



EURO²⁴
COPENHAGEN

33rd European conference
on **Operational
Research**

30th June – 3rd July 2024



Conference
REPORT

Table of contents

Planning and organization	2
Program committee	2
Organizing committee	5
Organizational support	7
Conference sponsors	9
Event promotion	10
Social and environmental responsibility	11
Scientific program	13
Area and call for papers	13
The submission process	14
Registration	15
Main conference schedule	16
Plenary and keynote speakers	17
Special issues	19
Satellite events	21
EURO awards	23
Special sessions	23
Making and impact, EURO Practitioners' Forum Stream	28
WISDOM	29
Memorial session	30
Lunch and coffee breaks	31
Social program	31
Welcome party	32
Gala dinner	33
Farewell party	35
Conference Balance	36

Planning and organization

Program committee

The Program Committee comprised 22 members, including the PC chairs (for the current, previous, and upcoming EURO conferences), the chair of the Organizing Committee, members of the EURO Executive Committee (the former and new Vice President 1), EURO officers (Manager, IT Manager, and Advisor to EURO-k Conferences), and 13 additional members carefully selected to maintain gender balance, represent various European countries, cover a range of OR specialties, and provide diversity in age. The committee worked efficiently and with great enthusiasm, contributing to the preparation of an outstanding conference program.



Prof. Marta Szachniuk
Programme Chair
Poznan University of
Technology, Poland



Dr. Sarah Fores
University of Leeds,
United Kingdom



Assoc. Prof. Maria
Antónia Carravilla
Universidade do Porto,
Portugal



Prof. Bernard Fortz
Université libre de
Bruxelles, Belgium



Prof. Emilio Carrizosa
University of Seville,
Spain



Prof. Milan Hladik
Charles University,
Czech Republic



Prof. Audrius
Kabasinskas
Kaunas University of
Technology, Lithuania



Prof. Nikolaos Matsatsinis
Technical Univeristy of
Crete, Greece



Assoc. Prof. Jan Kronqvist
KTH Royal Institute of
Technology, Sweden



Assoc. Prof. Sean
McGarraghy
University College Dublin,
School of Business,
Ireland



Assoc. Prof. Elisabeth Köbis
Norwegian University of
Science and Technology,
Norway



Prof. Dolores Romero
Morales
Copenhagen Business
School, Denmark



Assoc. Prof. Virginie Lurkin
University of Lausanne,
Switzerland



Prof. Ceyda Oguz
Koc University,
Turkey



Prof. Rita Laura D'Ecclesia
Sapienza University of
Rome, Italy



Prof. Joanna Jozefowska
Poznan University of
Technology, Poland



Prof. Gerhard-Wilhelm
Weber
Poznan University of
Technology, Poland, EURO
conference advisor



Prof. Leroy White
University of Exeter
Business School,
United Kingdom



Dr. Boglárka G.-Tóth
University of Szeged,
Hungary



Prof. Grit Walther
RWTH Aachen,
Germany



Assoc. Prof. Dario Pacino
Technical University of
Denmark, Denmark



Prof. Tina Wakolbinger
Vienna University of
Economics and Business,
Austria



Organizing committee

The organizing committee includes members from many of the major Danish universities studying OR. This committee is representative of the OR community in Denmark. It is this collective knowledge that made the conference organization a success.



Assoc. Prof. Dario Pacino
Local chair
Technical University of
Denmark, Denmark



Assoc. Prof. Richard Lusby
Technical University of
Denmark, Denmark



Prof. Marta Szachniuk
Poznan University of
Technology, Poland



Assoc. Prof.
Evelien Van der Hurk
Technical University of
Denmark, Denmark



Prof. Jesper Larsen
Technical University of
Denmark, Denmark



Assist. Prof. Nina Lange
Technical University of
Denmark, Denmark



Assoc. Prof. Thomas Stidsen
Technical University of
Denmark, Denmark



Assist. Prof. David Pisinger
Technical University of
Denmark, Denmark



Assoc. Prof. Line Reinhardt
Roskilde University,
Denmark



Prof. Dolores Romero
Morales
Copenhagen Business
School, Denmark



Assoc. Prof. Trine Boomsma
University of Copenhagen,
Denmark



Prof. Stefan Røpke
Technical University of
Denmark, Denmark



Assoc. Prof. Julia Pahl
University of Southern
Denmark, Denmark

Organizational support



DTU is a vibrant elite technical university, recognized for its high level of international research and its sought-after graduates. Through collaboration, our staff and students reach out to the world and work across disciplines to create value, welfare, and growth by developing technologies that work in a globalized world, transcending social and cultural differences.

At DTU, we believe in technology as a means for necessary change, and we see the UN's 17 Sustainable Development Goals as a platform for the University's activities.

Great ideas change the world, and we are driven by the desire to develop sustainable technologies that create jobs and new opportunities. At DTU, researchers and students collaborate with industry and government to create innovative solutions at the intersections of engineering and creativity, theory and practice, and university and society.

