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IFORS NEWS

INTERNATIONAL FEDERATION OF OPERATIONAL RESEARCH SOCIETIES

From the President

Héctor Cancela <cancela@fing.edu.uy>

Welcome to the September 2026 issue of the IFORS Newsletter!

I am very glad to report that our recent IFORS triennial conference, held at the University of Vienna last July, was a hugely successful event. I want to thank the organizing Committee chairs Karl Dörner, Jan F. Ehmke and Richard F. Hartl, and the other members of the committee, with special mention to Carina Artner-Konecny, for welcoming us to their city and university, and preparing everything during more than three years for ensuring that we have the best venue, with everything in place to have a well organized conference, with all the academic and also all the social activities. Danke schön Carina, Karl, Jan, Richard!

I want to thank Andrés Medaglia, the Program Committee chair, and the more than 20 members of the PC, for their work and contribution in ensuring a technical program of excellent quality, with the best plenary and tutorial speakers and with a huge number of contributed abstracts which reflect the state of the art of our discipline. Gracias Andrés, thanks to all!

I want to thank the IFORS VP, Rina Schneur, and IFORS secretary, Gavin Blackett, for also accompanying the organization effort and working together with the PC and organization chairs, ensuring that the traditions and standards of IFORS are being upheld. Thank you, Rina and Gavin!

To the many other people who contributed to the conference, so many that I can not mention all, my heartfelt gratitude for their effort and involvement!

I am very proud to be part of the IFORS community, and I want to congratulate every participant, student, scholar and practitioner, who attended the conference to share and learn, to talk about their experiences and to learn from other colleagues.

In a world where mistrust in science is growing, we have come to this event sure that scientific knowledge and evidence-based decision making are well grounded endeavors and can have a positive impact. In a moment where many actors make decisions purely on selfish interests, we have come thinking that cooperation is the way forward, that knowledge is a common heritage of all humanity and that it grows when shared.

In a society where discrimination still exists and hate speech reappears, we have come to think that it is important to promote equal opportunities, and we are proud of the birth of the GLOW initiative, which has the goal of connecting and promoting women in Operations Research (OR) from around the globe.

We have organized our triennial conference with the certainty that our discipline can contribute to better decision making , to improve the life of all citizens, and to ensure a sustainable world. These endeavors are only achievable with the contribution of every member of our global community; we welcome you all to engage with us!

Reproduction of materials printed here is welcome. We do request that the source, IFORS News, be acknowledged.

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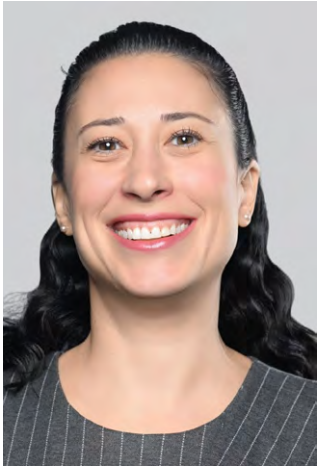
From the Editor In Chief

Sibel Alumur Alev <sibel.alumur@uwaterloo.ca>



Welcome to the September 2026 issue!

Summer is always a busy season for conferences, and this year the triennial IFORS Conference was held in the beautiful city of Vienna from July 12 to 17, 2026. It was a truly memorable event that exceeded all expectations. From the launch of GLOW: Global Leadership in OR for Women to the outstanding technical program, inspiring plenary and keynote talks, engaging social events, and memorable excursions, the week was filled with exceptional experiences. Beyond the excellent scientific program, the conference was a wonderful opportunity to reconnect with colleagues, meet new members of the OR community, and celebrate the many accomplishments of our profession. Below are a few photos capturing highlights of the conference through my lens, along with a video we prepared for you.

▲ *IFORS Administrative Committee meeting held the day before the conference.*

▲ *Welcome reception.*

▲ *GLOW panelists with their glowing backpacks.*

▲ *Afternoon excursion.*

▲ *IFORS Administrative Committee members.*

▲ *With a team of IFORS Newsletter Section Editors.*

▲ *IFORS 2029 will be held in Calgary, Canada.*

▲ *Organizers and the Administrative Committee wrapping up the conference after the farewell party.*

Not surprisingly, this issue is filled with highlights from the conference. We begin by announcing the recipients of the IFORS Hall of Fame, IFORS Fellows, and the IFORS Prize for OR in Development.

The GLOW article recaps the many activities held during the conference, including the Circle of Connection roundtable mentorship and networking event, the Leadership Pathways panel discussion, and the launch reception.

The OR for Development section features an article on integrating analytics and Operations Research to support healthcare decision-making in developing countries. It explores how OR can bridge the gap between predictive insights and actionable decisions in resource-constrained health systems.

The OR Impact article highlights the role of OR in supporting the introduction of a zero-emission bus fleet in Salzburg.

As usual, this issue includes several conference reports showcasing the global reach of OR, beginning with a feature on the IFORS Conference itself.

Last but certainly not least, we feature a book review of "Multi-attribute decision-making: bridging theory and practice".

As always, I extend my sincere thanks to all of our Section Editors for their outstanding work and for helping make this issue possible. I also thank all of our authors for their valuable contributions. I look forward to connecting with you again in our next issue.

Sincerely,
Sibel Alumur Alev
Editor-in-Chief

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International Federation of Operational Research Societies

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IFORS Hall of Fame 2026

Written by **Janny Leung** (Past President) <jannyleung@um.edu.mo>

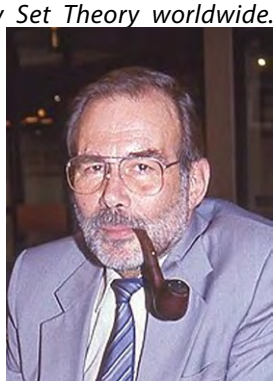
The IFORS Hall of Fame was created in 2003 to ***celebrate the significant contributions made by the Operational Research pioneers to methodology, to applications, to teaching, to the advancement of IFORS, to OR for development, and to the international dissemination of OR knowledge and understanding***.

Twenty-three giants of our field were inducted in 2004 and 2005. From 2023 onwards, three new inductions into the IFORS Hall of Fame will be made every three years, with the award ceremony being held at the IFORS triennial conference. In 2023 in Santiago, ***Clovis Gonzaga***, ***Fred Hiller*** and ***Ailsa Land*** were inducted into the IFORS Hall of Fame. The list of all Hall of Famers (and their biographies) can be found on the IFORS webpage: https://www.ifors.org/ifors-hall-of-fame/.

▲ **From left to right:** Paolo Toth (Selection Committee member), Janny Leung (Selection Committee chair), Andrés Weintraub (2026 Hall of Fame inductee), Jon Liebman (accepting the award on behalf of Judith Liebman), Thomas Magnanti (Selection Committee member), Brigitte Werners (accepting the award on behalf of Hans-Jürgen Zimmermann), Héctor Cancela (IFORS President).

At the ceremony held at the IFORS Vienna 2026 conference, we celebrate and honour three new inductees into the IFORS Hall of Fame:

Prof. Dr. Hans-Jürgen Zimmermann *was an eminent engineer, economist and one of the most influential pioneers in Operational Research and Fuzzy Set Theory worldwide. In a career spanning over fifty years, his ground-breaking work in integrating OR, AI and advanced mathematics in industry applications demonstrates how these fields can be combined to yield sustainable, robust and productive solutions*.



To our greatest regret, Prof. Dr. Zimmermann passed away in May 2026 shortly after his 92nd birthday, but he was informed of his induction into the IFORS Hall of Fame some months earlier. Prof. Dr. Brigitte Werners, his former student and colleague, accepted the award on his behalf. Prof. Dr. Zimmermann was known for his commitment to teaching and his strong conviction to combine scientific theory with practical applications. He founded one of the earliest OR software firms in 1969, which now employs over 1000 people. He is fondly remembered for his red Porsche and dinners at his home, but more so for his innovative spirit and his collaborative and constructive approach that has inspired so many of his students, staff and colleagues.

Professor Judith Stenzel Liebman *was a researcher, practitioner, educator and a leader in the field of Operational Research. She was the first (and only) female President of the Operations Research Society of America (ORSA). Her many pioneering achievements have inspired countless women and men in OR*.

Sadly, Prof. Judith Liebman passed away in 2023. We are delighted that her husband, Prof. Jon Liebman, and family members (son Christopher and wife Gigi, daughter Rebecca and husband Jeff, son Michael) all came to Vienna to accept the award on her behalf. In his speech, Prof. Jon Liebman told the audience about the many ground-breaking aspects of Prof. Judith Liebman's remarkable career. Graduating with a B.S. in physics in 1958, Prof. Judith Liebman's first job was at Convair Astronautics doing calculations for the Atlas missile. Later, she would develop the Fortran code to enumerate molecular configurations in some of the earliest work on determining protein structures. Prof. Jon Liebman also let on that it was he who got Prof. Judith Liebman started in Operational Research, telling her "You'd like this stuff" after he took an introductory OR course. Prof. Judith Liebman took the same course later, "and she was hooked"! Prof. Judith Liebman overcame many challenges and broke through many glass ceilings in her career. According to Prof. Jon Liebman, one of her greatest joys was in helping others succeed in the profession. All who have met her will remember her warmth and generosity.

Professor Andrés Weintraub *is a pioneer in the application of optimization and operational research methodologies to forestry, mining industries and natural resources management. His extensive collaborations in large-scale projects with industry and government organisations have helped to advance the global societal impact of operational research*.

In his speech, Prof. Weintraub described how he (together with Hugo Scolnik and Nelson Macaulan) established ALIO and built connections to IFORS and the global OR community. >>

>> His pioneering work in natural resources and other industries was motivated by his belief that OR can help to improve decision and policy-making and improve the quality of life for people. Prof. Weintraub also spoke of the need to develop young talent and the future generations of operational researchers. Prof. Weintraub quoted a famous verse in Spanish poetry, "Caminante no hay camino se hace camino al andar (Traveler, there is no road, the road is made as you walk)" to describe his own OR journey. Young operational researchers can take inspiration from this and be encouraged to break new ground in their careers.

We celebrate and honour these three pioneers of Operational Research. Their efforts have expanded the reach and impact of the field worldwide and nurtured the next generations of operational researchers. They are an inspiration to us all! 🌍

IFORS Fellow Award

Written by **Janny Leung** (Past President) <jannyleung@um.edu.mo>

The IFORS Administrative Committee approved the establishment of the **IFORS Fellow Award** in 2020. This award serves to recognize a distinguished individual's contribution to operational research, especially in the promotion and service to international operational research and its communities.

▲ IFORS Fellows group photo taken at the IFORS 2026 Conference in Vienna.

In the first year of the Award in 2021, all IFORS Past-Presidents became IFORS Fellows. In subsequent years, a Selection Committee (consisting of the three immediate Past Presidents of IFORS) reviewed all nominations and recommended the Fellows to be awarded to the IFORS Administrative Committee. No more than nine Fellows can be awarded each year.

The first IFORS Fellows Award Ceremony was held at the IFORS Conference in Santiago in 2023, where all Fellows from 2020 to 2023 were presented with the Fellows certificates. See https://www.ifors.org/ifors-fellows/ for the list of IFORS Fellows.

At the IFORS conference in Vienna, the IFORS Fellows of 2024 (**Jacek Błażewicz**, **Bruce Golden**, **Celso Ribeiro** and **Marino Widmer**) and the IFORS Fellows of 2025 (**Adiel Teixeira de Almeida**, **Shmuel Oren** and **Janny Leung**) were presented with their Awards by the IFORS President Prof. Héctor Cancela. Finally, the IFORS Fellows of 2026 were announced. They are **Cathal Brugha**, **Laureano Escudero**, **Richard Hartl**, **Mary Magrogan** and **Silvano Martello**.

It was wonderful that "local" conference organizer Prof. Richard Hartl became a Fellow this year, and that Mary Magrogan, who had been the IFORS Secretary from 2002 to 2023, was able to make the trip from the USA to receive the Award in person. At the end of the ceremony, all IFORS Fellows from 2020 onward in the audience were invited to the stage for a group photo. Congratulations to all IFORS Fellows! 🌍

IFORS Prize for OR in Development 2026

Written by **Margaretha Gansterer** (Chair of the committee) <margaretha.gansterer@aau.at>

Since 1987, IFORS has presented the IFORS Prize for OR in Development at each triennial conference to recognize and showcase outstanding applications of operations research that address important challenges in developing economies and economies in transition. Past winners and finalists have presented work that has improved healthcare, well-being, education, disaster relief, public investment, and many other areas across Africa, Asia, and Latin America.

The jury for this year's prize consisted of Margaretha Gansterer (Austria, EURO), Chair; Mario Guajardo (Norway, EURO/ALIO); Dmitry Krass (Canada, NORAM); Tava Olsen (New Zealand, APORS); Shadi Sharif Azadeh (Netherlands, EURO/NORAM); Heletje van Staden (Ireland, EURO/Africa); and Guiying Yan (China, APORS).

During the 24th IFORS Triennial Conference, held in Vienna from July 12 to 17, 2026, the finalists for the IFORS Prize for OR in Development 2026 presented their work. >>

▲ Professors M. Gansterer (Chair), Sebastian Maldonado (Universidad de Chile), Carla Vairetti (Universidad de Chile), Fredy Troncoso (Universidad del Biobío), Richard Weber (Universidad de Chile), Ignasi Neira, Leonardo J. Basso (Universidad de Chile)

>> The results of the competition were announced during the closing ceremony.

The winner, receiving the grand prize of US$4,000, was "NIRSE-CL: Design, Monitoring, Real-World Effectiveness and Impact Assessment of Chile's Universal Immunization Strategy against RSV", an application of operations research techniques to public healthcare in Chile. The work was presented by Leonardo J. Basso. The other members of the winning team are Felipe del Solar, Gonzalo Diaz, Marcel Goic, Ignasi Neira, Miguel O'Ryan, Denis Saure, Charles Thraves, Juan Pablo Torres, Natalia Trigo, and Amal Zgheib.

The panel of judges also selected a runner-up, which received a prize of US$2,000. The recognized work, "Prosecutor HeredIA: Analytics Meets Artificial Intelligence to Efficiently Combat Organized Crime," was presented by Richard Weber and co-authored by Carla Vairetti, Sebastián Maldonado, and Fredy Troncoso.

Congratulations to the two successful teams!

Announcements

"Doing good through OR" - IFORS Online Resources for Development and Developing Countries

Gerhard-Wilhelm Weber <gerhard.weber@put.poznan.pl>, **Jinal Parikh** <jinal.parikh@ahduni.edu.in>, **Sarah Fores** <manager@euro-online.org>, **Cathal Brugha** <cathal.brugha@ucd.ie>, **Sadia Samar Ali** <ssaali@kau.edu.sa>

For 67 years, the *International Federation of Operational Research Societies* (*IFORS*), which now represents 56 national societies, has been dedicated to "*doing good through Operational Research* (*OR*)." To support the global community and developing countries in particular, IFORS offers a specialized resource hub: *Developing Countries Online Resources* *. This platform provides open, free access to *OR-for-development* materials for researchers, academics, and scholars. It also serves as a collaborative space to share work-in-progress, learn from peers, and foster constructive discussion (https://dc.ifors.org/index.php/Main_Page).

Led by eminent global mentors - including past *IFORS* President *Dr. Elise del Rosario* and former UK *OR Society* President and former *IFORS* Vice President *Mrs. Sue Merchant* - the Committee on Web-based Resources on *OR for Development* works tirelessly to curate and distribute these materials. The platform's dynamic, contemporary presentation is credited to the commendable work of designer and webmaster *Mr. Ruel Tan*.

It includes free *Massive Open Online Courses* (*MOOCs*), downloadable free software for *OR*, etc., spanning across various domains of importance including agriculture, community *OR*, communication, education, energy, environment, health, industry, infrastructure, labour, law enforcement, safety, finance, transportation, etc. It also works collaboratively with all regional groupings and member societies of *IFORS* to make the resources more inclusive and global. This homepage has been viewed more than 1,400,000 times.

For instance, one of the latest articles focuses on the critical issue of *"Disaster Risk Decision Resources for Developing Countries"*. *OR* practitioners in developing countries face tight budgets while making critical disaster decisions - from emergency logistics to post-disaster recovery. Because essential disaster data and frameworks are scattered across hundreds of global databases, finding reliable information often wastes vital time. To solve this, two new open-access resources provide *OR* practitioners anywhere with quick, direct access to curated disaster risk reduction materials, replacing tedious searches with immediate insights.

▲ Source: IFORS DC Website.

The history of the *IFORS DC Online Resources* is closely linked to the growth of *IFORS* and *OR* itself, for example through events we helped organize, such as *ICORD* conferences worldwide, *EWG-ORD* workshops in Europe and beyond, *InteriOR* conferences in Indonesia or *Summer Schools* in Ukraine, and the introduction and development of new OR topics such as *OR for Development* or *OR and Neuroscience*.

To explore resources, check for regular updates, or submit open-access (non-copyrighted) materials, please visit the *IFORS Developing Countries Portal*.

** Please note that the portal is currently affected by cyberattacks and we are trying to retrieve all the information as well as to revive the broken link.*

IFORS/Elsevier
Sustainability Analytics and Modeling

Special Issue:
Sustainable Freight Transport and Logistics: Analytics, Optimization and Real-World Applications

Decision Support for a Sustainable World at IFORS 2026

Call for Papers

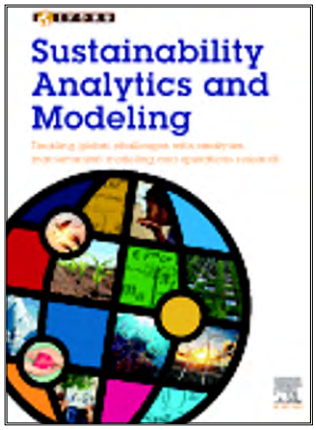
1. AIMS AND SCOPE

Freight transportation and logistics are fundamental enablers of economic development, global trade, and resilient supply chains. The timely and efficient movement of goods is essential for industrial competitiveness, economic growth, and customer satisfaction. However, freight transportation is also a major contributor to global greenhouse gas emissions, energy consumption, and other environmental externalities. Consequently, improving operational efficiency alone is no longer sufficient; logistics systems must also become environmentally, economically, and socially sustainable.

