments. On occasion, David would stop me in the corridor and say: "I have to tell you once again how fortunate we are to have you here". This was most embarrassing: my reply was "I am actually lucky to be here, a part of what you have created".

I had the honour to host David 80<sup>th</sup> birthday at the Royal Society. This was an extraordinary event attended by friends, family, and students. The scientific quality of the event was second to the emotional content. Everyone was genuinely happy to celebrate David, and he was the image of happiness. At the end of a 3-day scientific and social marathon, Jo approached me and said "You made him happy". This was the highest endorsement I could have hoped for.

In conclusion, I am grateful to David for having invited me to interview at Imperial and for having been a constant positive presence for almost 30 years. No doubt, his presence will be felt for a long time and will continue impacting generations of control researchers around the world."

Alessandro Astolfi (IFAC Technical Board vice-chair)

"David was a very close friend, we interacted a lot both personally and professionally, our families also saw each other many times. I had the great pleasure of staying at Elgin Crescent and its lovely garden many times, both alone and with my wife. It was a great pleasure to interact with David, he was very patient and often provided great insightful feedback. I remember one a conference on system identification, where Torsten Bohlin and I presented a joint paper on the maximum likelihood method and its application in the paper industry. David gave extremely good feedback and we had a very nice dinner with him afterwards. David's daughter Susan recently visited us in Lund and we had a great time talking about old memories."

Karl Åström (1987 Giorgio Quazza Medal winner)

I first met David at the Joint Harvard-Imperial College Conference on Games and Information

Structures, held at Imperial College, in June 1972, which I had attended as a Harvard Research Fellow. And the most recent encounter I had with David, which unfortunately turned out to be the last one, was 50 years later (precisely July 13, 2022), again in London, at an ECC VIP dinner at the Royal Thames Yacht Club. We sat at the same table, with also Alberto Isidori and our wives. The five of us had wonderful conversations, and David appeared to be in excellent health and as sharp as ever. Throughout the intervening 50 years, there were many occasions (conferences, my visits to Imperial College, and sitting on committees) that created the opportunities for me to talk to him and indulge in scientific discussions as well as delve into social issues. David is one of the most humble individuals I have known in our circles, showing utmost humility in spite of establishing himself as a towering figure in our community through his foundational contributions. To list from my perspective just a few of these contributions (and this is definitely not a complete list): his creation of differential dynamic programming, which made a revolution as a computational tool in the early 1970's, still enjoying today wide recognition; his follow-up computational work significantly expanding the arsenal of numerical algorithms for optimization and particularly optimal control; his innovative research in model-reference adaptive control for both discrete- and continuous-time systems; and pioneering the powerful receding-horizon based control design approach for linear and nonlinear systems, establishing connections with model predictive control, and unifying the two diverse communities through his most influential plenary lectures and review papers. I was shocked to hear his passing, which I view as a major loss for the control community, as well as the broader scientific community."

Tamer Basar (2005 Giorgio Quazza Medal winner)

"I first met David in 2007 when doing a sabbatical at Imperial College. David made me feel right at home, and I soon joined his regular lunch group, which included Martin Clark and Richard Vinter. During this time, my family and I first got to experience the Maynes' famous hospitality when we had dinner at their house in Notting Hill. We subsequently stayed with David and Jo during the IFAC Council and related meeting that took place in London in June 2009. Since then they have graciously hosted me whenever I passed through London, first in Notting Hill and later at their apartment in St. Petersburg Place.

David received many awards for the seminal contributions that he made to our field, including two IFAC Major Awards – the first person to do so. David and Jo travelled to Milan in 2011 and Cape Town in 2014 to receive the IFAC High Impact Paper Award and the Giorgio Quazza Medal, respectively. My wife Andrie and I met up with the Maynes on both occasions, and in Cape Town, Andrie had the pleasure of hosting Jo and their daughter Ruth on a tour of the surrounding area. One of the highlights of my career as IFAC President was to present the Giorgio Quazza Medal to David at the IFAC World Congress in Cape Town.

My last visit to the Maynes in London was in 2022 during the IFAC meetings that were held at Imperial College. David, at 92, appeared in good health but was plagued by a knee injury that he picked up while jogging in Hyde Park a few years earlier. We lost contact after that, and I heard from colleagues at Imperial that David and Jo had moved to a care home in Oxford. On a recent visit to Europe, Ruth arranged for me to see David one more time – we had lunch together in Oxford on 9 April 2024.

David was one of the best role models one could have. Besides being an outstanding academic, he was also a loving husband and father. He was a humble man despite his many achievements and a considerate person that treated everyone he met with kindness, dignity and respect. I will miss him dearly."