DTU has a vision for a better world, and we invite the world to join us in realizing that vision.


Research

Research underpins all our work. Technology is created through the synergy of research, education, innovation, and scientific advice and by innovative researchers who work at the cutting edge in global partnerships.

DTU's research centres on the natural and the technical sciences, and is driven by the needs of society - pushing the boundaries of the possible, discovering and driving change. Focus areas include several societally relevant engineering disciplines, including digitalization, sustainable energy technologies, and life science.

A key to addressing the 17 UN Sustainable Development Goals is collaboration across all fields. Consequently, research at DTU is often cross-disciplinary. We collaborate extensively with leading academic, private, and public partners to transfer innovations and discoveries to the public.

Education



DTU educates the next generation of thinkers, innovators, and doers. We educate problem-solvers who can lead the way and tackle the most important global challenges as described by the 17 UN Sustainable Development Goals.

All our study programmes are interdisciplinary and designed to promote sustainability, innovation, and the entrepreneurial spirit. Students get hands-on access to world-class facilities and engage in project-based assignments with industry partners where they can apply their theoretical knowledge to solving real-life problems.

Scientific advice

DTU offers scientific advice to public sector authorities, industries, and international institutions. It is one of DTU's core activities and contributes significantly to knowledge transfer and informed decision-making in society.

With a combined turnover of more than EUR 107 million (nationally and internationally), DTU is one of the main providers of scientific advice in Denmark.

Our advisory services include complex problem solving, risk characterization for informed standard setting, development of surveillance systems for ongoing risk assessments, and diagnostic capacity for contingency planning and crisis resolution.

Innovation

DTU has an entrepreneurial spirit, harnessing the energy and enthusiasm of our students, staff, and the people we work with. Ideas are unleashed and carried into society and industry where they make a difference.

DTU supports scalable and sustainable start-ups by offering training programmes, funding, competencies, team formation, mentoring, and incubation.

At DTU you will also find DTU Skylab, which is a hub for innovation where students and researchers experiment with, modify, and test their ideas. Every year, DTU Skylab generates hundreds of pre-start-up projects and prototypes.

Conference sponsors

PLATINUM SPONSORS



GOLD SPONSORS



SILVER SPONSORS



OTHER SPONSORS



OTHER EXHIBITORS

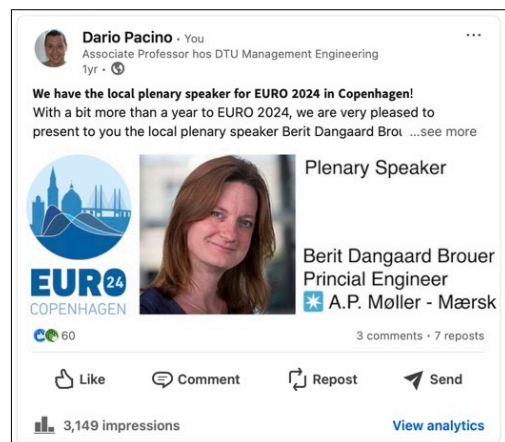


Event promotion

The first time the conference was publicly promoted, was during the EURO conference in Espoo in 2022. The initial website with important dates and committee members was launched and Dario Pacino, head of the organizing committee, made a presentation during the closing session of the conference. EURO 2024 was also present at IFORS 2023 in Chile, presenting the conference at the closing session.

For this conference we used LinkedIn as social media platform. The conference and call for papers were distributed here. We used also the platform to announce plenary speakers and the sponsors of the conference.

Announcing the sponsors though LinkedIn gave them some extra visibility. It is hard to say if LinkedIn was the reason for our success in finding sponsors, but it certainly did not hurt. Each post was sent to the EURO LinkedIn group and the organizing chair personal profile. Each post reached thousands of impressions and has been reposted several times.



Social and environmental responsibility

With over 3000 participants coming from all over the world, the organizing committee felt compelled to do as much as practically possible to reduce the negative environment and societal impact of the conference. In that respect the committee has taken several steps.

Conference bags have not been issued to the participants. The abstract book has now not been printed for several years, but participants are used to receive a conference bag with brochures from the conference sponsors. At EURO 2024 we decided to go as paperless as possible. We know, by participating in other conferences, that the first thing we do is to throw away these brochures, hence we have decided to get rid of them all together. This was clear in



the sponsor packages we sold, and we have not heard any complaints from the sponsors. As the conference bag was now almost empty, we also decide to remove it.

All the most important information was made available through a printed pocket program. The pamphlet included campus maps, the general conference schedule, and

QR codes for more detailed information.

Recycling was challenging, but something we strived to achieve. Beside the standard recycling bins available on campus, extra trash cans for compostable and plastic waste were positioned in the lunch and coffee break areas. The food containers and cups used in the conference were all compostable. Multi use cutleries were provided, collected, washed, and reused.