Achieving sustainability in freight transportation presents significant challenges, as efficiency and sustainability objectives are often conflicting. Decisions that minimize operational costs may increase emissions or resource consumption, while environmentally preferable solutions may require additional investments or operational changes. These challenges are further exacerbated by increasing energy costs, climate change, supply chain disruptions, geopolitical conflicts, and growing uncertainty in global markets, all of which demand more resilient and adaptive logistics systems. Addressing these complex and interconnected challenges requires integrated decision-support approaches based on analytical modeling, optimization, simulation, artificial intelligence, and data-driven analytics. Such methodologies enable decision-makers to evaluate trade-offs among economic, environmental, and social objectives, design more sustainable freight systems, and support evidence-based planning under uncertainty.

This Special Issue seeks original contributions that advance the field of sustainability analytics and modeling for freight transportation and logistics. We particularly encourage research that develops innovative mathematical models, optimization methods, simulation frameworks, machine learning approaches, and decision-support systems, while demonstrating their applicability through real-world case studies, industrial collaborations, or public-sector applications. Contributions that provide measurable sustainability impacts, promote reproducible research through publicly available benchmark datasets are especially welcome, as they facilitate transparency, comparison, and further advances in the field.

Papers should include operations research, quantitative modelling and/or analytical approaches, as well as applications to sustainable supply chains that fit the scope of the journal. The research reported in the articles should be based on or inspired by real-world problems and should provide new insights into how to address the challenges associated.



This special issue is dedicated to the **Conference of the International Federation of Operational Research Societies** in Vienna, Austria. Participants of the IFORS 2026 conference are encouraged to submit relevant work to this special issue. We also welcome submissions from the entire community of academics and practitioners working in the field of sustainable freight transport and logistics.

2. TOPICS COVERED

Sustainability Analytics and Modeling publishes articles that develop and apply quantitative methods of analytics and operations research to take on global sustainability challenges. These challenges are many and broad in scope. They involve poverty, hunger, health, well-being, education, equality, water, sanitation, energy, economies, industry, infrastructure systems, smart communities, consumption and production, climate, peace, and justice, among other topics, all of which are targeted by the 17 sustainable development goals (SDGs) of the United Nations (https://www.un.org/development/desa/disabilities/envision2030.html).

Topics that are of interest for this special issue include, but are not limited to:

- Mathematical programming and optimization for sustainable freight transport
- Supply chain network design and charging stations location
- Last mile logistics and vehicle routing
- Decision-support systems for logistics planning
- Container drayage and port-hinterland transport
- Machine learning and predictive analytics for sustainable freight transport
- Rail, maritime, port and terminal logistics
- Logistics and energy management
- Collaborative logistics and circular supply chains
- Warehouse analytics and sustainable warehousing
- Humanitarian and healthcare logistics
- Intersection among logistics and energy management
- Industrial case studies and public-sector applications

3. SUBMISSION GUIDELINES
The APC (Article Publishing Charge) will be covered by IFORS for all papers submitted by December 30th 2026. Submitted papers should be original works and should not have been previously published or currently considered for publication elsewhere. The manuscripts should be prepared according to the Guide for Authors available at https://www.sciencedirect.com/journal/sustainability-analytics-and-modeling/publish/guide-for-authors.

All manuscripts should be submitted electronically using the journal's online manuscript submission system at https://www.editorialmanager.com/samod/default.aspx. When prompted for the article type, please select, "Special issue on Sustainable Freight Transport and Logistics: Analytics, Optimization and Real-World Applications ".

On the Attach Files screen, please submit the Manuscript, Highlights, Cover Letter summarizing the contributions of the paper, and Conflict of Interest Declaration (template available at https://service.elsevier.com/app/answers/detail/a_id/286/supporthub/publishing).

At the Review Preferences screen, you may suggest potential reviewers for this submission and provide specific reasons for your suggestion in the comments box for each person.

Manuscripts submitted after the deadline may not be considered for the special issue and may be transferred, if accepted, to a regular issue.

4. IMPORTANT DATES
Eligible submissions will be immediately submitted to the peer review process by the guest editors.

Accepted papers will be published online immediately. Thus, papers submitted early will also be published well ahead of the scheduled publication date for the special issue.

Beginning of submissions: November 1, 2026

Deadline for submissions: January 31, 2027.

GUEST EDITORS
Rosa G. González Ramírez (Lead Guest Editor)
Faculty of Engineering and Applied Sciences, University of los Andes Chile, Chile.
Center of Advanced Transportation & Logistics Economic Competitiveness (CATLEC)
Email: rgonzalez@uandes.cl

Sibel A. Alumur
Department of Management Science and Engineering, University of Waterloo, Canada
E-mail: sibel.alumur@uwaterloo.ca

Jana Ries
School of Organisations, Systems and People, Faculty of Business and Law, University of Portsmouth, UK
E-mail: Jana.Ries@port.ac.uk

Yasmin Rios Solis
Université de Montpellier- LIRMM
E-mail: yasmin-agueda.rios-solis@umontpellier.fr

Heletjé van Staden
School of Business, University College of Dublin, Ireland.
E-mail: heletje.vanstaden@ucd.ie

GLOW Lights Up IFORS 2026: How the Launch Went in Vienna

By **Yasmin A. Rios Solis** <yasmin.riossolis@tec.mx>

After months of preparation, GLOW: Global Leadership in OR for Women officially launched at IFORS 2026 in Vienna, and the response exceeded every expectation. Across three events, GLOW brought together well over 700 participants (women and men) from the Operational Research community, and the energy in the room made one thing clear: the initiative has struck a chord!

Global Leadership in OR for Women

Circles of Connection: mentoring in motion
The launch opened on Monday with Circles of Connection, a mentoring and networking session that drew around 100 participants, mostly women, but also several men keen to support women's advancement in the field. The format was simple and effective: small tables, each built around a single discussion question, with participants rotating to a new table every ten minutes. The rotation kept energy high and ensured everyone heard a wide range of perspectives rather than settling into a single conversation.

What stood out most for the GLOW organizers were the comments and questions raised by participants themselves. Many came from early-career researchers and students, and their input gave GLOW a clearer sense of how to bring the younger generation's perspective into the initiative. It was also a useful reminder of something GLOW is keen to get right from the outset: this is not meant to be a women-only space set apart from the rest of the community. The goal is to promote women's leadership within OR, not to separate women from it. The voices around the tables were a good early sign that the message is landing.

Leadership Pathways: a full house
Tuesday morning's panel, Leadership Pathways in Operations Research, filled the room to capacity with around 100 attendees, again a mix of women and men. The panel delivered on its promise of academic, industrial, and regional perspectives on leadership in OR, and the discussion was consistently praised by attendees. It was organized by Rosa González (Universidad de los Andes, ALIO) and featured a distinguished lineup of speakers representing the breadth of the OR profession. >>

Panelists included Janny Leung (University of Macau, APORS), Héctor Cancela (Universidad de la República, ALIO), Anita Schöbel (TU Kaiserslautern / Fraunhofer ITWM, EURO), Rina Schneur (IFORS VP, NORAM), with Paula Carroll (University College Dublin, EURO) as moderator. One change to the original lineup turned out to be a highlight of the session: the scheduled African representative was unable to attend, and was replaced by Khadija Hadj Salem (KU Leuven, Belgium), a young operational researcher who spoke candidly about the difficulties young women face in securing academic positions. Her contribution grounded the panel's broader conversation about leadership pathways in a very concrete, current reality, and it was one of the most discussed moments of the event afterward.

▲ *Elise del Rosario (GLOW Founding Steering Committee member), Hector Cancela (IFORS President), and Grazia Speranza (GLOW Founder) are launching the GLOW reception.*

Evening GLOW Reception

The day closed with the Evening GLOW Reception, and the turnout said it all: around 500 people came to celebrate the launch, with men outnumbering women in the marvelous garden of the University of Vienna. It was a genuinely joyful way to mark the occasion, and it underlined exactly what GLOW is aiming for, pushing women's visibility and leadership forward as a shared goal for the whole OR community, not a cause championed by women alone.

What's next

Three events, one clear vision: GLOW is off to a strong start. The conversations sparked will directly shape what comes next for the initiative, including how to keep bringing younger voices into the field and how to keep GLOW's doors open to everyone who wants to see women's leadership in OR grow.

▲ *The GLOW steering committee team at IFORS 2026 (left to right): Janny Leung (University of Macau), Rina Schneur (IFORS Vice President), Jana Ries (University of Portsmouth), Rosa Guadalupe González Ramírez (Universidad de Los Andes), Yasmín Ríos-Solís (Université de Technology de Troyes), Paula Carroll (University College Dublin), Sibel Alumur Alev (University of Waterloo); Heletjé van Staden (University College Dublin), Grazia Speranza (Università degli Studi di Brescia), Bolajoko N. Dixon-Ogbechi (University of Lagos)*

▲ *Rosa González (Universidad de los Andes, GLOW Founding Steering Committee), Janny Leung (University of Macau, GLOW Founder), Anita Schöbel (TU Kaiserslautern / Fraunhofer ITWM), Héctor Cancela (Universidad de la República, IFORS President), Rina Schneur (IFORS VP, GLOW Founder), Khadija Hadj Salem (KU Leuven, Belgium), Paula Carroll (University College Dublin, EURO, GLOW Founder) as moderator.*

For more information about GLOW and how to get involved, visit https://www.ifors.org/glow-global-leadership-in-or-for-women/ or follow us on LinkedIn. 🌍

▲ *Snapshots from the circles of connection event.*

OR for Development

Section Editor: **Kelly Poldi** <poldi@unicamp.br >

This issue features an insightful contribution by Elena Valentina Gutiérrez, Jennifer Benavides Castillo, and David Barrera Ferro on the integration of analytics and Operations Research to support healthcare systems in developing countries. The article discusses the transition from predictive insights to actionable decisions and highlights important opportunities for OR to generate meaningful social impact. I hope you enjoy reading this inspiring contribution. If you are interested in sharing an article with the international OR community through the OR for Development section, please feel free to reach out to me. 🌍

From Prediction to Decision: Integrating Analytics and Operations Research for Healthcare Systems in Developing Countries

Elena Valentina Gutiérrez <valentina.gutierrez@correounivalle.edu.co>
School of Industrial Engineering at Universidad del Valle, Cali, Colombia

Jennifer Benavides Castillo <jennifer.benavides@correounivalle.edu.co>
School of Industrial Engineering at Universidad del Valle, Cali, Colombia

David Barrera Ferro <barrera-o@javeriana.edu.co>
Department of Industrial Engineering at Pontificia Universidad Javeriana, Bogotá, Colombia

▲ Authors: Elena Valentina Gutiérrez, Jennifer Benavides Castillo and David Barrera Ferro

Healthcare systems in low- and middle-income countries (LMICs) face persistent challenges: constrained resources, fragmented service delivery, workforce shortages, geographical inequities, and increasing epidemiological pressures associated with both communicable and non-communicable diseases. These challenges are further exacerbated by uncertainty in demand, limited interoperability of information systems, and the complex interactions among actors and services that comprise healthcare delivery networks.

Over the last decade, the digital transformation of healthcare has generated unprecedented volumes of data originating from electronic health records, administrative databases, insurance systems, laboratory information systems, telehealth platforms, and patient monitoring technologies. In Latin America, as in many developing regions, this digitalization process has advanced heterogeneously, producing information ecosystems characterized by varying levels of maturity, interoperability, and data quality. Nevertheless, these emerging data infrastructures provide an extraordinary opportunity for Operational Research (OR) and analytics to support better healthcare decisions.

The recent review by Beliën et al. (2025) highlights a remarkable expansion of OR applications in healthcare and points to several promising research opportunities. Among the most relevant findings is the increasing need to move beyond isolated methodological developments, toward integrated decision-support frameworks capable of connecting predictive insights with implementable decisions. Despite substantial advances in optimization, simulation, and machine learning, the translation of analytical results into operational and policy decisions remains limited in practice.

This challenge is particularly relevant in developing countries. A review of healthcare information systems in Latin America (Rosa & Frutos, 2022) reveals significant heterogeneity in data availability, digital capabilities, and information integration across healthcare organizations and territories. Consequently, healthcare managers frequently operate in environments where decisions must be made despite incomplete information, fragmented datasets, and rapidly changing conditions. Such realities demand analytical approaches that are robust, adaptive, and implementation oriented.

The Maturity of Healthcare Analytics: From Data to Decision

The digital transformation of healthcare has accelerated the evolution of analytics and, more importantly, the maturity of decision-making processes within healthcare organizations. Gartner's Analytics Value Escalator describes this progression from descriptive and diagnostic capabilities, focused on understanding system performance, to predictive and ultimately prescriptive capabilities that support future-oriented and action-driven decisions (Gartner, 2012).

Many healthcare organizations have made significant progress in the first three stages of this evolution. Advances in data availability and analytical methods now enable the monitoring of health systems, the identification of performance drivers, and the prediction of clinical outcomes, service demand, resource utilization, and population health trends. Particularly in developing countries, the growing digitalization of healthcare systems offers unprecedented opportunities to anticipate emerging needs and better understand complex system dynamics.

However, analytical maturity does not end with prediction. The ability to forecast demand, identify high risk populations, or estimate future resource requirements does not automatically translate into better decisions. Healthcare organizations frequently possess increasingly sophisticated predictive capabilities while lacking systematic mechanisms to determine how resources should be allocated, how services should be coordinated, or which operational policies should be implemented.

Prescriptive analytics represents one of the highest levels of analytical maturity because it connects data and prediction with action. This is where Operations Research becomes indispensable. Through optimization, simulation, stochastic modelling, and other OR methodologies, predictive insights can be transformed into implementable decisions that explicitly consider uncertainty, operational constraints, and competing objectives.

For healthcare systems in developing countries, advancing through these levels of analytical maturity is essential to bridge the persistent gap between analytical capabilities and real-world implementation. The next frontier for Healthcare OR is therefore not the development of isolated predictive or optimization models, but the creation of integrated analytical ecosystems that support the entire decision-making process, from understanding and anticipating healthcare needs to designing and implementing effective interventions.

Bridging the Gap Between Prediction and Decision

Despite their natural complementarity, predictive and prescriptive approaches have often evolved along separate paths. A substantial proportion of healthcare analytics research has focused on improving predictive performance without explicitly addressing how predictions can be embedded within structured decision-making processes. Conversely, many OR models continue to rely on deterministic assumptions or simplified representations of reality and often underutilize the increasingly rich information generated by digital health systems. As a result, healthcare organizations have become progressively better at anticipating future events, yet considerably less effective at determining the actions that should follow those predictions.

Bridging this gap represents one of the most important opportunities for OR in healthcare, particularly in developing countries where decisions must be made under severe resource constraints and high levels of uncertainty. Integrated analytical frameworks that combine descriptive, diagnostic, predictive, and prescriptive capabilities can support decisions throughout the healthcare system, from long-term questions related to network design and capacity planning to medium-term resource allocation, day-to-day operational decisions concerning scheduling and patient flows, and even clinical decisions associated with personalized interventions and risk management. These decisions are inherently interconnected and cannot be addressed in isolation because healthcare systems operate as complex adaptive networks in which patients, resources, services, and institutions continuously interact.

Consequently, the next generation of Healthcare OR should move beyond isolated analytical models and toward integrated decision-support ecosystems capable of transforming data and predictions into implementable recommendations. Achieving this integration is essential for narrowing the persistent gap between analytical advances and practical impact and for enabling healthcare systems to make decisions that are not only evidence-based but also operationally feasible and responsive to local realities.

OR for Development: An Implementation Imperative

The history of Operations Research in developing countries demonstrates that impact is ultimately measured not by methodological sophistication but by the extent to which analytical insights lead to meaningful improvements in healthcare systems. In healthcare, successful interventions depend not only on the quality of models but also on their ability to include institutional constraints, engage decision makers, and adapt to diverse and rapidly evolving contexts.

Low and middle-income countries offer a particularly valuable setting for advancing this implementation agenda. Their healthcare systems are characterized by heterogeneous data environments, marked territorial disparities, and organizational arrangements that often challenge conventional modelling assumptions. These conditions require approaches that are flexible, data informed, and capable of incorporating local realities into the modelling process. At the same time, they provide fertile ground for methodological innovation and for developing new paradigms of Healthcare OR that are both scientifically rigorous and practically relevant.

For the OR community, this represents an opportunity to strengthen the connection between methodological development and societal impact. By embedding analytical models within decision processes and implementation contexts, OR can contribute to more resilient healthcare systems, better coordination across care networks, and more equitable access to services. In this sense, advancing Healthcare OR in developing countries is not only a scientific challenge but also an imperative for development.

Looking Ahead

Part of our ongoing research is precisely focused on developing methodological frameworks that integrate the different stages of analytics to support decision-making in healthcare systems under uncertainty. Our objective is to bridge the persistent division between theoretical advances and practical implementation, by creating decision-support approaches that are simultaneously data-driven, operationally feasible, and relevant to policymakers and healthcare managers.

Some of these results were presented in the "*Healthcare OR in Developing Countries*" stream at the IFORS 2026 Conference in Vienna (Barrera & Gutiérrez, 2026). The stream aimed to bring together researchers, practitioners, and policymakers interested in Operational Research applications that address healthcare challenges in low and middle-income countries and emphasizes the need for innovative formulations and methodological adaptations capable of capturing real-world dynamics and generating implementable insights.

As healthcare systems continue their digital transformation, the opportunity for OR has never been greater. The challenge before our community is clear: to move beyond prediction and toward decision, beyond algorithms and toward implementation, and ultimately beyond analysis and toward better health systems for all.

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About the Authors

Elena Valentina Gutiérrez is a Full Professor in School of Industrial Engineering at Universidad del Valle, Cali (Colombia). She holds a Ph.D. and M.Sc. in Industrial Engineering, and a B.S. in Industrial Engineering from Universidad del Valle. Dr. Gutiérrez-Gutiérrez currently serves as president of the Latin Ibero-American Association of Operations Research (ALIO), and as former president of the Colombian Association of Operations Research (ASOCIO). She was co-founder of the ALIO and the ASOCIO Working Group in Healthcare.

Jennifer Benavides Castillo is a Ph.D. student in Industrial Engineering at Universidad del Valle, Cali (Colombia). She holds a Master in Analytics and Business Intelligence, and a B.S. in Industrial Engineering from Universidad del Valle. Her research, advised by Dr. Gutiérrez and Dr. Barrera, focuses on the integration of predictive and prescriptive analytics to support decisions in healthcare systems.