Ian K Craig (IFAC President 2011-2014)



David Mayne receiving the Giorgio Quazza Medal in a presentation made by Ian K Craig on 24 August 2014 at the IFAC World Congress in Cape Town, ZA

"David's major contributions to control theory undisputedly consist in a series of works that led to the development of a rigorous mathematical basis for the analysis of model predictive control algorithms. I personally had the pleasure, at the award ceremony in the opening session of the 2011 IFAC Congress in Milano, to hand him the "High Impact Paper Award" for his work "Constrained model predictive control: stability and optimality". The award in question was the inaugural award of a newly established series of major IFAC awards, meant to acknowledge fundamental works that had a profound and lasting influence on the development of control science. David made also numerous seminal contributions to systems and control science in various other areas of research, notably filtering, parameter estimation and optimal control. But there is another, different, field in which David is, and will be, remembered as a leader with a vision. David, in collaboration with Roger Brockett, was the promoter of an event that it is fair to acknowledge has marked the official birth of the field of geometric nonlinear control theory: the NATO Advanced Study Institute "Geometric methods in system theory", held at the Imperial College in London in September of 1973. As Roger stressed 40 years later, this event "brought together a group of talented people who found the subject interesting and whose subsequent work helped sustain the field for the next several decades". It was at this meeting in London that I first met David. Of course, I was immediately fascinated by his gentle personality, his commitment to education and

mentoring, excellence and inspirational leadership. Since then, we have constantly remained in touch, collaborating in various forms, until very recently, in services to our professional community. I will greatly miss the opportunity to interact with him from time to time.”

Alberto Isidori (IFAC President 2008-2011; 1996 Giorgio Quazza Medal winner)

The academic journey is often filled with moments of inspiration and mentorship that leave an indelible mark on one's career. For me, meeting David was one such pivotal moment. His ability to demystify complex mathematical concepts with clarity and warmth set him apart as not just a brilliant mind but also a generous teacher and friend.

I first met David at a one-day workshop in London in 1998, where he was one of the speakers. I was a PhD student at Cambridge, grappling trying to extend H-infinity control ideas to optimal control with constraints and nonlinearities. I hoped to gain some insights from the speakers that day. I quickly discovered why others held David in such high regard. He had a remarkable talent for explaining the intuition behind his ideas, blending just the right amount of mathematics to enhance clarity without causing confusion. During his talk, I had a profound “aha” moment as he explained how to formulate causality and feedback in an optimal control problem. I was delighted to hear a fellow South African shine some light on a difficult problem that we were both working on in the same country. Unfortunately, I was too shy to introduce myself to David that day. I deeply regret not doing so, as I missed the chance to know sooner what a warm and wise person he was.

It wasn't until after submitting my PhD that I finally mustered the courage to introduce myself to David at CDC 2000. That marked the beginning of a long collaboration and friendship that profoundly impacted my work. As a post-doc at Cambridge, I frequently visited Imperial to work with David, Richard Vinter, and Sasa Rakovic. It was a privilege to watch David meticulously work out mathematical arguments in real-time, debunking the myth that mathematicians do their best work when they're young.

I don't recall having a scanner at Cambridge, so I often faxed pages of handwritten theorems and proofs to David during our collaboration. My haste to share ideas, coupled with a bit of laziness, meant these faxes were often less than polished. What amazed me was David's prompt and elegant responses. Often, the very next day, he would send back beautifully typeset LaTeX documents, complete with figures,

that clarified my thoughts and extended my results.

Through these numerous exchanges of ideas, mostly via fax, hundreds of emails and LaTeX documents, David shaped the way I approach research today. He was incredibly patient, offering friendly, detailed, and constructive feedback that helped me communicate my ideas more effectively. One key lesson I learned from him was the importance of precisely defining the problem you're trying to solve, even if it doesn't lend itself to a computationally tractable solution (yet). The second lesson was to continually refine both the problem definition and its solution to enhance clarity without sacrificing rigour. Easy reading requires hard writing.

I was extremely fortunate to eventually join Imperial as a faculty member and have an office right next door to David. He was always willing to listen patiently whenever I was excited because I had a new result to share or needed to vent my frustrations.

My wife and I will miss the lunches, cocktails, and good wine (South African, of course) we had with him and Jo at their lovely home. These were relaxed, intimate moments where they shared many experiences from their lives and careers. I will miss my dear friend very much. Eric Kerrigan (TC Chair Optimal Control 2017-2023)

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

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Google Play [bit.ly/3lazFjx](https://bit.ly/3lazFjx)  
Web version [ifac.flog.live](https://ifac.flog.live)

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

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**The IFAC Calendar of Conferences is constantly updated as additional technical events (Workshops, Symposia, and Conferences) are approved. Please check back often for the current status. The complete version of the IFAC Calendar of Conferences is available online at:**

[www.ifac-control.org/conferences/@@conference\\_view](https://www.ifac-control.org/conferences/@@conference_view)