The vegetarian lunches received a mixed welcome. The organizing committee consciously decided to eliminate meat from the lunch menu in order to minimize the conference environmental impact. Making such choices to reduce the demand for meat is not uncommon in Denmark, and it is often part of the food policy of companies. DTU is



no different, and in recent years the university launched the first vegetarian only cafeteria on campus.

The catering chefs made an effort to ensure high quality lunches from season organic vegetables. The aim was to have a balanced, vegetarian based diet, that will not only reduce the conference environmental impact, but also provide an healthy option.

Not everyone was happy about the choice, and some participants did not even taste the food. This was a shame, as the food quality was excellent. Other participants were extremely happy and enjoyed the change from the usual conference menus.

No food was wasted during the conference. As operational researchers, we use the data available from previous conferences and

from the registration system, to make an educated guess as to where each participant would have lunch. We were surprised by the fact our guess was spot on. We managed to have a good food distribution to each of the 5 lunch areas, and any leftovers were freely distributed to the local homeless support organization.

Tap water is of very high quality in Denmark, hence we decide to distribute reusable water bottles to all the participants. This practice started during the EURO conference in Espoo in 2022, and it is our hope that it will continue in future EURO conferences. Water posts are available all over campus, and extra ones where also added.



Scientific program

Area and call for papers

The table below presents the areas for the EURO2024 conference and the PC members assigned to each.

	Area	PC Member (primary responsibility, support)
1	Behavioural OR and Problem Structuring Methods	Leroy White, Audrius Kabasinskas
2	Continuous Optimization	Boglárka G.Tóth, Milan Hladik
3	Data Science and Analytics	Emilio Carrizosa, Gerhard-Wilhelm Weber
4	Decision Support	Nikolaos Matsatsinis, Gerhard-Wilhelm Weber
5	Discrete Optimization	Jan Kronqvist, Elisabeth Köbis
6	Energy, Environment, and Climate	Grit Walther, Maria Antónia Carravilla
7	Financial Modelling, Risk and Revenue Management	Audrius Kabasinskas, Gerhard-Wilhelm Weber
8	Game Theory and Mathematical Economics	Elisabeth Köbis, Dolores Romero Morales
9	Healthcare, Humanitarian, Sports, and Life Science Applications	Andrej Brodnik, Marta Szachniuk
10	OR Foundations, History, and Ethics	Gerhard-Wilhelm Weber, Tina Wakolbinger
11	OR Initiatives for Education, Sustainability, and Developing Countries	Maria Antónia Carravilla, Grit Walther, Leroy White
12	Production, Logistics and Retail Management	Tina Wakolbinger, Andrej Brodnik
13	Scheduling, Timetabling and Project Management	Ceyda Oguz, Virginie Lurkin
14	Stochastic and Robust Optimization (Queueing)	Milan Hladik, Boglárka G.-Tóth
15	Transportation and Routing	Virginie Lurkin, Emilio Carrizosa
16	EURO Young	Jan Kronqvist, Elisabeth Köbis
17	Practice of OR (Making an Impact)	Ceyda Oguz, Nikolaos Matsatsinis, Leroy White
18	WISDOM – Women in OR	Dolores Romero Morales, Tina Wakolbinger
19	EURO Awards	Sarah Fores
20	Special Invited Talks	Marta Szachniuk

The submission process

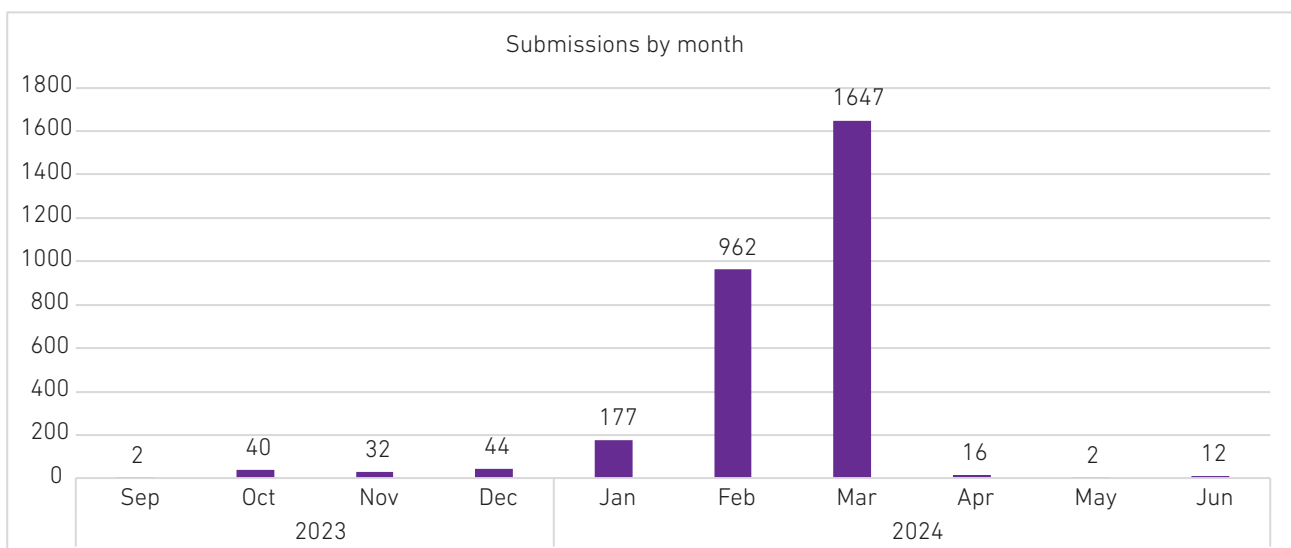
Prior to the opening of abstract submissions, calls for streams and session organizations were made. Each area was assigned to at least two PC members, who were in charge of managing the submission, the streams, and the sessions. This process was overseen by the chair Marta Szachniuk.