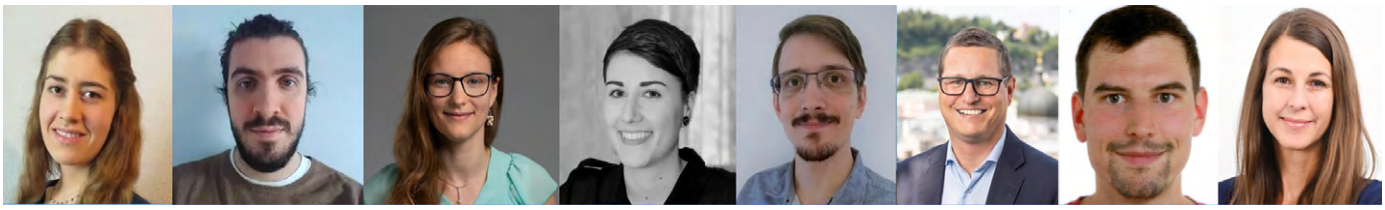
David Barrera Ferro is an Associated Professor in the Department of Industrial Engineering at Pontificia Universidad Javeriana, Bogotá (Colombia). He holds a Ph.D. in Management Science from University of Southampton, a M.Sc. in Industrial Engineering from Universidad de los Andes, and a B.S. in Industrial Engineering from Universidad Distrital. Dr. Barrera Ferro currently serves as president of the Colombian Association of Operations Research (ASOCIO). He was co-founder of the ALIO and the ASOCIO Working Group in Healthcare.

OR Impact

Section Editors: **John Ranyard** <jranyard@cix.co.uk>, **John Medhurst** <john@larrainzar.co.uk>

The ZEMoS Project: OR Supports the Introduction of a Zero-Emission Bus Fleet in Salzburg

Ertl, T., Forget, N., Gaar, E., Haslinger, X., Hiermann, G., Kainz, C., Krisch, P., Parragh, S.N. (2025)
Operations Research Supports the Transition to Zero-Emission Bus Fleets in Salzburg. Working Paper, Johannes Kepler University Linz. Available online at https://www.jku.at/zemos



Tamara Ertl | Nicolas Forget | Elisabeth Gaar | Xenia Haslinger | Gerhard Hiermann | Christian Kainz | Philipp Krisch | Sophie Parragh

Overview

As the news becomes full of heatwaves, floods and wildfires, with records broken this summer across Europe, the need to reduce carbon emissions and adapt to a changing climate becomes more and more obviously important as a role for OR.

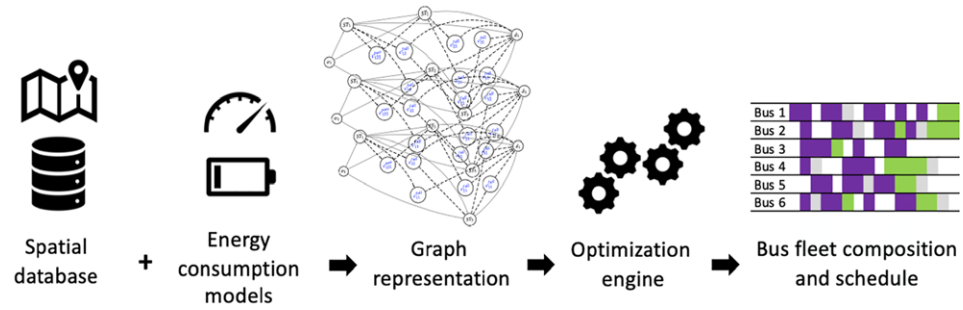
The decarbonisation of public bus transport is a potentially significant contributor to the green transition. Transport accounts for around a quarter of global CO2 emissions (IPCC 2022) and moving passengers from petrol and diesel cars into zero-emission buses would be an important step towards a net zero world.

The Zero Emission Mobility Salzburg (ZEMoS) research project was a collaboration between the Johannes Kepler Universität Linz and the Salzburger Verkehrsverbund GmbH (SVG) – the regional transport authority and various other partners, detailed on the ZEMoS webpage (see WIVA, 2026 for a full list and Ertl et al, 2025 for project information in English).

The Problem

The aim of the project was to prepare for a complete transition to zero-emission public transport by defining two pilot regions within the Salzburg region that would be converted to zero-emission buses, using this as a stepping stone to the electrification of the entire region. The areas chosen were the urban Tennengau and the rural and mountainous Pinzgau, with the latter being picked as a more challenging problem for electrification.

Complicating matters was the fact that the SVG does not run buses itself; instead, it sets routes and service requirements and puts out tenders to private companies who then run the buses. The Austrian government provides funding to those using zero-emission technologies, but this depends on both the number of buses and the number of kilometres per year that those buses will travel. Since the amount of funding will be an important element of the bidding process, the SVG needs to know before specifying the use of zero-emission technology buses how many buses will be required for a given route and what technology they will use.



▲ Firgure 1: ZEMoS data pipeline

The Approach

This is where OR comes in. Determining the minimum number of buses needed to service a set of routes is an optimisation problem. Specifically it is a variant on the Electric Vehicle Scheduling Problem (EVSP), where the bus timetable for a given bus line is defined as a set of time-stamped service trips that must be served by exactly one bus, with the task being to find feasible rotations (sequences of service trips allocated to individual buses) which respect constraints on time, battery levels, fleet constraints such as bus size and a return-to-depot trip that arrives back with a minimum end-of-day charge.

To do this in practice requires a lot of data, as shown in Figure 1. This is particularly important when deciding how much energy is required to complete a given service trip. Salzburg is in the Alps, and one of the regions had been deliberately selected to be an area in which buses must go up and down some steep hills.

To help understand how this affected energy requirements, the study team built a spatial database using bus timetables, geo-coded locations for bus stops and a 1m resolution digital terrain model of Salzburg, with road gradients computed at 1m intervals and corrected to allow for bridges and tunnels. Acceleration, braking and regenerative braking were all modelled explicitly using a drive-train model, allowing energy requirements to be computed for each service trip, for all possible deadhead moves without passengers and for all possible back-to-depot trips.

To this must be added the energy requirements for auxiliary systems including lights, doors, brakes, and heating and cooling systems. A worst-case scenario was assumed for auxiliary energy consumption, which turned out to be winter, since the energy requirement for heating in winter in Salzburg is greater than that for running air conditioning in summer. This was validated against real data for a demonstration zero-emission bus.

The Solution

The collected route and energy consumption data, together with the energy and acquisition costs for the two zero-emission technology options under consideration – Battery Electric Buses (BEB) and Fuel-Cell Electric Buses (FCEB) – are fed into an exact optimisation engine consisting of a mixed-integer linear programming (MILP) solver where different depots and vehicle types are represented as a layered graph, separating different fleet types. Battery levels are tracked as continuous variables and arc traversals as binary variables. The model handles any combination of single or multiple depots, homogeneous or heterogeneous fleets, and addresses both meeting the service requirement and minimising cost-based objectives. This is implemented in HiGHS (Huangfu and Hall, 2018), an open-source MILP solver selected to avoid constraining the solution to a commercial software provider.

Whilst the exact solution gives rapid and effective solutions for individual lines (Haslinger, Gaar and Parragh, 2025), it can take a long time to find an exact solution for either of the pilot regions. Because of this, the exact solver was paired with a heuristic approach using a combination of a greedy construction heuristic that builds rotations one bus at a time, selecting the next service trip based on minimising first energy, then distance, then earliest departure. It can generate feasible solutions in under a second and feeds into a Large Neighbourhood Search algorithm that improves the solution through a series of destroy and repair operators, with random, time-related, distance-related, and energy intensive detour removal operators and greedy or regret-based repair. To avoid being trapped in local optima, the system uses a simulated annealing approach where the probability of accepting a worse solution is controlled by a cooling temperature, allowing the system to converge on a hopefully optimum solution over a specified number of iterations.

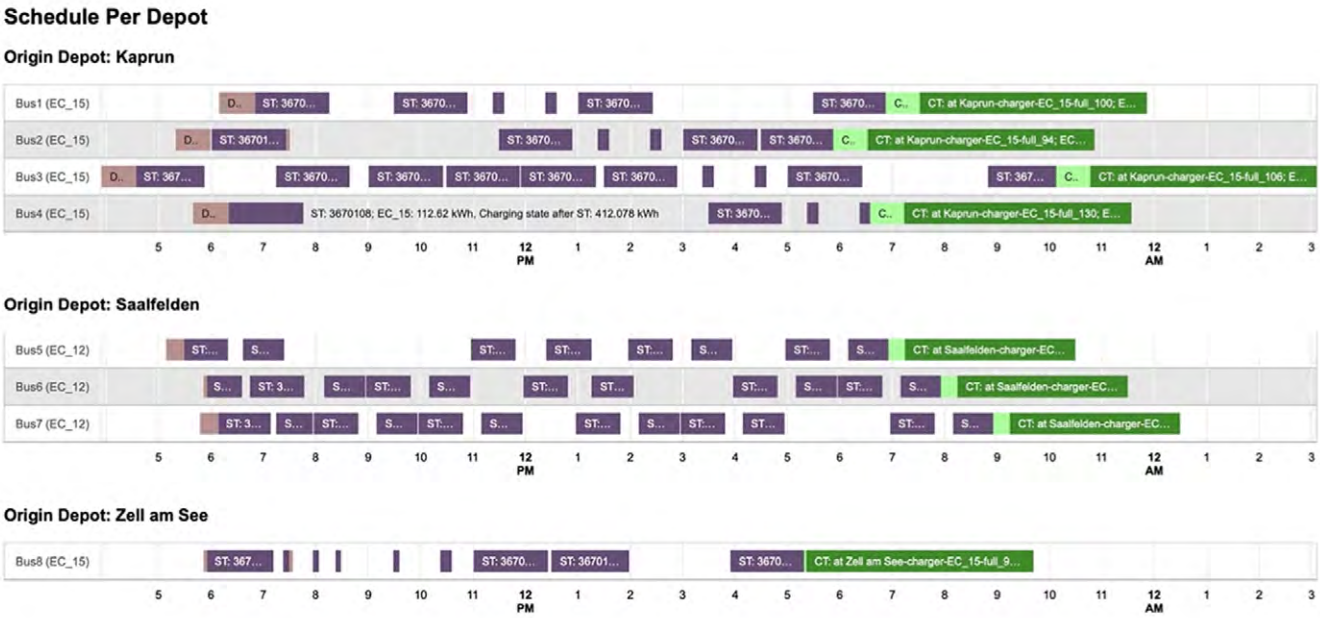
The Impact

The final version of the tool was refined over time and improved with an enhanced energy consumption model, multiple depots and different bus types. This improved tool was used by SVG to make technology choice decisions as part of their tendering processes and is now available as an Open Source tool in the form of a Julia notebook.

Running the optimisation tool produces an HTML file that shows the schedule by depot and bus type together with the energy consumption of each bus and overall. An example of this output is shown in Figure 2.

Three technology options were investigated by SVG using the toolbox – BEB with overnight charging, BEB with opportunity charging from overhead chargers at stops and FCEB. Opportunity charging was ruled out at an early stage due to the cost and difficulty of setting up a charging system, particularly in rural areas, and the FCEB were eliminated from consideration since no FCEB solutions were currently on the market that could meet the regional bus requirement. Thus, by a process of elimination, SVG settled on calculating the numbers of BEB required for each of the pilot regions and applying for funding on that basis.

As a result of the tenders, 21 BEB have been introduced onto regular services on 10 lines in the province of Salzburg and by February 2025 these vehicles had driven over half a million kilometres, saving 500 tons of CO2 and opening the way for the electrification of the Salzburg bus fleet.



▲ Firgure 2: Example output file (per depot bus schedule section)

The management team at SVG had this to say about their experience of OR:

"It was very interesting to learn more about operations research methods. We are convinced that such a tool can improve the decision-making process for optimizing fleet size and creating schedules for electric buses. Therefore, we view operations research methods as a valuable addition to the planning process for any public transit operator."

- Mag. Johannes Gfrerer, Managing Director SVG

This impact may be a local one, on what is an enormous global problem, but in the end it is the cumulative effect of many small changes that are our best chance of avoiding wider and more significant harms.
Also, the great advantage of OR is that a method that works in one place to improve efficiency can also be used in another and the provision of the optimisation toolset under an MIT Software Licence at www.jku.at.zemos allows any public transport association or bus operator to work out how they could most effectively introduce Zero Emission buses in their area.

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▲ Salzburg Buses in the Springtime © wildbild

▲ A Zero Emission Bus in the Alps © Neumayr / Christian Leopold

Conferences

Section Editors:
Gerhard-Wilhelm Weber <gerhard.weber@put.poznan.pl>,
Jinal Parikh <jinal.parikh@ahduni.edu.in>

IFORS 2026 brings the global *OR community* to Vienna

Andrés L. Medaglia <amedagli@uniandes.edu.co>,
Karl F. Doerner <karl.doerner@univie.ac.at>,
Jan F. Ehmke <jan.ehmke@univie.ac.at>,
Richard F. Hartl <richard.hartl@univie.ac.at>

▲ *Welcome Reception* in the *Arkadenhof (courtyard)* of the University of Vienna.

The *University of Vienna* and the *Austrian Society for Operations Research* (*ÖGOR*) proudly hosted the *24th Conference of the International Federation of Operational Research Societies* (*IFORS 2026*) from 12 to 17 July 2026, welcoming close to 2,700 authors to the heart of the Austrian capital. Held under the theme "*Decision Support for a Sustainable World*", the triennial conference unfolded across three historic university buildings, the *Main Building* (*Hauptgebäude*) on *Universitätsring*, the *Juridicum*, and *Kolingasse*, all within a few minutes' walk of one another in Vienna's first district.

▲ *IFORS President Prof. Héctor Cancela* welcomes the attendees.

After a warm *Welcome Reception* on Sunday afternoon in the *Arkadenhof* (courtyard) of the University of Vienna, the conference *officially opened* on Monday morning in the Audimax of the Main Building chaired by *Prof. Karl Doerner*. University of Vienna's Rector, *Prof. Sebastian Schütze*, welcomed attendees from *IFORS'* 50 member societies. Afterwards, *IFORS President Prof. Héctor Cancela* offered words of welcome to the participants and *ÖGOR President*, *Prof. Ulrich Pferschy*, introduced the Austrian Society of Operations Research. *Prof. Andrés L. Medaglia*, the *Program Chair*, guided attendees through the conference highlights, and *Prof. Grazia Speranza* presented the new initiative *GLOW*, *Global Leadership in OR for Women*. The *opening session* concluded with Co-Organization Chair, *Prof. Jan Ehmke*, who shared important organizational details about the conference. The ceremony was accompanied by a classical trio that provided a musical frame to the opening with three pieces by *Joseph Haydn*.

▲ *Opening Ceremony*: Classical trio plays Haydn in the Audimax, University of Vienna.

Academic Excellence and Global Dialogue:

IFORS 2026 assembled 2,225 accepted abstracts by 2,740 authors into 629 sessions, organised in 83 streams across 28 areas, with up to 51 sessions running in parallel at any given time. The academic program featured four plenary lectures, seven keynote lectures, and eight tutorials. Germany (325), China (216), UK (157), Netherlands (156), USA (146), France (134), Austria (131), Italy (114), Spain (96) and Japan (77) contributed the ten largest delegations from regional groupings *EURO*, *APORS*, *NORAM*, and *ALIO*. Nevertheless, the reach of the meeting extended well beyond, with authors coming from 64 countries from all over the world.

Speakers' Highlights:

The *plenary series* opened with *Prof. Miguel Anjos* (University of Edinburgh, UK), the *EURO Plenary Speaker*, on "*Operational research for a sustainable energy transition*". *Harald Ponweiser* (ÖBB-Produktion GmbH, Austria) followed on Tuesday with "*Simulation and optimization for railway resource planning*", offering a unique practitioner's view of a national rail operator. *Prof. Katya Scheinberg* (Georgia Institute of Technology, USA) spoke on Thursday about "*A study of stochastic and noisy oracles in unconstrained continuous optimization*", and *Prof. Karen Smilowitz* (Northwestern University, USA) closed the conference on Friday with "*Transportation research for social impact in a changing world*".

The *keynote program* was equally wide-ranging. *Prof. Stefan Pickl* (Universität der Bundeswehr München, Germany) delivered the *Club of Rome Lecture* on "*Emissions trading 'cap and trade'* and *Operations Research*"; *Prof. Radhika Kulkarni* (SAS Institute Inc., USA) spoke on "*From models to smarter decisions: harnessing OR + AI*"; *Dr. Georgios Paschos* (Amazon, Luxembourg) on "*Amazon fulfillment optimization*"; *Prof. Asgeir Tomasgard* (NTNU, Norway) on "*Stochastic optimization for the energy transition*"; *Prof. Beril Toktay* (Georgia Institute of Technology, USA) on "*Operations Research for sustainability and resilience in the age of AI*"; *Prof. Gabriele Eichfelder* (TU Ilmenau, Germany) on "*Compromising objectives: more information thanks to multiobjective optimization*"; and *Prof. Ming Xu* (Tsinghua University, China) on "*AI for sustainability research and education*".

▲ *Plenary* and *Keynote* Sessions filled the Audimax throughout the week.

Tutorials and (Very) Special Sessions:

A dedicated tutorial series ran daily in the Audimax, in which renowned scholars gave interactive introductions to methodologies and application domains: *Prof. Georg Pflug* (University of Vienna) and *Prof. Alois Pichler* (TU Chemnitz) on model error in financial optimization and insurance design; *Prof. Andrés Gómez* (University of Southern California) on convexification and solution of mixed-integer nonlinear optimization problems; *Prof. David E. Bernal Neira* (Purdue University) on quantum computing for operations research; *Prof. Veronica Piccialli* (Sapienza Università di Roma) on optimizing machine learning; *Prof. Katsuki Fujisawa* (Tokyo Institute of Science), jointly with *Xun Shen* and *Takashi Tanaka*, on digital twins from algorithms to industrial applications; *Prof. Rafael Martinelli* (PUC-Rio) on decomposition methods for discrete optimization problems; *Prof. Axel Parmentier* (Institut Polytechnique de Paris) on combinatorial optimization augmented machine learning; and *Prof. Tal Raviv* (Tel Aviv University) on the design and operation of vehicle sharing systems.

IFORS 2026 Vienna also introduced a new "*Practice of OR*" *stream*, chaired by *Dr. Elise del Rosario*, which gave practitioners a dedicated home in the program from the very first morning, and hosted a *session on ERC funding opportunities* and *personal experience* - moderated by *EURO President Prof. Frits Spieksma*, with *Prof. David Pisinger* and *Dr. Adriana Cristoiu* as speakers - as well as an *OR Journal Editors Panel*. Both events were aimed at early-career researchers.

The *stream* "*Moments in the History of OR and IFORS*", co-chaired by *Prof. Gerhard-Wilhelm Weber* and *Prof. Roberto Rossi*, was a resounding success: junior and senior operations researchers packed the rooms to hear first-hand accounts from *Prof. Andrés Weintraub*, *Prof. Jan Karel Lenstra*, *Prof. Anna Nagurney*, *Prof. Tamás Terlaky*, *Prof. Cathal Brugha*,

▲ *Prof. Miguel Anjos* delivers his *Plenary Lecture*.