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Innovation und Technolog

## Calendar of IFAC Conferences

Title	2024	Place	Further Information
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://conferences.ifac-control.org/micnon2024/">conferences.ifac-control.org/micnon2024/</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="mailto:fosbe2024.iceht.forth.gr">fosbe2024.iceht.forth.gr</a> <a href="mailto:fosbe2024@iceht.forth.gr">fosbe2024@iceht.forth.gr</a>
2 <sup>nd</sup> Conference on Modelling and Simulation SIMS EUROSIM 2024	September 10 – 12	Oulu Finland	<a href="http://scansims.org/events.php?sid=39&amp;src=db1557571001">scansims.org/events.php?sid=39&amp;src=db1557571001</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>
Title	2024	Place	Further Information
3 <sup>rd</sup> SACAC Control Conference Africa (in cooperation with IFAC) CCA 2024	September 16 – 17	Balacava Mauritius	<a href="http://cca2024.org/">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>
7 <sup>th</sup> IFAC Conference on Engine and Powertrain Control, Simulation and Modeling E-COSM 2024	Oct./Nov. 30 – 01	Dalian China	<a href="http://ecosm2024.dlut.edu.cn/">ecosm2024.dlut.edu.cn/</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="http://icinco.scitevents.org">icinco.scitevents.org</a> <a href="mailto:icinco.secretariat@insticc.org">icinco.secretariat@insticc.org</a>
18 <sup>th</sup> INSTICC/IFIP IFAC Workshop on Enterprise Integration, Interoperability and Networking EI2N 2024	November 21 – 22	Porto Portugal	<a href="http://in4pl.scitevents.org/EI2N.aspx">in4pl.scitevents.org/EI2N.aspx</a> <a href="mailto:in4pl.secretariat@insticc.org">in4pl.secretariat@insticc.org</a>
5 <sup>th</sup> INSTICC et al. International Conference on Innovative Intelligent Industrial Production and Logistics IN4PL 2024	November 21 – 22	Porto Portugal	<a href="http://in4pl.scitevents.org/Home.aspx">in4pl.scitevents.org/Home.aspx</a> <a href="mailto:in4pl.secretariat@insticc.org">in4pl.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>
Title	2025	Place	Further Information
11 <sup>th</sup> Vienna International Conference on Mathematical Modelling MATHMOD 2025	February 19 – 21	Vienna Austria	<a href="http://mathmod.at/">mathmod.at/</a> <a href="mailto:mathmod@acin.tuwien.ac.at">mathmod@acin.tuwien.ac.at</a>

## Calendar of IFAC Conferences

Title	2025	Place	Further Information
12 <sup>th</sup> IFAC Symposium on Intelligent Autonomous Vehicles IAV 2025	May 08 – 10	Phoenix, AZ USA	
14 <sup>th</sup> IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems DYCOPS 2025	June 16 – 19	Bratislava Slovakia	<a href="http://www.dycops2025.org/">www.dycops2025.org/</a> <a href="mailto:miroslav.fikar@stuba.sk">miroslav.fikar@stuba.sk</a>
2 <sup>nd</sup> IFAC Workshop on Control of Complex Systems COSY 2025	June/July 30 – 02	Gif-sur-Yvette France	
9 <sup>th</sup> IFAC Symposium on System Structure and Control SSSC 2025	June/July 30 – 02	Gif-sur-Yvette France	
19 <sup>th</sup> IFAC Workshop on Time Delay Systems TDS 2025	June/July 30 – 02	Gif-sur-Yvette France	
11 <sup>th</sup> IFAC Conference on Manufacturing Modelling, Management and Control MIM 2025	June/July 30 – 03	Trondheim Norway	<a href="http://conferences.ifac-control.org/mim2025/">conferences.ifac-control.org/mim2025/</a> <a href="mailto:mim2025@mtp.ntnu.no">mim2025@mtp.ntnu.no</a>
11 <sup>th</sup> IFAC Symposium on Robust Control Design ROCOND 2025	July 02 – 04	Porto Portugal	
6 <sup>th</sup> IFAC Workshop on Linear Parameter Varying Systems LPVS 2025	July 02 – 04	Porto Portugal	
15 <sup>th</sup> IFAC Workshop on Adaptive and Learning Control Systems ALCOS 2025	July 02 – 04	Mexico City Mexico	<a href="http://alcos2025.itam.mx">alcos2025.itam.mx</a> <a href="mailto:alcos2025@itam.mx">alcos2025@itam.mx</a>
14 <sup>th</sup> IFAC Symposium on Robotics ROBOTICS 2025	July 15 – 18	Paris France	
10 <sup>th</sup> IFAC Symposium on Mechatronic Systems MECHATRONICS 2025	July 15 – 18	Paris France	
13 <sup>th</sup> IFAC Symposium on Nonlinear Control Systems NOLCOS 2025	July 23 – 25	Reykjavik Iceland	
15 <sup>th</sup> IFAC Symposium on Intelligent Manufacturing Systems IMS 2025	September 11 – 12	Koszalin Poland	
7 <sup>th</sup> IFAC Symposium on Telematics Applications TA 2025	September 15 – 18	Padova Italy	
1 <sup>st</sup> IFAC Workshop on Engineering and Architectures of Automation Systems EAAS 2025	September 15 – 18	Padova Italy	
7 <sup>th</sup> IFAC Conference on Intelligent Control and Automation Sciences ICONS 2025	September 15 – 18	Padova Italy	
5 <sup>th</sup> AACC Conference on Modeling, Estimation and Control MECC 2025	October 5 – 8	Pittsburgh, PA USA	
Title	2026	Place	Further Information
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>