The first call for papers was sent in September 2023, followed by one in December, and one in February 2024. In March 2024 two calls for papers were sent, where the first included an extension of the submission deadline from March 3rd to March 17th.

Only a few hundred submissions were received in 2023, but the submission trend grew exponentially from January until March (see graph below). A few abstracts had been allowed a late submission. These were, however, mainly internal submissions such as keynote speeches, or system errors. By the deadline we had received nearly 3000 abstracts. The review process was mainly swift, and finally 2458 abstracts were accepted for presentation.

In a few cases we had to intervene as a small, but not insignificant number, of participants had submitted multiple abstracts using different euro-online accounts.

The planning of the program was also affected by having a large number of abstracts, whose authors had not registered within the required deadline. In the end, we managed to accommodate all the abstracts.



Registration

After the traditional (and expected) extensions the conference deadlines were as follows:

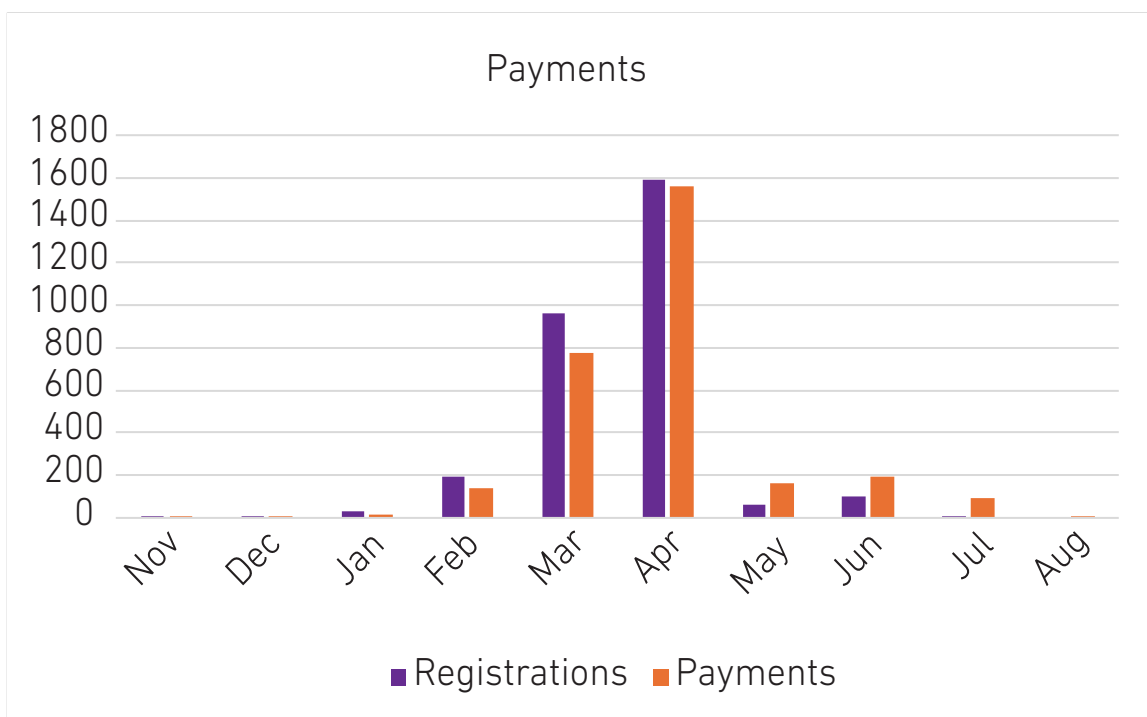
- Opening of the abstract submission: Sunday, October 1st, 2023
- Opening of registration portal: Sunday, November 5th, 2023
- Closing of the abstract submission: Sunday, March 17th, 2024
- Closing of early registration: Sunday, April 7th, 2024
- Author registration deadline: Sunday April 21st, 2024

The graph below shows the daily registrations and payments.

Though the registration deadline for authors was in April, it was decided to make an internal extension as to allow authors and their universities to pay. Though this solved the problem for authors from universities with rigid payment procedures, many outstanding payments were still present. Many of those were paid after we removed the abstracts from the program.