Prof. Sally Brailsford, *Prof. John Ranyard*, *Prof. Laura Albert*, *Prof. Ulrike Leopold-Wildburger*, *Prof. Josef Jablonsky*, *Prof. Leonidas Sakalauskas*, *Prof. Rita D'Ecclesia*, *Prof. Ya-xiang Yuan*, *Prof. Yu-Hong Dai*, and *Prof. Chang Won Lee*, among other prominent speakers, session chairs and discussants who have shaped our profession over many decades.

GLOW (*Global Leadership in Operations Research for Women*) ran a three-part programme: a "*Circle of Connections*" *session* on Monday afternoon, a *panel discussion* on Tuesday morning and a *reception* on Tuesday evening.

▲ *GLOW reception* in the Arkadenhof: *Prof. Sibel Alumur*, *Prof. Rina Schneur*, *Prof. Grazia Speranza*, *Prof. Elise del Rosario*, *Prof. Ulrike Leopold-Wildburger*, *Prof. Qingna Li* and *Jana Ries* (from left to right).

Industry and Academia Unite:

The exhibition area in the Main Building brought the optimization industry and the scholarly publishing world into direct contact with attendees. Hexaly and Gurobi joined as *headline* sponsors; AMPL as *gold* sponsor; and Artelys, COPT, MOSEK, FICO, RISC Software, GAMS, Springer, Elsevier, Taylor & Francis and Wiley as *silver* sponsors. *Sponsor workshops* on Wednesday morning, on modelling and solving packing problems with Hexaly Studio, and on moving optimization models from prototype to operational decision systems with AMPL, were well attended, underlining how quickly research-grade methods now reach production.

A Sustainable Meeting:

Fittingly for a conference themed on sustainability, *IFORS 2026* was organized as a *sustainable meeting*. Neither the program nor the abstract volume was printed, no conference bags were distributed, and delegates received a reusable water bottle and vouchers to refill it at water stations across the venues, a practical nod to Vienna's thousand-plus public drinking fountains. >>

>> Waste was separated throughout, and only a slim printed booklet with floor plans was handed out at registration.

▲ At the *GLOW Reception* on Tuesday: *A packed crowd celebrates women in OR!*

Celebrating Culture and Connection:

IFORS 2026 was as much about community as about research. The week began on Sunday evening with a *Welcome Reception* in the Arkadenhof, the arcaded courtyard at the heart of the Main Building. On Tuesday, the *Evening GLOW Reception* took place at the Arkadenhof.

▲ *Closing session* (humorously) chaired by *Prof. Richard Hartl*. In the picture, a sample of the enthusiastic and professional volunteers led by *Mr. Ulrich Breunig*.

This was the perfect event to celebrate women in *OR* from around the globe. Thanks to the *GLOW* challenge many attendees enlarged their network by meeting at least someone they should know. Wednesday afternoon was reserved for *excursions* included in the registration fee, with nine options ranging from an abbey and a wine tour in Klosterneuburg, Schönbrunn Palace and Schloss Hof, to a walking tour of the Old Town, the Wien Museum, a panorama of the city, a Tablet Rallye and Top Golf. On Thursday evening the *Conference Banquet* at the Hilton Vienna Park opened with a sparkling wine reception and continued with a buffet dinner, a photobooth, and a DJ that kept the dance floor busy.

The conference closed on Friday afternoon in the Audimax, chaired by *Prof. Richard Hartl*, followed by a *Farewell Party* back in the university courtyard, where colleagues lingered over drinks well into the evening.

Celebrating Excellence

The week was punctuated by the Federation's flagship ceremonies. On Tuesday morning the new inductees to the *IFORS Hall of Fame* were announced: late *Prof. Hans-Jürgen Zimmermann*, late *Prof. Judith Stenzel Liebman*, and *Prof. Andrés Weintraub*, introduced by *Prof. Janny Leung*, *Prof. Paolo Toth* and *Prof. Thomas Magnanti*; and on Thursday morning the *EJOR Best Paper Awards* and the *new IFORS Fellows* were celebrated, presented by *Prof. Janny Leung* and *Prof. Héctor Cancela*, respectively:

the *EJOR Best Paper Awards* went to "*Solving large-scale electricity market pricing problems in polynomial time*" by *Mete Şeref Ahunbay*, *Martin Bichler*, *Teodora Dobos*, and *Johannes Knörr* (in the category *Innovative Applications of OR*), "*A general deep reinforcement learning hyperheuristic framework for solving combinatorial optimization problems*" by *Jakob Kallestad*, *Ramin Hasibi*, *Ahmad Hemmati*, and *Kenneth Sörensen* (in the category *Theory and Methodology*), and "*The flexible job shop scheduling problem: A review*" by *Stéphane Dauzère-Pérès*, *Junwen Ding*, *Liji Shen*, and *Karim Tamssaouet* (in the category *Review*);

the *IFORS Fellows* of the previous three years have been *Prof. Jacek Błażewicz*, *Prof. Bruce Golden*, *Prof. Celso Ribeiro* and *Prof. Marino Widmer* (*IFORS Fellows 2024*), *Prof. Adiel Teixeira de Almeida*, *Prof. Shmuel Oren* and *Prof. Janny Leung* (*IFORS Fellows 2025*), and *Prof. Cathal Brugha*, *Prof. Laureano Escudero*, *Prof. Richard Hartl*, *Mrs. Mary Magrogan* and *Prof. Silvano Martello* (*IFORS Fellows 2026*).

The *IFORS Prize for OR in Development*, chaired by *Prof. Margaretha Gansterer*, ran two finalist sessions on Thursday afternoon; the prize went to the work "*NIRSE-CL: Design, Monitoring, Real-World Effectiveness and Impact Assessment of Chile's Universal Immunization Strategy against RSV*", presented by *Prof. Leonardo J. Basso*, with his common winners *Felipe del Solar*, *Gonzalo Diaz*, *Marcel Goic*, *Ignasi Neira*, *Miguel O'Ryan*, *Denis Saure*, *Charles Thraves*, *Juan Pablo Torres*, *Natalia Trigo* and *Amal Zgheib*, and the also selected "*runner-up*" was "*Prosecutor HeredIA: Analytics Meets Artificial Intelligence to Efficiently Combat Organized Crime*", presented by *Prof. Richard Weber* with *Carla Vairetti*, *Sebastián Maldonado* and *Fredy Troncoso* as his common winners.

The *EURO Doctoral Dissertation Award* (*EDDA*) talks, introduced by *Prof. Violeta Cvetkoska*, who was supported by *Dr. Sarah Fores*, were held on Tuesday morning in the Juridicum, with the award going to *Dr. Fabian Akkerman* with his thesis "*Machine Learning for Sequential Decisions in Logistics*".

Congratulations to all winners!

As *IFORS* looks ahead, the Vienna edition reaffirmed the triennial conference as the one occasion on which the whole of the global *OR* community, with their 56 national societies from every region, meets in a single place. A special thank you goes to the *IFORS officers*, the *ÖGOR*, the *Program Committee area chairs*, the *Event Management Team* of the University of Vienna, the Academic Program Chair assistants *Ms. Sofía Castro* and *Ms. Katherinne Quiroga*, the support provided by *EURO through its officers*, all members of the *Local Organizing Committee*, especially *Mrs. Carina Artner-Konecny*, and last but not least, the almost *two hundred student volunteers in orange T-shirts* whose professionalism and good humor kept three buildings and more than six hundred sessions running smoothly. They were trained by the lecturer and events expert, *Mr. Ulrich Breunig*, as part of a university course in event management and were able to apply their knowledge at the conference. Conference photographs and impressions are available on Instagram at @ifors.vienna and on LinkedIn at *IFORS Vienna*; further information on the conference remains at **http://www.ifors2026.at**. For *IFORS* events, publications and awards, visit http://www.ifors.org.

We look forward to seeing you in *2029* at the *25th IFORS triennial conference in Calgary, Canada*! 🌎

IFORS 2026 Launches *Magic of OR* Area - A Stream Report on *The Practice of OR: Stories of Solutions, Setbacks, and Successes*

Elise del Rosario <elise@jgdelrosario.com>, **Gerhard-Wilhelm Weber** <gerhard.weber@put.poznan.pl>

The *2026 IFORS Conference* saw the launch of a new area *Magic of OR* organized by *Rina Schneur*. Under it is the stream on the *Practice of OR* organized by *Elise del Rosario* and supported by *Gerhard-Wilhelm Weber* – which proved to be a vibrant and well attended track. Running from July 13 to 16 in Vienna with 21 papers, the stream brought together practitioners from around the world to share grounded, real world insights into how *Operations Research* unfolds in practice: the opportunities, the constraints, the human dynamics, and the ingenuity required to turn models into impact.

▲ Some *invited speakers* of the *Practice of OR* stream (from left to right, top) - *A. Weintraub*, *E. Del Rosario*, *J. Cochran*, *K. Hoffman*; (from left to right, bottom) - *A. Banaszewska* and *F. Gotzinger*, *E. Arruda*, *A. Cohn* and *S. Nickel*.

Across five invited sessions, speakers presented stories of solutions, setbacks, and successes, illustrating how *OR* thrives when theory meets organizational reality. The stream's popularity reflected a growing appetite within the community for practice centered narratives - ones that illuminate not only what models can do, but how analysts navigate the messy environments in which decisions are made. Importantly, presenters did not shy away from discussing failures, missteps, and situations where *OR* tools fell short, offering candid reflections on what practitioners can learn from projects that did not go as planned.

OR Solutions and Practice Lessons from Around the World, the opening session chaired by *Gerhard Wilhelm Weber*, showcased applications from Chile, the Philippines, Africa, and the United States. *Andrés Weintraub* highlighted award winning *OR* applications in forestry, mining, logistics, and sports scheduling, emphasizing innovation and long term societal impact while acknowledging the setbacks encountered along the way. *Elise del Rosario* examined the complex decision making environments analysts face, offering a framework for understanding how organizational context shapes model adoption. *Jim Cochran* shared frontline data collection challenges in conflict affected regions, including instances where data limitations hindered model reliability. *Karla Hoffmann* discussed why *OR* projects fail - and how human behavior, ambiguity, and shifting systems often determine whether a model succeeds or falls short.

Organized by *Amy Cohn*, *OR in Emergency Response, Healthcare, and Human Protection* explored *OR* in high stakes environments. Speakers addressed surgery scheduling in Brazil, emergency department flow, co designing models with human trafficking survivors, EMS logistics, and pediatric care. A recurring theme was the necessity of partnering with domain experts and aligning models with lived realities - especially when initial modeling attempts failed to capture critical nuances.

Public Sector, Society, and Sustainability session covered inmate population management by *Tamas Terlaky*, agricultural sustainability project in Peru by *Lluis Pla-Aragones*, various consulting projects by *Zilla Sinuany Stern*, and methodologies for flawed and incomplete thinking by *Cathal Brugha*. The presentations covering multi objective optimization, resource allocation, and DEA emphasized the importance of physically engaging with operational sites to build trust and insight. Speakers noted that versions of their models were rejected or underutilized until they better reflected on the ground conditions.

Large Scale Industrial Systems and Platforms featured speakers from Google, Porsche, and Banedanmark who demonstrated how *OR* scales in massive industrial systems - from compute capacity matching and parts logistics to railway maintenance and network planning. Talks highlighted the challenge of imperfect data, evolving requirements, and computational complexity, including examples where initial models were too slow, too rigid, or misaligned with operational realities.

The final session, *OR in Practice: Models and Impact* showcased *OR* tools deployed in industry for vacation planning, GenAI enhanced team allocation, real time portfolio rebalancing, and strategic asset allocation DSS design. Each presentation underscored how long term collaboration with stakeholders strengthens model credibility and adoption - and how early prototypes often failed before iterative refinement led to successful implementation.

For all other related author names and their abstracts, please refer to the *IFORS 2026* "*conference booklet*" at https://www.euro-online.org/conf/admin/tmp/program-ifors2026.pdf.

The *Practice of OR* stream succeeded because it brought forward what practitioners know intimately: *OR* is not only about elegant models - it is about people, processes, constraints, and creativity. The stories shared across the week demonstrated how *OR* continues to evolve, adapt, and deliver impact across sectors and continents, while openly acknowledging the failures that make future successes possible.

The other *streams*, with their organizers, in this *newly launched practice* area further showcased the breadth of *OR* applications worldwide. They are: *OR in Rising Economies* (*Issmail El Hallaoui*), *OR in Military, Defense, and International Security* (*Greg Parlier*), and *From Models to Smarter Decisions: Harnessing OR+AI* (*Radhika Kulkarni*), which also featured a *keynote* address.

Ensuring that *OR* works effectively in practice is essential to realizing its potential to influence business, society, and daily life. *The Magic of OR* streams and sessions underscored the importance of maintaining a strong focus on practical applications across *IFORS* conferences and within regional and local *OR* communities, reinforcing the relevance and impact of *OR* in real world decision making.

OR@Africa at *IFORS 2026*: Research Collaboration, and a Tribute to *Professor Fatima Ezzahra Achamrah*

Wissem Ahmed Zaid <wissemahmedzaid@gmail.com>, **Mohamed Faouzi Benammour** <benammourmf@gmail.com>, **Imene Selahi** <selahiimene@gmail.com>, <contact@oratafrica.org>

From July 12 to 17, 2026, *OR@Africa* took part in the *IFORS 2026 Conference*, hosted by the *University of Vienna* in Austria. This major international event provided an important opportunity to showcase the growing *Operational Research* (*OR*) community in Africa, strengthen collaborations with researchers and institutions worldwide, and highlight the role of *OR* in addressing major societal and economic challenges.

▲ *OR@Africa community members* during the *IFORS 2026 Conference* in Vienna, Austria.

OR@Africa Sessions at IFORS 2026

OR@Africa organized *three dedicated sessions* within the "*OR in Rising Economies*" *stream*. The presentations covered a wide range of topics, including supply chains, inventory routing, sustainable logistics, industrial planning, network design, scheduling, mathematical programming, simulation, and deep reinforcement learning. These contributions highlighted the methodological strength of the African *OR* community and its commitment to addressing real-world challenges

Promoting Women's Leadership in *OR*

OR@Africa also contributed to the *GLOW - Global Leadership in Operational Research for Women* panel, *Leadership Pathways in Operations Research: Academic, Industrial, and Regional Perspectives*. This participation brought an African perspective to discussions on women's leadership, gender equity, and inclusive career pathways in *OR*. *Professor Fatima Ezzahra Achamrah* was a remarkable example of women's leadership and dedication to the *OR* community. She strongly believed in the potential of *OR* to contribute to Africa's development and was deeply motivated to support new projects, collaborations, and opportunities for researchers across the continent.

▲ *OR@Africa speakers and participants* at the *IFORS 2026 Conference* in Vienna, Austria.

A Tribute to *Professor Fatima Ezzahra Achamrah*

The final *OR@Africa* session concluded with a deeply moving *Minute of Silence* in *Professor Fatima*'s memory. A *Book of Condolences* was also made available during the conference, allowing colleagues and friends to share messages and personal memories. Her vision, generosity, and determination continue to inspire the *OR@Africa* community.

The *OR@Africa* team sincerely thanks Professors *Issmail El Hallaoui*, *Youssef Diouane*, *Gerhard-Wilhelm Weber*, *Rina Schneur*, and *Tarik Aouam*, as well as *Navonil Mustaphe*, *Amina Lamghari*, and the *four Conference Chairs*, for their valuable support and contributions to *OR@Africa*'s participation in *IFORS 2026*.

For more details about the event, visit our *LinkedIn* page: https://www.linkedin.com/company/oratafrica.

EUROPT 2026 - an unforgettable Conference held in beautiful Linz, Austria

Sophie N. Parragh <sophie.parragh@jku.at>, **Markus Sinnl** <markus.sinnl@jku.at>,
Giancarlo Bigi <giancarlo.bigi@unipi.it>, **Immanuel Bomze** <immanuel.bomze@univie.ac.at>

▲ *Group picture* of the *EUROPT 2026 Summer School*.

The *23rd EUROPT Conference on Advances in Continuous Optimization* was held from July 8 to 10, 2026, at the *Johannes Kepler University Linz, Austria*. The event brought together more than 210 participants from over 30 countries. The conference was preceded by the *6th EUROPT Summer School*, held from July 6 to 7 (https://www.jku.at/europt2026).

Summer School Highlights: Over 70 PhD candidates took part in the *Summer School*, immersing themselves in a rigorous yet engaging academic program. *Martin Schmidt* (University of Trier) delivered a compelling tutorial on *Bilevel Optimization*, while *Etienne de Klerk* (Tilburg University) presented interesting insights in his tutorial, *Semidefinite programming and iterative optimization algorithms*.

Scientific Program: The program of the conference was set up by a *scientific committee* chaired by *Sophie N. Parragh*, *Markus Sinnl*, *Immanuel Bomze* and *Giancarlo Bigi*. *EUROPT 2026* featured three plenary talks, delivered by *Ana Luisa Custodio* (NOVA University of Lisbon), *Bissan Ghaddar* (IE University, ÖGOR Supported Plenary), and *Martin Schmidt* (University of Trier), and the *EUROPT Fellowship Lecture* delivered by *Etienne de Klerk* (Tilburg University), who was elected *2026 EUROPT Fellow*.

The scientific program included over *180 talks* organized in *47 parallel sessions*, covering topics such as conic optimization, global optimization, nonsmooth and nonconvex optimization, bilevel optimization, zeroth and first order methods, optimization under uncertainty, optimization for machine learning and statistics, shape and topology optimization. >>

▲ *Group picture* of the *EUROPT 2026 Conference*.

>> The breadth and sophistication of the talks showcased the community's continual growth and innovation.

The traditional *EUROPT dinner* was held on the evening of July 9 at the *Stiegl Klosterhof*, providing a charming setting for delegates to gather. This memorable event offered an excellent opportunity to strengthen connections within the *EUROPT* community, fostering informal conversations and new collaborations in a relaxed, welcoming atmosphere. On July 10, there was an optional tour of the *voestalpine* steel plant, which gave further opportunities for participants to network, observe cutting-edge industrial processes firsthand, and reflect on the real-world impact of optimization in manufacturing.

The closing session marked an important moment for the *EUROPT* community. The *EUROPT* chair, *Giancarlo Bigi*, announced that the Managing Board was leaving office to a new lineup of colleagues. He summarized the achievements of the group in these years before announcing the names for the new board. Upon *Immanuel Bomze*'s invitation, the participants thanked the outgoing Managing Board for the excellent service and welcomed the incoming Managing Board with a warm and heartfelt incessant applause.

▲ *Sophie N. Parragh*, *Markus Sinnl*, *EUROPT Fellow 2026 Etienne de Klerk*, and (the then) Chairman of *EUROPT*, *Giancarlo Bigi* (from left to right).

EUROPT 2026 was made possible thanks to the support of numerous sponsors, a devoted scientific committee, and ten enthusiastic student volunteers.

2026 INFORMS Transportation Science and Logistics Conference celebrated at Massachusetts Institute of Technology, USA

Alexandre Jacquillat <alexjacq@mit.edu>

The transportation science and logistics community celebrated the *2026 INFORMS Transportation Science and Logistics* (*TSL*) Conference at the Massachusetts Institute of Technology from July 26-29, 2026. The conference brought together researchers, practitioners, and students from around the world to share the latest advances in transportation science, logistics, optimization, machine learning, and artificial intelligence. It also provided a platform to explore emerging application areas and innovative approaches to addressing major societal challenges in transportation science and logistics.

The conference attracted more than 300 participants from over 50 countries, including more than 150 students. Over three days, attendees enjoyed 30+ hours of programming, featuring 200 research presentations over 6 parallel sessions and 30+ posters, creating an outstanding environment for scientific exchange, lively discussions, and new collaborations.

The conference program committee comprised of *Professor Alexandre Jacquillat* (Local Chair, MIT Sloan School of Management), *Professor Halit Üster* (Program Chair, Southern Methodist University), *Professor Saurabh Amin* (Edmund K. Turner Professor of Civil and Environmental Engineering, Massachusetts Institute of Technology), *Professor Daniel Freund* (Robert G. James Career Development, MIT Sloan School of Management), *Professor Matthias Winkenbach* (Director, MIT Megacity Logistics Lab CTL Principal Research Scientist, MIT Center for Transportation & Logistics), *Professor Sibel Alumur Alev* (Department of Management Science and Engineering, University of Waterloo), and *Professor Lavanya Marla* (Department of Industrial and Enterprise Systems Engineering, University of Illinois at Urbana-Champaign).

▲ *Impressions* of the *2026 INFORMS Transporation Science and Logistics Conference* (from left to right): *Keynote speech* by *Professor Cynthia Barnhart*, *Industry Panel*, *Keynote speech* by *Timothy L. Jacobs*.

A highlight of the conference were the two plenary sessions. In the first one, *Professor Cynthia Barnhart* delivered an inspiring keynote reflecting on decades of research, real-world impact, and academic leadership, which included the reprise of her *2025 Robert Herman Lifetime Achievement Award*. While in the second one, *Timothy L. Jacobs*, Vice President of Applied AI and Machine Learning at Walmart, shared a compelling vision of how artificial intelligence and optimization are transforming modern retail supply chains. The conference also featured a vibrant industry panel on the intersection of AI, analytics, and transportation practice, bringing together *Daniel Merchan* (Amazon Delivery), *Fred Gardi* (Hexaly), *Tamir Beged-Dov* (DAT Freight & Analytics), and *Matthias Winkenbach* (MIT Center for Transportation and Logistics, moderator). Their discussion highlighted how advances in optimization and machine learning are increasingly shaping large-scale transportation and logistics systems.

The conference also featured, for the first time, a student poster competition. Congratulations to the winners: *Rashika Gupta* (first place, Indian Institute of Management Ahmedabad), *Shiyu Shen* (second place, University of Illinois Urbana–Champaign), *Ari Prezerowitz* (third place, KU Leuven), and *Jason Lu* (honorable mention, University of Michigan).

Beyond the technical program, participants had numerous opportunities to connect through the conference's social events. The welcome reception at the MIT Museum and the gala dinner aboard the Spirit of Boston provided memorable settings for networking, reconnecting with colleagues, and building new collaborations across academia and industry.

The success of the conference would not have been possible without the generous support of our sponsors - DAT Freight & Analytics, Hexaly, Haladir, the MIT Intelligent Logistics Systems Lab, the MIT Sloan School of Management, and the University of Iowa Tippie College of Business.

It was a privilege to host the *2026 INFORMS TSL Conference* at MIT. We hope participants returned home with new ideas, new collaborators, and renewed enthusiasm for advancing both the science and practice of transportation science and logistics. We look forward to seeing the community again at the next *TSL Conference*.

Welcome to the INFORMS Healthcare Conference 2026, held in Raleigh, NC, USA

Maria Mayorga <memayorg@ncsu.edu>

*** This article was previously printed in *OR/MS Today*.**

Since the last *INFORMS Healthcare Conference* in 2023, AI has become pervasive across industries, and healthcare is no exception - adding new challenges to the many that persist in this sector. The challenges facing healthcare remain as pressing as ever. As one of the premier gatherings in the field, the *INFORMS Healthcare Conference 2026*, hosted by North Carolina State University, July 28-30, in Raleigh, NC, brought together researchers, practitioners, clinicians, policymakers, engineers, data scientists, and innovators from across the healthcare ecosystem (https://pubsonline.informs.org/do/10.1287/orms.2026.02.24/full/).

The conference theme "*Smarter Healthcare for a Brighter Future*, highlighted *INFORMS*" commitment to advancing healthcare through analytics, *operations research* (*O.R.*), AI, technology integration, and systems-level innovation. *INFORMS* recognizes that comprehensive solutions are needed that span the entire healthcare ecosystem: from individuals to communities to policymakers.

Beyond its foundational programming in healthcare operations management, AI in healthcare, and medical decision-making, the conference also showcased an expanded lineup of sessions focused on:

▲ Members of the *INFORMS staff* and the *Healthcare Conference committee* celebrate the launch of the *2026 conference*.

- Public health policy,
- Healthcare quality and safety,
- Global health and humanitarian operations.

Attendees also found dedicated clusters that explored:

- Health opportunities for all,
- Healthcare practice,
- Healthcare technology and bioinformatics,
- Critical intersections between health economics and finance.

Plenary Speakers

Three plenary speakers addressed attendees on each day of the *INFORMS Healthcare Conference 2026*.

The opening plenary was given by *Natalia Summerville*, director of decision intelligence at the Memorial Sloan Kettering Cancer Center. In this role, *Summerville* leads the deployment of AI and operations research-based solutions to support hospital operations and clinical workflows.

Her address, "*Decision Intelligence for Clinical Operations: Designed for Impact,*" walked attendees through a real-world example of how to move from concept to design, to governance, to the implementation of clinical decision support tools.

On the second day, *Amy Cohn* followed with her address, "*Diagnosing Complex Problems in Pediatric Emergency Medicine and Developing Comprehensive Treatment Plans*." *Cohn* is an Alfred F. Thurnau professor in the Department of Industrial and Operations Engineering at the University of Michigan, faculty director of the Center for Healthcare Engineering and Patient Safety, and chief transformation officer at Michigan Medicine. She drew parallels between how physicians diagnose and treat complex diseases and strategies to address challenges in healthcare operations.

▲ Attendees came from across the globe to participate in the *2026 INFORMS Healthcare Conference*.

To close the conference, *Jamie Pina*, vice president for data and AI strategy at RTI International, discussed "*Operationalizing AI in Health and Science: Governance, Alignment, and Execution*." *Pina* focused on how organizations can translate investments in AI and analytics into sustained performance improvement. He will provide practical examples of how governance, leadership alignment, and disciplined execution can position emerging technologies to drive meaningful change.

Cordially thanks to dear ***Ashley Klimp*** for communication and editing assistance that make this reprint possible.

ECCO XXXIX - CO2026 - The Latest Conference of European Combinatorialists, Celebrated in Lisbon, Portugal

Bo Chen <b.chen@warwick.ac.uk>, **Silvano Martello** <silvano.martello@unibo.it>, **Luis Gouveia** <legouveia@ciencias.ulisboa.pt>

ECCO XXXIX - CO2026 (https://ecco2026.campus.ciencias.ulisboa.pt/) brought together 83 participants from Austria, Belgium, Canada, China, Denmark, France, Germany, Hungary, Ireland, Italy, Japan, Republic of Korea, Poland, Portugal, Slovakia, Spain, Switzerland, Turkey, and the United Kingdom. The conference was jointly organized by the *European Chapter on Combinatorial Optimization* (*ECCO*, https://ecco.grenoble-inp.fr/) and the *Combinatorial Optimization Conferences* (*CO*, https://warwick.ac.uk/fac/soc/wbs/conf/co/).

The scientific program included 54 talks spanning several aspects of combinatorial optimization, covering both theoretical foundations and real-world applications. Thanks to generous financial support from *EURO*, registration fees were waived for a number of students and early-career researchers.

▲ *ECCO XXXIX - CO2026*: The *Plenary Speakers William Cook, Gábor Galambos, Sergio García Quiles, Joerg Kalcsics* (from left to right).

Four plenary lectures were delivered by *William Cook* on "*The Traveling Salesman Problem: Amazon Deliveries, Pub Walks, and Astro Tours*"; *Gábor Galambos* on "*The Coupled Task Problems*"; *Sergio García Quiles* on "*Facility Location Models with Preferences Constraints*", and *Joerg Kalcsics* on "*Firefighter Games on Graphs*".

The *Program Committee* and the *Organizing Committee*, both chaired by *Luis Gouveia*, crafted an excellent social and academic program. The conference dinner on Friday, June 9, took place at *Zambeze Restaurante & Rooftop Bar*, located in the historic centre of Lisbon near Sao Jorge Castle, where Portuguese and Mozambican cuisines come together.

A special issue of the *Journal of Combinatorial Optimization* on "*Recent Advances and Emerging Challenges in Combinatorial Optimization*" has been launched, with a submission deadline of December 1, 2026.

The *EWG ECCO*, created in 1987 by *C. Roucairol*, *A. Rinnooy Kan*, and *D. de Werra*, has been chaired since 2000 by *Silvano Martello*, assisted by a committee made up of *Jacek Błażewicz*, *Van Dat Cung*, *Alain Hertz*, and *Paolo Toth*. With over 1,700 members, *ECCO* is currently one of the largest working groups within *EURO*.

Since 1988, the group has brought researchers together annually to discuss the latest advances in combinatorial optimization, with only two exceptions: *ECCO IV* in Dubrovnik (1991, cancelled due to the war) and *ECCO XXXIII* in St. Petersburg (held online). Every fourth year, the conference is held as a joint meeting with *CO*, the series of combinatorial optimization conferences, which began in the UK in 1977, currently chaired by *Bo Chen*.

▲ The *Opening Session*: *Bo Chen*, *Silvano Martello*, *Luis Gouveia* (from left to right) - The Traveling Salesman Problem.

ECCO has a tradition of convening in charming locations. Conferences since 2000 have been held in Capri, Bonn, Lugano, Molde, Beirut, Minsk, Porto, Limassol, Dubrovnik, Jerusalem, Malaga, Amsterdam, Antalya, Paris, Munich, Catania, Budapest, Koper, Fribourg, St Julian's (Malta), Madrid (online), St Petersburg (online), Chania (Crete), Ghent, Marrakech, and Lisbon.

The next conference, organized by *Bo Chen*, *Sergio Garcia Quiles*, and *Joerg Kalcsics*, will be a joint *EURO/ALIO/ECCO* conference taking place in Edinburgh, UK, on June 23-25, 2027. It will be followed by *ECCO XLI*, to be held in Palermo, Italy (venue: Hotel La Torre, Mondello Beach), on May 18-20, 2028.

Széchenyi University hosted the *11th VOCAL Optimization Conference* in historic Mosonmagyaróvár, Hungary

Botond A. Bertók <bertok.akos.botond@sze.hu>, **Marianna E.-Nagy** <marianna.eisenberg-nagy@uni-corvinus.hu>, **Tibor Illés** <tibor.illes@uni-corvinus.hu>

The *11th VOCAL Optimization Conference* was held at the *Albert Kázmér Faculty* of *Széchenyi István University* in *Mosonmagyaróvár*, Hungary, on June 10-12, 2026. The conference was supported by Széchenyi István University, the *Hungarian Operations Research Society* (*HORS*), *EURO*, and the *EURO Working Group on Continuous Optimization* (*EUROpt*).

▲ *HORS Plenary Speaker: Prof. Zsolt Páles.*

The event brought together *94 participants* from *16 countries* across *3 continents*, providing an international forum for researchers in mathematical optimization and its applications.

A distinctive feature of this edition was the presence of three Hungarian plenary speakers: *Ferenc Friedler*, *Zsolt Páles* (*HORS Plenary Speaker*) and *Tamás Terlaky*. *Friedler* and *Terlaky*, founders of the *VOCAL Conference series* in 2003, were invited to deliver plenary lectures in recognition of their outstanding contributions to establishing and developing the conference series. Their talks offered historical perspectives on interior point algorithms and P-graphs. *Professor Páles*, recipient of the *2026 Jenő Egerváry Memorial Plaque* awarded by *HORS*, presented his recent work on nonlinear inverse images of convex sets.

▲ *EURO Plenary Speaker: Prof. Georgina Hall.*

The international optimization community was represented by *Georgina Hall* (INSEAD, France; *EURO Plenary Speaker*), who spoke on shape-constrained optimization using sum-of-squares polynomials, and *Sara Shashaani* (North Carolina State University, USA), whose plenary lecture focused on stochastic and derivative-free trust-region methods.

The conference also celebrated the 70th birthdays of *Tibor Csendes*, *Goran Lešaja*, *Yurii Nesterov* and *Zsolt Páles* through dedicated special sessions highlighting their scientific contributions. In total, the scientific program included *29 sessions* and *83 presentations* covering topics such as interior point methods, approximation algorithms, decision and game theory, combinatorial optimization, and stochastic programming.

Hosted by *Széchenyi István University*, whose *Albert Kázmér Faculty* has a history dating back to 1818, the conference emphasized the role of optimization in modern engineering, agriculture, and applied sciences.

Beyond the scientific program, the conference provided an excellent environment for networking and collaboration. Informal discussions during breaks complemented the sessions and fostered new professional connections in a friendly atmosphere.

Located at the crossroads of Hungary, Austria, and Slovakia, the historic city of *Mosonmagyaróvár* offered participants an attractive setting for the event. We look forward to welcoming the optimization community back to Mosonmagyaróvár at the next *VOCAL Conference* in June 2028.

ECMI 2026 in green Kaunas, Lithuania - *Building (OR) bridges between Mathematics and Industry*

Audrius Kabašinskas <audrius.kabasinskas@ktu.lt>, **Gabija Celiešienė** <gabija.celiesiene@ktu.lt>

The *23rd ECMI Conference on Industrial and Applied Mathematics* (*ECMI 2026*) was held at *Kaunas University of Technology* (*KTU*), Lithuania, from June 29 to July 3, 2026. The biennial conference brought together 163 researchers, industry representatives, and students to exchange ideas, present recent research, and strengthen collaboration between academia and industry. *ECMI 2026* was the first flagship *ECMI conference* hosted in Lithuania, marking an important milestone for the industrial mathematics community, supported by *Operational Research* (*OR*).

▲ *Participants of ECMI2026* at *Kaunas University of Technology* and the famous *pink soup* for lunch.

The *scientific programme* featured *plenary lectures* by internationally recognized professors: *Marta Fiocco* (*Leiden University*), *Paola F. Antonietti* (*Politecnico di Milano*), *Paweł Dłotko* (Polish Academy of Sciences), *Lorenzo Pareschi* (Heriot-Watt University and University of Ferrara), *Stefano Maria Iacus* (European Commission Joint Research Centre and Harvard University), *Sigrid Leyendecker* (FAU Erlangen-Nürnberg), *Mayur Pal* (Kaunas University of Technology), and *Rita Laura D'Ecclesia* (Sapienza University of Rome). Their *lectures* addressed topics including causal inference, neurodegenerative diseases, topological data analysis, plasma fusion, digital safety, nonlinear dynamical systems, the role of mathematics, *OR* and *AI* in the energy transition, and integrated risk management in the era of financial innovation. Alongside the plenary lectures, participants presented their work in *parallel sessions* and *mini-symposia* covering a broad range of developments in *OR*, industrial and applied mathematics.

One of the conference highlights was *Industry Day*, dedicated to showcasing the role of mathematics in solving practical challenges faced by industry and the public sector. Representatives from industry shared examples of how mathematics, data analysis, and modelling support innovation, digital transformation, and decision-making in their organizations. Participants also attended a lecture by this year's *EMS/ECMI Lanczos Prize* winner, *Prof. Garth Wells*, who presented the *FEniCS Project*, an open-source computing platform that has become one of the world's leading tools for finite element computing. Industry Day also featured the *panel discussion* on "*Artificial Intelligence: Opportunities and Challenges for Science, Education, and Industry*", to emphasize the growing role of *OR* and *AI* in research, higher education, and business.

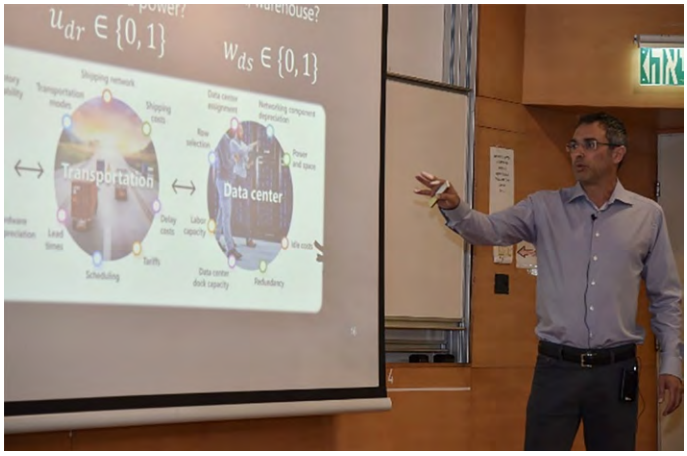
The conference also celebrated excellence in industrial mathematics through several prestigious *ECMI awards*. In addition to the *Lanczos Prize*, awards were presented to the winners of the *Anile-ECMI Prize* for the best PhD thesis, *Mattia Corti* (Politecnico di Milano) and *Maximilian Gießler* (Offenburg University), and the *Hansjörg Wacker Memorial Prize* for the best MSc thesis, *Jad Mounayer* (University of Oxford), recognizing outstanding achievements by early-career researchers.

ECMI 2026 was partially supported by *EURO* and the *Research Council of Lithuania*. The next *ECMI* conference will take place in September 2028 in Kaiserslautern, Germany.