The issue still stands for authors that had not yet received a visa, and who did not want to pay before they were sure the visa was granted. Fortunately, this was not a large portion of the participants, as it can be seen from the graph.

The final number of paid, registered participants was 3026.



Main conference schedule

The conference schedule followed the traditional format used for the past years. It included 2 coffee breaks and a lunch break. At each of the 12 time slots, it was possible to listen to a keynote speaker. No sessions were running during the plenary talks, which were at the end of each conference day.

 Conference Schedule		30 June - 3 July 2024		
	Sunday	Monday	Tuesday	Wednesday
08:30 - 10:00		Parallel Sessions	Parallel Sessions	Parallel Sessions
09:30 - 11:00			Morning Coffee	 Sponsored by 
10:30 - 12:00		Parallel Sessions	Parallel Sessions	Parallel Sessions
11:30 - 14:00			Lunch	
12:30 - 14:00		Parallel Sessions	Parallel Sessions	Parallel Sessions
13:30 - 15:00			Afternoon Coffee	 Sponsored by 
14:30 - 16:00		Parallel Sessions	Parallel Sessions	Parallel Sessions
16:30 - 17:30	Opening Session	Plenary	Plenary	Plenary
After 17:30	Welcome Party		Gala Dinner	Closing Session + Farewell Party

Plenary and keynote speakers

The conference featured 12 keynote speakers and 3 plenary speakers. Following tradition, the plenary speakers included a local speaker, and IFORS invited speaker, and a EURO invited speaker.

Plenary speakers



Berit Dangaard Brouer
Local Speaker
Principal engineer for data
and decision science at
Maersk



Charles J. Corbett
IFORS Speaker
Professor of Operations
Management and
Sustainability, UCLA



Pascal Van Hentenryck
EURO Speaker
Professor of
Industrial Engineering,
Georgia Tech

Keynote speakers



Ruben Ruiz
Principal Applied Scientist at
Amazon Web Services (AWS)
Professor of Statistics and
Operations Research,
Universitat Politècnica de
València



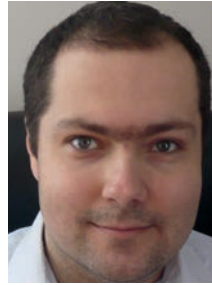
Veronica Piccialli
Professor in Operations
Research, Sapienza
University



Péter Biró
Research fellow,
Hungarian Academy of
Sciences



Maria Besiou
Professor of Humanitarian
Logistics, Kühne Logistics
University



Miloš Kopa
Assoc. Prof. of Operations
Research, Charles
University of Prague



Bahar Yetis Kara
Professor of Industrial
Engineering,
Bilkent University



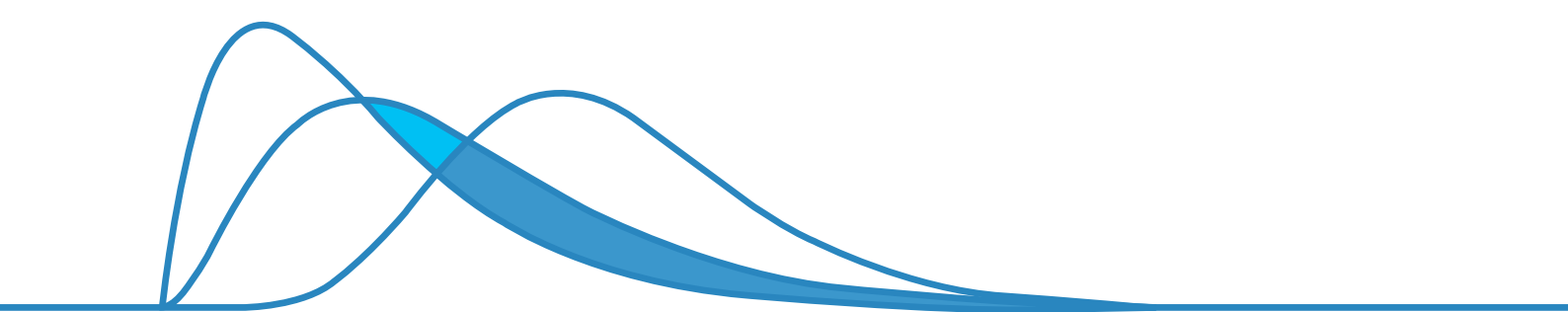
Inmanuel Bomze
Professor of Operations
Research, University of
Vienna



Pedro Amorim
Associate Professor of
Industrial Engineering
University of Porto







Emma Frejinger
Professor of Operations
Research, Université de
Montréal

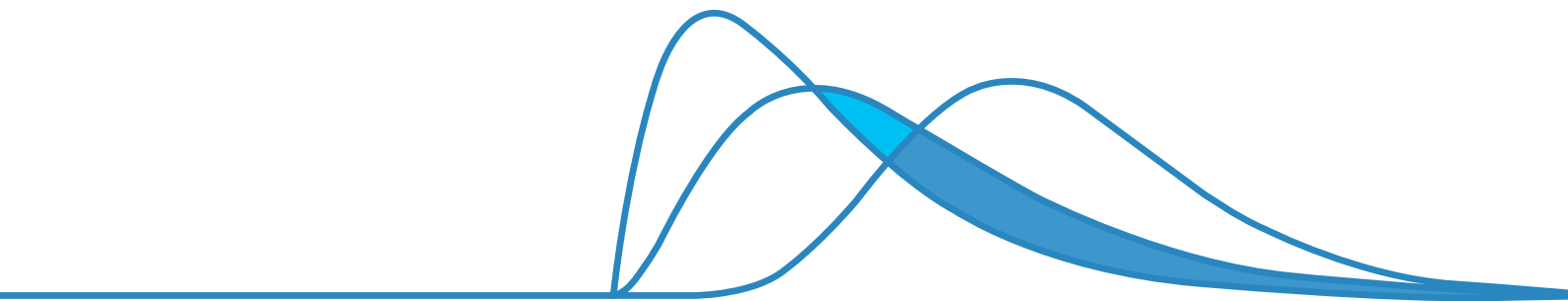


Special issues

Journal	Journal	Title	Guest Editors
	European Journal of Operational Research	Submissions by invitation only	<ul style="list-style-type: none"> • Marta Szachniuk • Dario Pacino
	Journal of Dynamics and Games	EURO 2024	<ul style="list-style-type: none"> • Vanesa Guerrero • Milan Hladik • Audrius Kabasinskas • Elisabeth Köbis • Jan Kronqvist • Boglárka G.-Tóth • Gerhard Wilhelm Weber
	Central European Journal of Operations Research (CEJOR)	Advances of Operational Research and Data Analytics in Supply Chain Economy	<ul style="list-style-type: none"> • Erfan Babae Tirkolae • Gerhard-Wilhelm Weber
	International Transactions in Operational Research (ITOR)	Optimizing Port and Maritime Logistics: Advances for Sustainable and Efficient Operations	<ul style="list-style-type: none"> • Eduardo Lalla • Rosa G. González Ramírez
	Optimization - A Journal of Mathematical Programming and Operations Research	Recent Advances in Continuous Optimization, Variational Methods and Applications	<ul style="list-style-type: none"> • Lidia Huerga • Vicente Novo • Miguel Sama



Journal	Title	Guest Editors
	Annals of Operations Research	Recent advances in stochastic and robust optimization
	Networks	Recent Advances in Network Optimization
	EURO Journal on Computational Optimization	Recent Advances in Using Machine Learning for Optimization
	Annals of Operations Research	Decision-making under uncertainty for commodities and financial markets





Satellite events



DTU's Advanced Operations Research PhD Summer School

Future Mobility: optimizing user-centric transit networks under uncertainty

This year will cover all questions related to the optimal planning of public transportation, with a specific focus on the passenger perspective, robust planning, and covering also demand-driven transportation. Combining international experts with practical case studies, we are sure this summer school will be interesting to all passionate about future mobility!



MAPSP 2024

MAPSP, the workshop on models and algorithms for planning and scheduling problems, is a biennial workshop dedicated to all theoretical and practical aspects of scheduling, planning, and timetabling.

The organizers of this workshop are Marco Chiarandini, Lene Monrad Favrholt, and Kevin Schewior (chair).



2nd Copenhagen School of Stochastic Programming

The 2nd Copenhagen School of Stochastic Programming is a PhD course that provides a rigorous and research-oriented introduction to selected topics on stochastic programming, a mathematical framework for decision-making in the presence of uncertainty. The course will take place at the University of Copenhagen during the week immediately before EURO 2024. The course comprises lectures by international lecturers as well as a limited number of student presentations. Students can obtain 5 ECTS upon successful completion of the course.



ETHICS AND OR/ STATE OF THE ART WORKSHOP

The EWG Ethics and OR organizes for the 31st time a Satellite Event/ State of the Art workshop.

We invite the chairs and their fellow colleagues of EWG groups to reflect on adjacent subjects such as decision support, societal complexity, sustainable development and developing countries, to discuss and give presentations. In this way we inform each other on recent developments and questions in our fields and as we may have to change, to discuss and to connect.



Panel Debate-Discussion "CAN AGE BE A BARRIER TO AN ACADEMIC CAREER ?"

Sensitive issues such as academic career problems and the stability of employment relationships concerning age are becoming topical in many European countries. However, they are not sufficiently highlighted in academia, and many academics are unaware of the actual situation and do not try to influence the relevant decisions made in universities.

Social activism, research and a broad and multifaceted debate are needed to find a strategy for managing older researchers and teaching staff in universities and research institutes that ensures the effective development of economic, social, and intellectual capital and is in line with the constitutional rule of law.