Annual Conference of the OR Society of Israel: successfully held in Haifa

Yale T. Herer <yale@technion.ac.il>

▲ *Conference Chair Galit Yom-Tov*, *Plenary speaker Mor Armony*, and *ORSIS 2024 Life Achievement Awardee Avishai Mandelbaum* (from left to right).



▲ *Plenary Speaker Ishai Menache.*

The *Operations Research Society of Israel* (*ORSIS*) held its latest *national conference* on May 12-13, 2026, in Haifa, Israel. The conference was hosted by the *Faculty of Data and Decision Sciences* at the *Technion - Israel Institute of Technology*. Held annually, the meeting covers all areas of *Operations Research* (*OR*). This year's conference was organized by *Galit Yom-Tov* (*Chair*) and *Yale T. Herer*, both members of the hosting faculty. The conference was overseen by the *ORSIS President*, *Nahum Shimkin*, also of the Technion.

▲ *Walking tour* of Haifa along the slopes of *Mount Carmel*.

Highlights of the conference included two inspiring *Plenary Talks*. *Ishai Menache* of Microsoft Research spoke about Microsoft's winning entry for the *2026 Franz Edelman Award* and the *2026 INFORMS Award*, describing impactful innovations in cloud supply chain management. *Mor Armony* of New York University delivered this year's *Naor Lecture*, speaking about "*Queue Configurations and Customer Ownership*."

▲ *Award* recipients *Noa Zychlinski* and *Jennifer Kruman*, with *ORSIS President Nahum Shimkin*, conference *co-organizer Yale Herer*, and the *award committees chairs Yael Perlman* and *Moshe Haviv*.

During the conference, *ORSIS* bestowed the *Uriel Rothblum Award* for outstanding work in *OR* to *Noa Zychlinski* and the *Abraham Mehrez Prize* for best student work in *OR* to *Jennifer Kruman* (advised by *Yale T. Herer*).

The meeting attendance did not disappoint with *145 registered participants*, including *51 students*. In addition to the plenary talks and presentations by the prize winners, the two-day conference featured a rich scientific program which included *4 semi-plenary talks* on various *OR* topics, an industrial exposure lecture on quantum optimization, and *90 additional scientific talks* delivered in parallel sessions over the course of the conference.

On the evening between the two conference days, the participants joined a walking tour in *Haifa* followed by a dinner next to the *beach*. The walking tour was a walk down the "side" of Haifa, from *Carmel Center* to *Hadar*, offering panoramic views of the *Haifa Bay* while highlighting some of the city's architecture and recent history.

We hope that you can join us next year! You can keep up-to-date and find details of past and future conferences by visiting the *ORSIS* website at https://www.orsis.org.il/.

Cordially thanks to dear ***Prof. Nahum Shimkin*** for his support with the communication that made this report possible.

National Seminar and Symposium ORAI 2026, Surabaya and Malang - an Assembly Forum for *OR* Enthusiasts in Indonesia

Ahmed Raecky Baihaqy <ahmed.baihaqy@its.ac.id>

National Seminar and Symposium on Operations Research & Artificial Intelligence (ORAI) 2026 (https://elib.its.ac.id/conf/orai2026/) was held on 8 July 2026 in Surabaya, Indonesia, and 9 July 2026 in Malang, Indonesia. This event was organized by *Institut Teknologi Sepuluh Nopember* (*ITS*) as the host university in collaboration with several prominent universities across Indonesia, including *Universitas Indonesia* (*UI*), *Institut Teknologi Bandung* (*ITB*), *Universitas Gadjah Mada* (*UGM*), *Universitas Atma Jaya Yogyakarta* (*UAJY*), *Universitas Sebelas Maret* (*UNS*), and *Universitas Diponegoro* (*Undip*).

▲ The official establishment of *OR Society of Indonesia* (*ORSI*).

The main goal of this event was to gather various stakeholders, including academicians, practitioners, and students from across Indonesia who are interested in quantitative methodologies such as operations research (*OR*), simulation, machine learning, data analytics, and systems modeling, as well as their practical implementation and application in solving numerous industrial problems. This year's event carried the theme "*Operations Research in the Age of Artificial Intelligence: From Prediction to Prescription - The Strategic Role of OR in Intelligent Systems*".

The event in ***Surabaya***, Indonesia, commenced with a *keynote speech session*. The invited *Keynote Speakers* were *Gilarsi W. Setijono* (President Director of PT Perusahaan Mineral Indonesia (Perminas)), *Soerjo Winarto* (Operations Director of PT Sreeya Sewu Indonesia), and *Rio Lasse* (Director of Operations and Transformation of PT ASDP Indonesia Ferry). The keynote speakers highlighted the transformative role of *OR* and AI in industry, emphasizing resource optimization, effective change management, and technology-enabled decision-making as key drivers of future organizational and industrial competitiveness. The *parallel sessions* were carried out afterwards. In these sessions, submitted research papers were presented by the authors to disseminate knowledge related to the implementation trends of *OR*, AI, and other quantitative modeling methods in various industrial applications. The submitted papers employed various quantitative approaches ranging from metaheuristics to simulations.

▲ Group photo with *Keynote Speakers*.

The event continued the following day in ***Malang***, Indonesia, where the *symposium* was held. The symposium began with presentations delivered by invited *guest speakers*: *Andreas D. Prakasa*, (Director of Corporate Relations & Strategic Affairs of PT Etana Biotechnologies Indonesia), *Prof. Budisantoso Wirjodirdjo* from ITS, and *Dimas Prasetyo* from Advanced Semiconductor Engineering Inc., Taiwan. The guest speakers emphasized the expanding role of *OR*, quantitative modeling, and ML across different industries, highlighting their applications in biopharmaceuticals, systems thinking for complex problem-solving, and semiconductor manufacturing.

The symposium was followed by a *panel discussion* in which representatives from various universities shared their perspectives on how *OR* and machine learning (ML) are taught at the university level, as well as the history and future trends of *OR* and AI applications in research and industrial projects. Through this discussion, the panelists, who are also faculty members, had the opportunity to gain valuable insights and learn best practices implemented at other universities.

At the end of the event, the establishment of the *OR Society of Indonesia* (*ORSI*) was officially announced. It is hoped that, through the establishment of the *OR* Society of Indonesia, professionals and researchers working in *OR*, ML, and other quantitative fields will be able to come together and organize annual events to discuss and share knowledge on the applications of *OR* and AI in the years to come.

Cordially thanks to the dear ***Prof. Anton Abdulbasah Kamil*** for his support with the communication that made this report possible.

Mathematics of Operational Research Conference, Successfully held in Birmingham, UK, in 2025 - with an outlook to 2027

Conference Organising Committee:
Paresh Date, Adam Letchford, Dilek Onkal, Anna-Lena Sachs, Aris Syntetos (chair);
conferences@ima.org.uk *

▲ The 5th *IMA and OR Society Conference on Mathematics of OR*.

In the vibrant city of Birmingham, the *IMA* (*Institute of Mathematics and its Applications*) and *OR Society* (*ORS*) held the *5th Conference on Mathematics of Operational Research* from 30 April to 2 May 2025. Held at *Conference Aston*, the event attracted over *80 delegates* from across the globe, uniting a diverse mix of researchers, practitioners, educators and thought leaders. The conference provided a platform for the exchange of ideas, showcasing the latest developments in management mathematics and *operational research*, while also fostering collaboration and innovation.

Our *keynote speakers*, *Simge Küçükyavuz*, *Banu Lokman*, *James Reade*, *Maria Paola Scaparra* and *Ruud Teunter,* each delivered compelling and thought-provoking presentations. Their talks emphasised the practical applications of mathematical research in solving complex, real-world problems, underscoring the importance of the field in today's data-driven landscape.

▲ *Heather* awards *Nirmani* with the "*best poster prize*".

The technical talks and panel discussions covered a broad spectrum of themes, reflecting the depth and breadth of interest within the management mathematics community. Notably, the session on *WORAN* (*Women in OR and Analytics Network*) provided an important platform for improving gender equality. Panels focussed on *Early Career Researchers* (*ECR*) and *Equity, Diversity, and Inclusion* (*EDI*) in mathematics further emphasised our commitment to promoting an inclusive and supportive research environment.

Another highlight of the programme was the *poster competition*, which showcased a diverse selection of innovative research projects from delegates. The competition provided a valuable opportunity for both established and emerging researchers to present their work in a more informal setting and engage directly with their peers. The *prize for the best poster*, "*Real-time Simulation for Improving Patient Flow in Emergency Departments*", was awarded to *Nirmani Amarasinghe*. This £500 prize was generously sponsored by the *Smith Institute* and presented by *Heather Tewkesbury*, CMath FIMA (Smith Institute and President Elect of the *IMA*).

The feedback from attendees was overwhelmingly positive, with many praising the high quality of the presentations and the collegial atmosphere.

* A version of this article was originally published in the August 2025 issue of ***Mathematics Today***.

The full reference is: ***Paresh Date***, ***Adam Letchford***, ***Dilek Onkal***, ***Anna-Lena Sachs*** and ***Aris Syntetos*** (***2025***), ***Mathematics of operational research conference, vol. 61, no. 4, p. 101***.

The *6th IMA - OR Society Conference on Management Mathematics* will be held in April 2027 in *Birmingham*, UK: https://ima.org.uk/28639/the-6th-ima-or-society-conference-on-management-mathematics-formerly-the-conference-on-the-mathematics-of-operational-research/.

Cordially thanks to the dear ***Mrs. Pamela Bye*** for her support with the communication that made this report possible.

12th International Conference on Decision Support System Technology - ICDSST 2026 of EWG-DSS, Held in Plymouth, UK

Shaofeng Liu <shaofeng.liu@plymouth.ac.uk>, **Pavlos Delias** <pdelias@af.duth.gr>, **Boris Delibasic** <boris.delibasic@fon.bg.ac.rs>

The *EURO Working Group on Decision Support Systems* (*EWG-DSS*) successfully held its *12th International Conference on Decision Support System Technology* (*ICDSST 2026*) during 27-29 May 2026 in Plymouth, UK. This year's conference addresses the theme of "*DSS technologies for sustainable and resilient transitions*", offering a platform to explore how *DSS* can drive and support a wide range of transitions, including but not limited to, green transition, digital transition, skills transition, societal transition, organisation transition and supply chain transition. Full details of the conference are available on its official website: https://icdsst2026.wordpress.com/.

Over 100 authors from 25 countries contributed to the conference. Over three days, colleagues from *DSS* community participated in four keynote speeches, 11 parallel sessions and 1 poster session.

▲ *ICDSST 2026*: the popular *group photo*.

Two proceedings have already been published:

27 papers were selected and published by *Springer* in the *Lecture Notes in Business Information Processing* (*LNBIP*) series, book "*Decision Support Systems XVI. Decision Support System Technology for Sustainable and Resilient Transitions*", LNBIP vol 582, ISBN 978-3-032-25145-9 (print), ISBN 978-3-032-25146-6 (eBook).

The remaining accepted papers and posters are published by *University of Plymouth* in the *Proceedings of the 2026 International Conference on Decision Support System Technology (ICDSST 2026)*, with ISBN number 978-1-84102-474-5.

Three *special issues* (*SIs*) of journals will be published after the conference:

Journal of Decision Systems, SI topic: "*Decision Support Systems for Sustainable and Resilient Transitions*"- submission deadline: 30 September 2026;

Technology in Society, SI topic: "*Entrepreneurial Behaviour and Decision Support Systems: New Path to Sustainable and Resilient Futures*" - submission deadline: 31 July 2026;

International Journal of Logistics Management, SI topic: "*A systemic understanding of supply chain resilience: cross-level interactions, multi-level frameworks, and theoretical innovations*" - the submission deadline: October 1, 2026.

Looking ahead, the *13th International Conference on Decision Support System Technology* (*ICDSST 2027*) will take place in *Chania*, Crete, Greece, in May 2027. Full details, including the Call for Papers, will be posted on the conference website: https://icdsst2027.ewg-dss.com. Interested colleagues are encouraged to monitor the site for updates.

For more details of the *EWG-DSS* and its activities, please refer to https://ewgdss.wordpress.com/.

EWG on Vehicle Routing and Logistics Optimization celebrated its *10th Meeting* in Bath, UK

Maria Battarra <mb2182@bath.ac.uk>, Chair of the Organizing Committee,
Alice Raffaele <alice.raffaele@unipd.it>, attendee of VeRoLog 2026,
Roberto Roberti <roberto.roberti@unipd.it>, Chair of the Scientific Commission and Coordinator of VeRoLog

The 10th conference *EURO Working Group on Vehicle Routing and Logistics Optimization* (*VeRoLog*) was held at the *School of Management of the University of Bath*, United Kingdom, on July 6-9, 2026, attracting about 160 participants from 25 countries worldwide, 72 institutions, and 16 companies. The opening session included the official handover of the coordinator role from *Daniele Vigo* to *Roberto Roberti*, and the award ceremony of the *VeRoLog Doctoral Dissertation Prize*, won by *Florentin Hildebrandt* with his thesis entitled "*Machine Learning for Stochastic Dynamic Vehicle Routing Problems*".

The conference featured 126 presentations on several *OR* topics: electric and green vehicles (25%), heuristics and solver methods (20%), last-mile delivery and lockers (20%), warehouse and dynamic models (15%), optimization networks (15%), and others (5%). From the methodological perspective, the talks covered exact approaches, metaheuristics and matheuristics, as well as machine learning techniques.

▲ *Opening session*: *Maria Battarra*; *Daniele Vigo* and *Roberto Roberti*; *Florentin Hildebrandt* and *Kris Braekers* (from left to right).

There were *4 plenary lectures* by international invited speakers: *Anand Subramanian* (UFPB) analyzed the performance of a state-of-the-art metaheuristic for the Minimum Latency Problem across 12 programming languages; *Carolina Osorio* (HEC Montréal / Google Research) presented advances and open questions in the fields of continuous and combinatorial simulation-based optimization with applications to urban mobility; *Niels Agatz* (Rotterdam School of Management) made an overview on *demand management in routing and transportation*; and *Ola Jabali* (Politecnico di Milano) discussed arising challenges in *deploying electric vehicles related to energy consumption, district partitioning, and fleet sizing*. Hexaly and ORTEC discussed solver development and real-world applications in their *2 sponsor talks*.

Besides representing a strong reference for the international community in routing and transportation, *VeRoLog* has always targeted youngsters. In addition to the main conference, in the preceding days, there was a *Ph.D. school*. After the first one held in 2025 about exact methods, this edition was about heuristics and metaheuristics, and included 3-hour masterclasses: two by *Diego Cattaruzza* (University of Udine) on the basics of metaheuristic optimization and genetic algorithms; one by *David Pisinger* (Technical University of Denmark) on *ALNS*; one by *Anand Subramanian* (UFPB) on ILS; and the last one by *Roberto Roberti* (University of Padova) on the basics of modeling *VRP problems* and what this has to do with *developing heuristics*.

▲ *VeRoLog 2026 Ph.D. School.*

Social events could not be missed: besides coffee breaks and lunches full of networking, on July 7, participants enjoyed an entertaining walking tour of Bath, while on July 8, they visited Bristol's marina and had a social dinner on the SS Great Britain.

▲ *VeRoLog sponsors.*

Now, the *VeRoLog* journey keeps going. First, there is a *special issue* of *Omega* reserved for attendees of the conference, with a submission deadline of September 30, 2026; all details can be found on the dedicated webpage. Then, the next stop will be in Le Havre, France, from June 30 to July 2, 2027, with *Christophe Duhamel* (Université Le Havre Normandie) and *Jakob Puchinger* (EM Normandie) as organizing chairs. *VeRoLog 2027* will again be preceded by a *Ph.D. school* on June 28-29, this time on *optimization under uncertainty*. This will be the last part of a three-year doctoral school, which will be offered again in subsequent years, allowing early-career researchers to become familiar with the key tools they may need.

To stay updated, subscribe to the *VeRoLog* mailing list and join the LinkedIn group.

▲ *Conference group picture.*

ORAHS 2026 - 52nd Annual Meeting of EWG on OR Applied to Health Services - Celebrated in Belfast, Northern Ireland, UK

Laura Boyle <laura.boyle@qub.ac.uk>, **Adele Marshall** <a.h.marshall@qub.ac.uk>

▲ *Doctoral Colloquium* - Belfast 18th July.

Queen's University Belfast hosted the *52nd Annual Meeting* of the *EURO Working Group on Operational Research Applied to Health Services* (*ORAHS 2026*) on 19th-24th July 2026, bringing together an international community of scholars to share and debate cutting-edge research in the application of systematic and quantitative analysis in support of planning and management in the health services sector (https://www.qub.ac.uk/sites/orahs-2026/). The *2026 ORAHS* theme was "*Transforming healthcare systems through digital innovation and artificial intelligence*". Over five intensive days, the program featured *25* thematic *sessions* with *92 talks* and *12 poster presentations* spanning rostering, surgery scheduling, emergency medical services, integrated planning, and the use of machine learning and Artificial Intelligence in healthcare.

ORAHS 2026 Doctoral Colloquium (18th-19th July)

The *2026 ORAHS Doctoral Colloquium* featured an intense 2-day programme of presentations, feedback sessions, group discussions, challenges, and speed-networking. In total, *25 PhD students* and *7* experienced *researchers* participated (*John Blake*, *Laura Boyle*, *Nadia Lahrichi*, *Houra Mahmoudzadeh*, *Melanie Reuter-Oppermann*, *Alexander Rutherford*, and *Joe Viana*).

ORAHS 2026 featured three plenary talks from leading academics and healthcare practitioners. *Professor Sally McClean* from Ulster University spoke about "*Markov Processes for healthcare modelling*", *Professor Christine Currie* from the University of Southampton presented "*Grand Challenges in Healthcare Simulation*", and *Dr. Peter Cosgrove* spoke about "*designing healthcare data input systems to better meet support modelling needs*".

On Tuesday 21st July we held an outdoor poster session featuring 12 poster presentations. The *Steve Gallivan Award* for most effective collaboration by an early career operational researcher with health and care professionals was judged and awarded to PhD student *Nathan Maguire* for poster "*Statistical Modelling of Ambulance Fleets and Emergency Calls in Belfast, Northern Ireland*", highlighting the commitment of the *ORAHS* community to supporting early career research excellence.

▲ *Outdoor Poster Session* at *Queen's University*, Belfast - 21st July.

In addition to the scientific sessions, the meeting featured a social programme aimed at promoting informal interaction and networking among participants. Highlights included a conference dinner at *Belfast City Hall* and a tour to the North Coast, including a boat trip from Ballycastle.

▲ *Conference Dinner* at *Belfast City Hall* - 23rd July.

▲ *Boat Trip* from *Ballycastle Harbour* - 21st July.

▲ *Prof. Sally McClean* - 20th July.

▲ *Prof. Christine Currie* - 21st July.

▲ *Dr Peter Cosgrove* - 23rd July.

Overall, *ORAHS 2026* demonstrated its role as a leading international forum for presenting high-quality research in *OR* applied to health services. The conference promoted interdisciplinary dialogue, facilitated the exchange of innovative methodologies and practical applications, and strengthened collaborations aimed at improving healthcare planning, decision-making, and policy in an increasingly complex and evolving healthcare landscape. Delegates will have the opportunity to submit to a special issue on "*Operational Research and Artificial Intelligence for Transforming Healthcare Systems*".

MCDM 2026 in Wuppertal: Better Decisions for a Better Tomorrow

Kathrin Klamroth <klamroth@uni-wuppertal.de>, **Michael Stiglmayr** <stiglmayr@uni-wuppertal.de>

▲ *Logo of MCDM 2026.*

From May 25 to 29, 2026, the "*28th International Conference on Multiple Criteria Decision Making*" (*MCDM 2026*) brought together leading researchers, practitioners, and decision-makers from around the world at the *University of Wuppertal*. Under the theme "*Better Decisions for a Better Tomorrow*", the conference explored how Multiple Criteria Decision Making (MCDM) can address complex challenges in society, ecology, and economics. Organized by *Kathrin Klamroth* and *Michael Stiglmayr* and supported by the *Optimization Group* at the University of Wuppertal, the event fostered interdisciplinary exchange and innovation in the fields of decision-making and optimization. Financial support by the *German Research Foundation* (*DFG*) and by the *German OR Society* (*GOR*) is gratefully acknowledged.

MCDM 2026 provided a unique forum for discussing cutting-edge research and practical applications of decision making methodologies. The conference program featured plenary talks by renowned experts, specialized streams, and awards that recognize outstanding contributions. Participants engaged in lively debates on how *MCDM* can shape a sustainable and equitable future.

▲ *Group Photo*
[photo by *Friederike von Heyden*, University of Wuppertal].

Topics Addressed – Better Decisions for a Better Tomorrow

Four distinguished speakers delivered *plenary talks*, offering deep dives into critical aspects of *MCDM*: *Salvatore Corrente* (University of Catania, Italy) "*Decision Rules for Explainable Decision Aiding and Interactive Evolutionary Multiobjective Optimization*"; *Andreia Guerreiro* (INESC-ID, Portugal) "*Set-Quality Indicators in Multiobjective Optimisation*"; *Manuel Bickel* (Wuppertal Institute for Climate, Environment and Energy, Germany) "*Decision Contexts in Applied Sustainability Science - Navigating Data Challenges, Trade-offs, and the Promises of Digitalization*"; and *Stefan Ruzika* (RPTU Kaiserslautern-Landau, Germany) "*Approximation in Multiobjective Optimization*".

The conference program included *six streams* of parallel sessions covering key areas of *MCDM* research and application: *Advances in MCDM Theory*; *Heuristic Algorithms*; *Multi-objective Programming*; *Decision Analysis/Making*; *Interactive Methods*; and *Practical Applications of MCDM*. Additionally, *invited sessions* focused on the topics *Ordinal Optimization*; *Parametric Optimization*; and *Multiple Rule-Based Decision Making*.

Celebrating Excellence: MCDM Awards 2026

The conference honored outstanding contributions to the field with *four prestigious awards:*

- MCDM Gold Medal: Awarded to *Prof. Jafar Rezaei* (Delft University of Technology, Netherlands) for his lifelong achievements in *MCDM* research and education.
- Edgeworth-Pareto Award: Presented to *Prof. Xavier Gandibleux* (University of Nantes, France) for his pioneering work in multiobjective combinatorial optimization and his contributions to *MCDM* software development.
- Georg Cantor Award: Recognized *Prof. Luis Dias* (University of Coimbra, Portugal) for his fundamental contributions to decision analysis.
- PhD Award: Granted to *Yannik Nikolas Zeiträg* (Instituto Superior Técnico Lisboa, Portugal) for his innovative dissertation on interactive decision-making methods.

Looking Ahead

We are looking forward to the next edition of the *International Conference on Multiple Criteria Decision Making 2028* in *Rome* which will be organized by *Lavinia Amorosi* and *Paolo Dell'Olmo*.

June Was Optimization Month in Edinburgh!

Lars Schewe <lars.schewe@ed.ac.uk>, **Miguel Anjos** <miguel.f.anjos@ed.ac.uk>

During the month of June 2026, members of the *University of Edinburgh's Data & Decisions group* co-organized six events in optimization. The largest of these was the *triennial* ***SIAM Conference on Optimization***, one of the major mathematical optimization conferences in the world. We welcomed more than *1300 participants* from all over the world who gave talks in *more than 450 minisymposia and contributed sessions*. We hosted the conference in the University's famous *McEwan Hall* and several buildings around *George Square.*

In addition, Edinburgh hosted five **satellite events**: *HiGHS* held the *HiGHS days* together with *jump.dev*, and a special event provided the opportunity to celebrate the career and contributions of one of the world's foremost optimization researchers. Moreover, we hosted two doctoral schools on optimization as part of the well-established *NATCOR programme*, one on convex optimization and one on optimization under uncertainty.

Against the impressive backdrop of *McEwan Hall*, the *plenary speakers* and *prize winners* showcased important open problems and current research topics in optimization. A common thread in these talks was the interplay between optimization and AI. Optimization methods are at the heart of modern AI methods as they provide the algorithmic backbone of all modern training methods. On the other hand, the input data in many practical applications of optimization is the output of an AI tool, so integrating these methods is a critical area of research.

Beyond the scientific program, the participants got a taste of the Scottish weather. One minute, they could take in the sun and chat in George Square Gardens, and the next they experienced the Edinburgh rain. Many participants also took the opportunity to take in Edinburgh's unique sights and rich history.

We thank *SIAM* and the *Activity Group in Optimization* for the opportunity to host this conference and our student volunteers for taking the time to support the conference.

We were delighted to host everyone and look forward to their future visits! 🌍

23rd International Conference on the Integration of CP, AI and OR CPAIOR 2026 was celebrated in Rabat, Morocco

Diego Delle Donne <delledonne@essec.edu>, **Tias Guns** <tias.guns@kuleuven.be>, **Emiliano Traversi** <traversi@essec.edu>

The *23rd International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research* (*CPAIOR 2026*) was held from May 26-29, 2026, for the first time on the African continent at the *ESSEC Business School Africa Campus* in *Rabat*, *Morocco*, with *Tias Guns* (KU Leuven) serving as Program Chair, *Serdar Kadioglu* (Fidelity Investments and Brown University) as Master Class Chair, and *Diego Delle Donne* (ESSEC Business School) and *Emiliano Traversi* (ESSEC Business School) as Conference Chairs.

CPAIOR has established itself as the premier venue dedicated to the integration of these three disciplines, promoting methodological advances that combine optimization, machine learning, satisfiability, planning, mathematical programming, and hybrid intelligent systems. The *2026* edition continued this tradition by providing an outstanding scientific program while also strengthening collaborations across the different research communities. It also featured a 1-day masterclass on "*Large Language Models for CP/OR*".

The conference attracted *100 submissions* to the main proceedings track. Following author rebuttals, *37 papers* were accepted for publication in the *Springer Lecture Notes in Computer Science proceedings*. The conference also featured an extended abstract track, with 17 submissions and 9 accepted contributions. *CPAIOR 2026* welcomed *78 participants* representing more than *15 countries* across Europe, North America, South America, and Australia.

The keynote lectures were delivered by *Ambros Gleixner* (HTW Berlin, Germany), *Axel Parmentier* (École Nationale des Ponts et Chaussées, France), and *Yingqian Zhang* (Eindhoven University of Technology, The Netherlands). The talks covered recent advances in mathematical optimization, stochastic optimization, and the integration of optimization with modern artificial intelligence techniques, stimulating lively discussions throughout the conference. >>

▲ *Group photo* of *CPAIOR 2026* in Rabat, Morocco.

>> For all talks, including keynote speakers and the master class, the slides are available online. Beyond the technical sessions, participants enjoyed a rich social program that showcased the cultural heritage of Morocco.

As in previous editions, *CPAIOR* recognized outstanding scientific contributions through its *best paper awards*. The Best Paper Award was presented to *Hongzhao Guan*, *Beste Basciftci*, and *Pascal Van Hentenryck* for the paper "*Transit Network Design with Two-Level Demand Uncertainties: A Machine Learning and Contextual Stochastic Optimization Framework*." The Best Student Paper Award was presented to *Christoph Jabs*, *Jeremias Berg*, and *Matti Järvisalo* for the paper "*Multi-objective Maximum Satisfiability by Single-objective Implicit Hitting Set Optimization*."

The organizers gratefully acknowledge the efforts of the *Program Committee*, reviewers, keynote speakers, master class instructors, sponsors, volunteers, and all participants for making *CPAIOR 2026* a successful event.

HORIZONS 2026: "Optimization for Sustainability", Celebrated in Hanoi, Vietnam

Center for Environmental Intelligence, VinUniversity <cei.conference@vinuni.edu.vn>

▲ *Participants* and *keynote speaker Prof. Yinyu Ye* at *HORIZONS 2026: "Optimization for Sustainability"*.

At a glance

HORIZONS 2026: "Optimization for Sustainability" was successfully held at July 1-3, 2026 at the beautiful campus of *VinUniversity* in *Hanoi*, *Vietnam*. The event brought together leading researchers, industry experts, and aspiring students to explore how optimization, artificial intelligence, and machine learning can accelerate sustainable development.

Throughout 3 days, the conference welcomed 300+ participants, 50+ international speakers, representatives from 10 world-leading institutions of 7 countries, 100+ paper and poster submissions.

Highlights

- *AI Training Bootcamp*, led by *Prof. Nitesh Chawla* (University of Notre Dame) and *Dr. Mai Anh Tien* (Singapore Management University), equipped 50+ researchers with practical knowledge of reinforcement learning and its applications to impactful, real-world research.

- *Plenary Talks* by distinguished keynote speakers: *Prof. Alexandre Bayen* (UC Berkeley), *Prof. Nitesh Chawla*, and *Prof. Yinyu Ye* (Stanford University) gave insights into how optimization and machine learning are reshaping energy systems, climate modeling, and sustainable decision-making

- *Prof. Alexandre Bayen*, *Mr. Antoine Rostand* (Kayrros - TIME Top 100 Company), and *Dr. Le Ngoc Anh* (Petrovietnam) joined in the *Fireside Chat* to tackle the real question: "*Can AI actually serve developing nations*?".

▲ *Fireside Chat: "Can AI actually serve developing nations?".*

▲ *Poster presenters* at the *poster session*.

• *Presentation sessions* showcasing the latest research in optimization, AI/ML, sustainable systems design, and data science. Outstanding contributions were recognized through the *Best Paper & Poster Awards*.

Impact and Outlook

HORIZONS 2026 strengthened international collaboration across academia and industry while showcasing innovative research at the intersection of optimization, AI, and sustainability. Building on the success of this inaugural event, the conference has laid the foundation for future partnerships and continued advances toward sustainable, data-driven solutions worldwide.

2026 MIP Workshop - University of Connecticut, Stamford Campus, USA, Highlighting the latest trends in *MIP*

Sebastian Perez-Salazar <sperez@rice.edu>

The *2026 Mixed Integer Programming (MIP) Workshop* was held from May 18th to 21st, 2026, at the *University of Connecticut*, *Stamford campus*. The *23rd edition* of the workshop brought together *more than 120 optimization researchers* and *practitioners* to explore the latest trends and developments in computation, practice and theory of mixed integer programming and discrete optimization.

Program Highlights

• The event featured a single-track program with *20 invited speakers* from academia, industry, and national laboratories.

• It included *11 contributed flash talks* from optimization researchers.

• A student poster *session* was held, featuring *49 poster presentations*. Congratulations to *Akul Bansal* (Northwestern University), who won first place in the poster competition for his work, "*Normalization of ReLU Dual for Cut Generation in Stochastic Mixed-Integer Programs*." Honorable mentions were awarded to *Connor Johnston* (University of Florida) and *Jingye Xu* (Georgia Institute of Technology).

• The program featured a presentation by the winners of the *Lang-Doig MIP Computational Competition*. Congratulations to *Timo Berthold*, *Ambros Gleixner*, *Alexander Hoen*, *Nils-Christian Kempke*, *Thorsten Koch*, *Gioni Mexi*, *Sebastian Pokutta*, and *Gennesaret Tjusila* for their work, "*CHAP - Coordinating Heuristics Across Platforms*." Two honorable mentions were awarded: one to the team of *Peng Lin*, *Zhe Wang*, *Kewu Yang*, and *Shaowei Cai*, and another to *Yiran Zhu*.

▲ *MIP 2026*: the ever-popular *group photo*.

The workshop was a great success, strengthening the *OR* community by bringing together researchers and practitioners at all career stages. *MIP* is a cornerstone of *OR*, providing essential modeling and computational tools for decision-making in areas such as transportation, logistics, scheduling, energy, healthcare, and supply chain. A core mission of the *MIP Workshop* is also to provide a dedicated platform that increases the visibility of students and early-career researchers, giving the next generation of talent an opportunity to present their work and engage with the wider community.

The organizers extend their sincere gratitude to the *Local Organization*, chaired by *David Bergman* (UConn); the *Lang-Doig Computational Competition Committee*, chaired by *Christian Tjandraatmadja* (Google); and the *Poster Competition Committee*, chaired by *Philipp Christophel* (FICO). A special thank you goes to our sponsors for their vital support, with specific recognition for our three key contributors: Federal (AFOSR), Platinum (Hexaly), and Gold (Connecticut Advanced Computing Center). We look forward to seeing you at the next edition of the workshop, to be held at the *University of Iowa*!

MIP Program Committee:

- *Beste Basciftci* (University of Iowa),
- *Yatharth Dubey* (DEFCON AI),
- *Cheng Guo* (Clemson University),
- *Sebastian Perez-Salazar* (Rice University),
- *Matthias Walter* (University of Twente).

NUMTA 2026 - Scientists from *Numerical Computation and OR* Met in beautiful Calabria, Italy

Dmitri E. Kvasov <kvadim@dimes.unical.it>

The *5th International Conference and Summer School "Numerical Computations: Theory and Algorithms* (*NUMTA 2026*)" was held from 21 to 27 June 2026 at the *Falkensteiner Garden Calabria Resort*, Italy (https://www.numta.org). Organized by the *Department of Computer Engineering, Modeling, Electronics and Systems Science* (*DIMES*) of the *University of Calabria* in cooperation with the *Society for Industrial and Applied Mathematics* (*SIAM*), the conference continued the successful *NUMTA* series established in 2013.

NUMTA 2026 brought together researchers and co-authors from 44 countries, providing an interdisciplinary forum where numerical analysis, optimization, operations research, machine learning, artificial intelligence, and advanced computational paradigms met to address challenging scientific and industrial problems.>>

>> As in previous editions, *Operations Research and Optimization* represented one of the conference's major themes, with numerous special sessions devoted to mathematical optimization, decision support, AI-driven optimization, and computational methods for real-world applications.

The scientific programme featured plenary lectures by internationally renowned researchers, including *Louis D'Alotto*, *Schahram Dustdar*, *Daniel Kuhn*, *Gitta Kutyniok*, *Daniel Krob*, *Yurii Nesterov*, *Panos Pardalos*, and *Davide Rizza*, together with tutorials by *Renato De Leone* and *Yaroslav D. Sergeyev*.

▲ *Group photo* of the participants at *NUMTA 2026*, Falkensteiner Garden Calabria Resort, Italy.

As customary at *NUMTA*, the conference recognized outstanding scientific achievements through the *NUMTA Research Award* and the *Springer Young Researcher Award*. The *2026 Springer Young Researcher Prize* for the best conference presentation by a young scientist was awarded to *Adeeba Haider* (University of Turin, Italy).

Selected papers will appear in the *Springer Lecture Notes in Computer Science* (*LNCS*) proceedings, while extended versions of outstanding contributions will be invited for publication in special issues of international journals, including the Springer journal "*Operations Research Forum*".

The organizers thank all participants for contributing to another successful edition of *NUMTA* and look forward to welcoming the international *Operations Research* and numerical computation communities to future editions.

16th Metaheuristics International Conference - MIC 2026 successfully held in beautiful Ischia Island, Italy

Paola Festa <paola.festa@unina.it>

▲ *Ischia Island*: location of *MIC 2026* conference.

This international meeting continued the successful series of *MIC* events (the most two recent editions were *MIC 2024* in Lorient, France and *MIC 2022* in Ortigia-Syracuse, Italy). As with any *MIC* conference, the main purpose of this edition was to focus on the progress of the area of "*Metaheuristics and Their Applications*" and provide an opportunity to the international research community to discuss recent research results, to develop new ideas and collaborations, and to meet old friends and make new ones in relaxed atmosphere.

MIC 2026 hosted two *Invited Talks* and two *Invited Tutorials* given by the following four leading researchers:

Helena Ramalhinho Lourenço (Universitat Pompeu Fabra, Spain) gave the invited talk entitled "*Driving Social Good: How Optimization Enhances Care and Equity*" on June 8th; *Roberto Battiti* (University of Trento, Italy) gave the invited tutorial entitled "*Intelligent Optimization for self-improving reliable Artificial Intelligence*" on June 9th; *Mauricio G. C. Resende* (Federal University of São Paulo, Brazil) gave the invited tutorial entitled "*Random-Key Optimizers: Problem Independent Combinatorial Optimization*" on June 10th; *Kenneth Sörensen* (Universiteit Antwerpen, Belgium) gave the invited talk entitled "*From algorithmic competition to empirical science: a new metaheuristics paradigm*" on June 11th.

The conference took place in *Ischia Island* (Napoli, Italy) from June 8th to 11th, 2026. *Ischia* is one of the wonderful islands in the Gulf of Naples, having volcanic origin and known and appreciated all around the world for its diversified landscape, natural beauty, and thermal water. Its wonderful thermal hot springs have been used for wellness and therapeutic treatments since the VII century BC on Ischia, there are many beautiful beaches that invite the visitor to go for a swim.

MIC 2026 Local Organizing Committee members were *Carmine Cerrone* (University of Genova, Italy), *Ciriaco D'Ambrosio* (University of Salerno, Italy), *Daniele Ferone* (University of Naples "Federico II", Italy), *Paola Festa* (Chair) (University of Naples "Federico II", Italy), *Giusy Macrina* (University of Calabria, Italy), *Tommaso Pastore* (University of Naples "Federico II", Italy), *Ornella Pisacane* (Marche Polytechnic University, Italy).