Meeting pursues bring together those who are looking for ways to find the OR-based solution.



EUROPT 2024 - the 21st Conference on Advances in Continuous Optimization

The EUROPT conference focuses on recent advances in continuous optimization, covering theory, algorithms, and software, as well as the role of continuous optimization in applications. The event features invited and contributed talks as well as invited plenary lectures.

Special sessions

EURO awards

EURO Gold Medal (EGM 2024)

The EURO Gold Medal (EGM) is the highest distinction within OR in Europe. The award is conferred on a prominent person or team or institution, for an outstanding contribution to the OR science.

Members of the 2024 Jury:

Mirjam Duer (Germany) - chair
Ivana Ljubic (France)
Justo Puerto Albandoz (Spain)
Ahti Salo (Finland)
Silvano Martello (Italy)

Winner: Prof. Maria Grazia Speranza



EURO Distinguished Service Award (EDSA 2024)

The EURO Distinguished Service Award honours extraordinary efforts in recognition of distinguished service to EURO and to the profession of OR.

Members of the 2024 Jury:

Michel Bierlaire (Switzerland) - chair
Daniele Vigo (Italy)
Sally Brailsford (UK)
Josef Jablonský (Czech Republic)
Metin Türkay (Turkey)

Winner: Prof. Lidija Zadnik Stirn



EURO Doctoral Dissertation Award (EDDA 2024)

The purpose of the EURO Doctoral Dissertation Award is to distinguish an outstanding doctoral dissertation in Operational Research, defended in the countries having an OR society that is a member of EURO. Five finalists have presented their work at a special session during the conference.

2024 Finalists:

- Spyridon Pougkakiotis:
Regularized Interior Point Methods for Convex Programming
- Matthias Soppert:
Demand Management in Shared Mobility Systems
- Cristina Molero-Río:
Enhancing classification and regression trees. A mathematical optimization approach
- Jan-Rasmus Kuennen:
Advanced Demand-Capacity Balancing Mechanisms to Improve Performance of European Air Traffic Networks
- Henri Lefebvre:
Adjustable Robust Optimization with Non-Linear Recourse

Members of the 2024 Jury:

- Laura Palagi (Italy) - chair
- Marjan van den Akker (Netherlands)
- Violeta Cvetkoska (North Macedonia)
- Rym M'Halla (UK)
- Frédéric Semet (France)

Winner: Henri Lefebvre



EURO Excellence in Practice Award (EEPA 2024)

The EURO Excellence in Practice award is for the best submission and presentation describing an application of Operational Research in practice. This year there are three finalists have presented their work at a special sessions during the conference.

Sponsored by



2024 Finalists:

Trung Hieu Tran, Thi, Thu Ba Nguyen, Thi Hoa Sen Le, Duc Chinh Phung, Hoai Chung Pham, Phuong Le Nguyen, Thi Anh Phuong Huynh: Optimal Planning Tool for Agricultural Waste Management in Vietnam (OPT-AWAMA)

Louis Bouvier, Thaddeus Leonard, Guillaume Dalle, Axel Parmentier: Renault Group Packaging Return Logistics in Europe

El Mehdi Er Raqabi, Issmail El Hallaoui, Nizar El Hachemi, François Soumis, Ahmed Beljadid, Mohammed Ali Bennouna, Nabil Si Hammou, Michel Fender, Anouar Jamali, Hicham Guellaf, Ilyas Rakhis: OCP Optimizes Its Supply Chain For Africa and The World

Members of the 2024 Jury:

- Ruth Kaufman (UK) - chair
- Carolin Trouet (Germany)
- Frédéric Gardi (France)
- Tobias Achterberg (Germany)
- Mauro dell'Amico (Italy)

Winners: El Mehdi Er Raqabi, Issmail El Hallaoui, Nizar El Hachemi, François Soumis, Ahmed Beljadid, Mohammed Ali Bennouna, Nabil Si Hammou, Michel Fender, Anouar Jamali, Hicham Guellaf, Ilyas Rakhis



EURO Prize for OR for the Common Good (EPOCG 2024)

This is a new EURO Prize to honour outstanding accomplishments of OR for solving social-oriented problems. This year there are three finalists who will present their work during special sessions during the conference.

2024 Finalists:

Jan Boeckmann, Clemens Thielen:
Rethinking Municipal Flood Mitigation: A Real-World Application of Operations Research Methods for Improving Climate Resilience

Ohad Eisenhandler, Gur Mittleman, Moshe Tshuva, Ronen Eran, Lev Zhivin, Yossi Luzon:
The potential of renewable electricity in isolated grids: The case of Israel in 2050

Ashraf Labib, Dylan Jones: Formulation of Strategy Towards the ARCTIC in terms of Search and Rescue – Needs, Innovations, and AI/OR based solutions

Members of the 2024 Jury:

- Cathal Brugha (Ireland) – chair
- Claudia D'Ambrosio (France)
- Alec Morton (UK)
- Eeva Vilkkumaa (Finland)
- Ulrike Reisach (Germany)

Winners: Jan Boeckmann, Clemens Thielen



EURO Award for the Best EJOR Paper (EABEP 2024)

Sponsored by:

EURO has three annual awards available for papers published by EJOR: best survey paper; best application paper; and best theory/methodology paper.