The author of this report, ***Prof. Paola Festa*** from University of Napoli "Federico II", Italy, served as the *Conference Chair* of *MIC 2026*.

European Meeting on Game Theory 2026 - SING21:
The international game theory community gathered in Naples

Annamaria Barbagallo <annamaria.barbagallo@unina.it>

The *European Meeting on Game Theory 2026* (*SING21*) was held from 29 June to 1 July 2026 at the *University of Naples Federico II*, Italy. The conference brought together approximately 150 researchers from Europe and beyond for three days of scientific exchange, showcasing the latest advances in game theory research. Widely recognized as one of the leading conferences in the field, *SING* has evolved from its origins in the early 2000s as the Spain-Italy-Netherlands Game Theory Meeting into a truly international event. Today, it attracts researchers working on both the theoretical foundations of strategic interaction and its applications across a wide range of disciplines.

The 21st edition of the *European Meeting on Game Theory* was chaired by *Professor Annamaria Barbagallo*. The Organizing Committee included *Professors Giovanna Bimonte*, *Francesco Ciardiello*, *Anna De Simone*, *Antonio Di Bari*, *Rosamaria Rescigno*, *Salvatore Tramontano*. Participants represented an exceptionally diverse international community, with delegates from Europe as well as Australia, Brazil, Canada, Chile, China, India, Israel, Japan, Paraguay, the Republic of Korea, Thailand, and the United States. Their participation highlighted both the global reach of the conference and the increasingly interdisciplinary character of game theory research.

▲ Collage with impressions from *SING21* in Naples.

The scientific programme featured recent advances in cooperative and non-cooperative game theory, mechanism and market design, matching, bargaining, coalition formation, social choice and voting, power indices, fair division, network games, dynamic and stochastic games, and computational methods for strategic interaction. These research areas continue to play an increasingly important role within *Operations Research*, with applications spanning market design, logistics, transportation, communication networks, sustainability, engineering, economics, and public policy.

A highlight of the conference was the keynote lecture programme delivered by three internationally renowned scholars: *Professor Francis Bloch* (Université Paris 1 Panthéon-Sorbonne), *Professor Anna Nagurney* (University of Massachusetts Amherst), and *Professor Hans Peters* (Maastricht University). In addition, parallel sessions provided participants with the opportunity to present their latest research and engage in lively scientific discussions, demonstrating the breadth and vitality of current developments in game theory.

To further disseminate the research presented at the conference, two special issues of international journals have been announced: *"Game Theoretical Models and Applications SING21"* in the *Annals of Operations Research* and in the special issue *"Game Theory: Models, Methods, and Applications* (*SING21*)*"* of the *Journal of Dynamics and Games*.

During the opening ceremony, the *Stef Tijs Prize* was awarded to *Zsófia Ráncsik* (ELTE Centre for Economic and Regional Studies, Hungary) in recognition of her outstanding contribution to game theory. Her paper, *"TU-games with utility functions: the u-τ-value"*, extends and axiomatizes the τ-value for cooperative games with utility functions, advancing an important research direction initiated by *Stef Tijs*. The *Prize Committee* commended the work for its originality, mathematical rigor, and clarity of presentation.

Hosting *SING21* at the *University of Naples Federico II*, one of the world's oldest universities, provided an inspiring setting for scientific exchange and international collaboration. Supported by the *University of Naples Federico II*, the *University of Salerno*, *AIRO* (Italian Association of Operations Research), and *AMASES* (Association for Mathematics Applied to Social and Economic Sciences), the conference fostered new collaborations while strengthening established research networks.

By bringing together leading scholars and early-career researchers from across the globe, *SING21* once again confirmed its status as a premier international forum for game theory and highlighted the growing importance of strategic interaction models within the broader *Operations Research* community.

Further information about the conference, including the programme, keynote speakers, and related activities, is available at https://sites.google.com/view/sing-21/.

2nd Geeky Bioinformatics and Optimization Workshop - GOATS'26: Celebrated in Poznan, Poland

Jacek Błażewicz <jacek.blazewicz@put.poznan.pl>

The *2nd Geeky Bioinformatics and Optimization Workshop* (*GOATS'26*) took place on June 1-2, 2026, at the *Poznan University of Technology*, *Poznan*, *Poland*. The workshop brought together researchers, graduate students, and practitioners working at the intersection of bioinformatics, optimization, machine learning, and computational biology.

The workshop was organized by the *Institute of Computing Science*, *Faculty of Computing and Telecommunications*, *Poznan University of Technology*, and chaired by *Dr. Hab. Aleksandra Swiercz* and *Professor Marta Szachniuk*.

▲ *Group photo* with participants.

A comprehensive scientific program included invited lectures and technical presentations delivered by researchers from several academic institutions, including Poznań University of Technology (Poland), Hochschule Mittweida (Germany) and IASI-CNR (Italy). Among the distinguished invited speakers were *Professor Thomas Villmann* (Hochschule Mittweida, Germany), who discussed the reliability of machine learning models, and *Dr. Marika Kaden* (Hochschule Mittweida, Germany), who presented recent research perspectives on certainty in machine learning model predictions.

The scientific sessions covered a broad spectrum of topics reflecting the interdisciplinary character of the workshop. Presentations addressed viral evolution and SARS-CoV-2 mutational trajectories, processing-in-memory approaches for sequence analysis acceleration, and explainable optimization methods for robust gene signature selection. Further contributions explored topics such as T-cell receptor repertoire analysis, autoencoder-based approaches for plasmid vector design in CAR-T therapy, RNA structural motifs, and multi-agent modeling of biological processes. The workshop also featured presentations on machine learning in sports genomics, human-computer interaction and accessibility, and computational tools for G-quadruplex structure analysis.

Overall, *GOATS'26* was a successful scientific meeting that strengthened collaboration between researchers in bioinformatics, optimization, and machine learning, promoted the exchange of innovative ideas, and highlighted the important role of computational *OR* methods in addressing contemporary biological and biomedical challenges.

Acknowledgements: On behalf of the organizing committee, we would like to express our sincere gratitude to all speakers, participants, and institutional partners for their contributions to the success of the workshop. Special thanks are extended to the *Institute of Computing Science, Faculty of Computing and Telecommunications, Poznan University of Technology*, for hosting and supporting the event.

▲ *GOATS'26*: Impressions from the sessions.

14th International Conference on Logistics and Maritime Systems, and EUROMar Conference on Maritime Optimization and Logistics: LOGMS 2026 / EUROMar 2026, Celebrated in Barcelona

Jesica de Armas <jesica.dearmas@upf.edu>, **Sara Hatami** <sara.hatami@upc.edu>,
Eduardo Lalla Ruíz <e.a.lalla@utwente.nl>, **Rosa G. González-Ramírez** <rgonzalez@uandes.cl>

▲ *Group photo; Keynote speakers*: *Berit Brouer* and *Stefan Voss*; *Special Session* on "*Secure, Sustainable, and Resilient Maritime Supply Chains*"; *Industry Session*; *Carles Rua*, *Francesco Gallo* and *Bernat Ibáñez*; *Visit* to the Port of Barcelona (from left to right, top to bottom).

LOGMS 2026 / EUROMar 2026 was hosted by *Universitat Pompeu Fabra* (*UPF*) in Barcelona, Spain, from 7-10 July 2026. The theme was "*Networks, Energy and Intelligence: Designing the Next Generation of Maritime Logistics*". This conference provides a platform for establishing international networks among researchers and practitioners in logistics and maritime systems.

The *LOGMS conference* series was first established in 2005. This year, the conference attracted *129 registered participants* from *more than 20 countries* across Europe, Asia, North America, South America, and the Middle East, highlighting its strong international reach.

The *scientific programme* comprised approximately *82 technical presentations* organized into parallel sessions covering a broad range of topics. The conference also featured two distinguished *keynote lectures*: *Berit Dangaard Brouer* (ZeroNorth), "*The Golden Era of Decision Science: How Generative AI Bridges the Trust Gap*," and *Stefan Voß* (University of Hamburg), "*Agentic Generative AI for Maritime Logistics: From Modeling to Automated Solution Design*." These keynote lectures highlighted recent advances in artificial intelligence and their transformative potential for decision science and maritime logistics. Among the technical sessions, the Special Session on "*Secure, Sustainable, and Resilient Maritime Supply Chains*," chaired by *Sungjin Kim* highlighted the growing importance of AI and *OR*, resilience, and sustainability in the future of maritime logistics.

In addition, the conference included an *Industry Session* featuring presentations from *Hexaly*, the *Port of Barcelona*, and the *Port of Castelló*, providing valuable perspectives on optimization technologies, port innovation, and energy transition strategies. A pre-conference *PhD Day* was organized, featuring a tutorial on "*Reinforcement Learning for Logistics and Maritime Systems*", offering doctoral students and early-career researchers an opportunity to gain foundational knowledge in modern AI-driven optimization techniques.

The conference concluded with a *technical visit* to the *Port of Barcelona*, where participants were introduced to the port's organizational structure, strategic vision, and future development plans. The visit also included a *boat tour* through the harbor, allowing participants to observe the major terminal facilities, and to gain first-hand insights into one of Europe's leading multimodal ports.

We extend our deepest gratitude to the organizing committee, volunteers, reviewers, sponsors, and supporting institutions. Their dedication and commitment were essential in bringing this inspiring program to life.

Section Editors:
Jinal Parikh <jinal.parikh@ahduni.edu.in>,
Gerhard-Wilhelm Weber <gerhard.weber@put.poznan.pl>

Multi-attribute decision-making: bridging theory and practice, Transactions on Computer Systems and Networks

by **Ashok Kumar Yadav, Ali Ahmadian, Ajay Pratap**

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OR-Analytics – Multi-attribute Decision-making

Jinal Parikh <jinal.parikh@ahduni.edu.in>
Gerhard-Wilhelm Weber <gerhard.weber@put.poznan.pl>,

This book by *Ashok Kumar Yadav*, *Ali Ahmadian*, *Ajay Pratap* presents a commendable and timely scholarly contribution to the field of *Multi-Attribute Decision-Making* (*MADM*) in the current dynamic environment, which is marked by complexity, interconnectedness, and uncertainty. Specifically, this book provides an essential scientific framework and crucial methodological tools to address multifaceted challenges that involve navigating a landscape of multiple, often competing, objectives and constraints. The primary contribution of this work lies in its comprehensive framework and holistic approach for analyzing how *decisions* are made. It provides a rigorous, step-by-step exploration of decision-making, moving seamlessly from core theoretical concepts to complex normalization techniques, attribute weighting, and model evaluation.

▲ *Book authors* (from left to right):
Professor Ashok Kumar Yadav (https://www.researchgate.net/profile/Ashok-Yadav-39),
Professor Ali Ahmadian (https://au.linkedin.com/in/aliahmadian82),
Professor Ajay Pratap (https://www.iitbhu.ac.in/dept/cse/people/ajaycse).

At its core, decision theory uses mathematics to bring structure to common-sense choices. By combining *utility theory* (our preferences) and *probability theory* (the right decision we don't know for sure), it creates a framework for making optimal choices when future consequences are uncertain. Broadly, the field looks at decisions through three lenses: *normative* (the theoretical ideal), *descriptive* (actual human behaviour), and *prescriptive* (actionable tools for better results). When a decision involves multiple conflicting goals, *MADM* steps in to help compare and rank the options.

Decisions typically happen under 1 of 3 conditions: under certainty: every outcome is fixed and fully known; under risk: futures are uncertain, but we know the exact odds of each outcome happening; under uncertainty: neither the outcomes nor their odds are known, forcing us to use strategy-focused approaches like maximin or fuzzy models. *MADM*, thus, serves as an enabler in resolving complex problems where options must be evaluated against multiple conflicting criteria under conditions which are generally categorized by the level of available knowledge.

As its name suggests, this book "*Multi-attribute decision-making: bridging theory and practice*" is about bridging theory with practice in *MADM*. In addition to providing a rigorous theoretical and methodological foundation to the *MADM* literature involving various tools and techniques, it also provides a practical guide to apply these powerful analytical techniques to real-world problems. Given that the process of assigning importance to different criteria is a linchpin of any *MADM* application, the emphasis placed on criteria weighting is noteworthy. A delicate blend of subjective methods that leverage expert intuition, objective methods that derive insights from data patterns, as well as integrated approaches that seek a synergistic balance not only provides nuanced understanding but also demonstrates that a comprehensive perspective is an enabler that fosters robust and defensible decision outcomes.

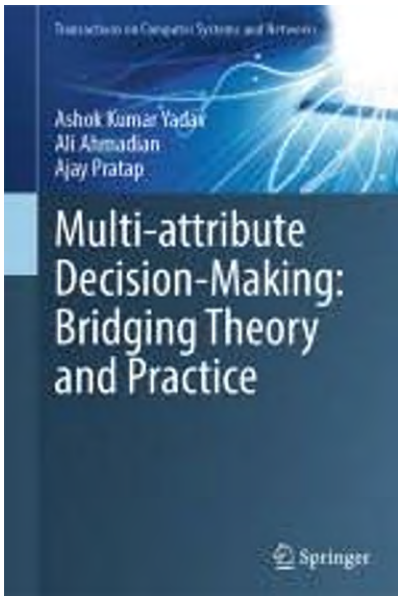
The book has been designed to provide a comprehensive, cohesive, and accessible resource to cater to a diverse range of audiences, including students, academics, researchers, practitioners, and policymakers. This book, which offers a lucid, well-structured, rigorous, and insightful exploration of *MADM* has tremendous potential to become a seminal text in the field. >>

>> The book adeptly elucidates the often-intricate processes involved in *MADM*, from the initial structuring of a decision problem to the final selection and validation of an optimal alternative.

It significantly emphasizes the foundational elements that are critical for sound decision analysis. This includes a thorough exploration of normalization strategies, essential for rendering diverse data comparable, and an in-depth examination of criteria weighting - a pivotal step that profoundly influences outcomes. A substantial portion of this book is dedicated to explaining *Subjective Weight Methods*, which harness the invaluable insights of expert judgment; *Objective Weight Methods*, which derive criteria importance from the inherent structure of the data; and *Integrated Weight Methods*, which thoughtfully combine both perspectives to achieve a balanced and robust assessment. The authors have provided a generous list of references at the end of each chapter for the readers who would want to delve deeply into a particular topic of their interest.

A brief overview of the eight chapters of the book follows:

Chapter 1 - *Introduction to Decision Theory* begins by introducing the readers to the basic concepts of decision theory, followed by explaining specific components essential to understanding decision theory. The topics covered include single-attribute decision models and multi-attribute decision-making. It also introduces the fundamentals of fuzzy theory, examines the significance of criteria and attributes in decision-making, and concludes with a brief discussion on *MCDM* techniques, highlighting two core components: weighting and ranking methods.



▲ *OR-Analytics - Multi-Attribute Decision-Making.*

Chapter 2 - *Normalization Strategies* begins with a discussion on the importance of normalization, followed by a discussion about its purpose. Next, various normalization methods are discussed, followed by a discussion on the application of normalization, the utility function, and the challenges of normalization.

Chapter 3 - *Subjective Weight Method* explores subjective weighting methods, their purpose, types, and key techniques, along with step-by-step procedures, advantages, disadvantages, and associated challenges. It includes *MATLAB* implementations of *AHP* and *fuzzy AHP*. The chapter concludes with a discussion on the driving forces behind the evolution of objective weighting methods, highlighting the need for balance between expert judgment and data-driven approaches in multi-criteria decision-making processes.

Chapter 4 - *Objective Weight Methods* covers the concept of objective weight by delving into its significance, diverse methods for estimating criteria weight, conducting a comparative analysis, as well as examining both the advantages and limitations of these methods. Additionally, it includes a review of current research trends in weight estimation. The chapter also includes a discussion of numerical examples, providing results from different weight estimation methods. Moreover, it has the *MATLAB* implementation of various approaches for estimating decision criteria weight.

Chapter 5 - *Integrated Weight Methods* explains the concept of *comprehensive weighting* and the pivotal role it plays in *MADM*, given that it integrates both subjective and objective perspectives to derive more balanced and accurate decision criteria weights. Further, it covers various important topics, including the need for a comprehensive weight method followed by steps in the comprehensive weight method. Next, various types of comprehensive weight methods such as *AHP-Entropy Weighting Method*, *CRITIC*, and other hybrid techniques that offer a robust solution have been covered. A comparative analysis of these comprehensive weighting methods highlights their relative strengths and limitations in diverse decision-making contexts, then follows. The impact of proportional coefficient weight distributions, the effectiveness of various integrated methods, numerical computation and analysis, and *MATLAB* implementation of these methods have also been effectively covered next in the chapter.

Chapter 6 - *Multi-Attribute Decision-Making Models* begins with an introduction to the fundamentals of *MADM* and discusses the necessity of weight determination methods to reflect the relative importance of different attributes in decision-making scenarios. Next, some of the vital *MADM* techniques are presented, followed by an examination of *fuzzy MADM* methods that address uncertainty and imprecision in input data. An analysis of how comprehensive weighting methods influence the ranking order of alternatives is next presented, followed by a discussion about the effects of both weighting schemes and normalization techniques on final decision outcomes. A comparative analysis of different *MADM* methods highlighting their advantages, limitations, and appropriate use cases is next done. Additionally, the impact of proportion coefficient weight distributions on decision results is explored. The chapter concludes with practical aspects, including numerical computation and analysis of *MADM* problems, and demonstrates *MATLAB*-based implementation for effective modeling and solution development.

Chapter 7 - *Challenges in MADM Models* addresses the current research challenges and exciting future directions in *MADM*, aiming to stimulate further inquiry and innovation in the field. Specifically, the topics covered in this chapter include aggregation methods for multiple criteria, ranking abnormality, *MADM's* suitability and complexity for emerging applications, future trends in multi-attribute decision making, existing model limitations and future research directions.

Chapter 8 - *Application of MADM* showcases the versatility of *MADM* through a discussion of its applications in diverse fields such as sustainable development, smart city planning, healthcare management, energy planning, disaster management, and advanced telecommunications, thereby bridging the gap between robust theory and impactful practice.

In a nutshell, this book, which imparts a thorough understanding and judicious application of *MADM* techniques, will serve as an enlightening and practical guide to empower its readers to confidently navigate through the complexities of modern decision-making and to effectively translate sound theory into impactful practice across various domains of importance. Future application fields of this exciting book may include the application of *MADM* for broader logistics, especially production planning, notably aggregate production planning; financial *OR* and mathematics, especially portfolio optimization and optimal control, notably stochastic; and neuroscience and cognitive sciences in and supported by *OR*.

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