Members of the 2024 Jury:

- Lars-Magnus Hvattum (Norway) – chair
- Bernardetta Addis (France)
- Valentin Bertsch (Germany)
- Emanuele Borgonovo (Italy) [EJOR rep]
- Agostinho Agra (Portugal)

Winner of the best survey paper:

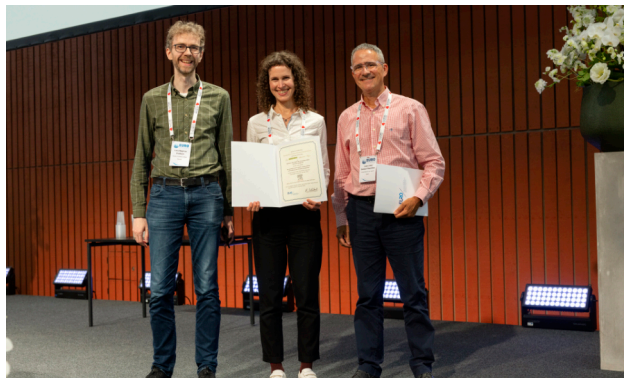
Claudio Gambella, Bissan Ghaddar, and Joe Naoum-Sawaya,

Optimization problems for machine learning: A survey



Winner of the best application paper: Pamela C. Nolz, Nabil Absi, Dominique Feillet, and Clóvis Seragiotto,

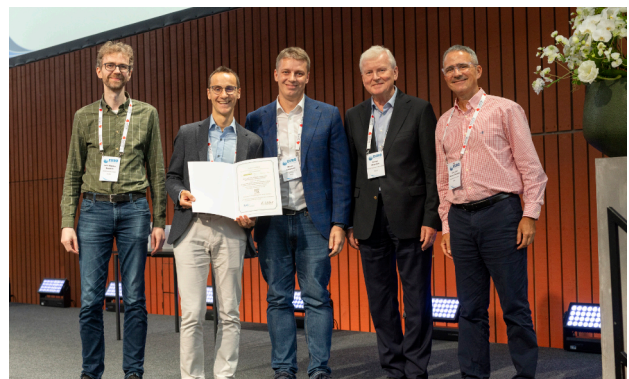
The consistent electric-Vehicle routing problem with backhauls and charging management



Winner of the best theory/methodology paper:

Marco Cinelli, Miłosz Kadziński, Grzegorz Miebs, Michael Gonzalez, and Roman Stowiński,

Recommending multiple criteria decision analysis methods with a new taxonomy-based decision support system



Making and impact, EURO Practitioners' Forum Stream

Stream organisers: Sander van Aken, João Paiva Fonseca, Johan Kellerth Fredlund, Ruth Kaufman, Michele Quattrone

"Making an Impact" is a stream with a difference. Every session is designed to help with the issues faced when we put OR into practice, whether they are issues around people, technology, methods, or personal development.

Most sessions are participative, and aim to help build networks and connections across practice and academia. Everyone with an interest in practical OR is welcome.

At MAI sessions you can:

- Get a rapid and inspiring overview of some of the exciting OR going on in practice, at the 'Fast and Furious' session;
- Develop your skills with workshops and tutorials on human-centred analytics, latest apps, coding, and optimisation tips; and a re- view of Generative AI;
- Listen to expert panel members, ask them questions and share your own experience at a variety of panel discussions and round tables
- on important topics;
- Share your own challenges, and make valuable connections, at speed networking and open space problem discussion sessions.

	Monday 1st July	Tuesday 2nd July	Wednesday 3rd July
A 8.30-10.00	Fast And Furious: Lightning Talks	Generative AI For OR People: Disruptor, Enabler, Or Distraction?	Not the Excellence in Practice Award: lifting the lid on practice
B 10.30-12.00	Speed Networking	What's on your mind? – getting what you want from this conference	Practical Skills: Knowledge Sharing Tutorial -2- Coding; optimisation tips
C 12.30-14.00	Practical Skills: Knowledge-Sharing Tutorials -1- Streamlit; Kubernetes	From Academia To Practice: Reflections From Those Who Have Taken The Leap	Which solver?
D 14.30-16.00	The Quest for the Right OR Professionals – A Hiring Perspective	Success, failure and the factors that influence outcomes	Maria Besiou

WISDOM



The EURO WISDOM (Women In Society Doing Operational Research and Management Science) Forum promotes the participation of all genders in OR. You'll find more information about the EURO WISDOM Forum here.

The Forum hosted several sessions at EURO.

WISDOM Workshop

You are welcome to join us for an insightful panel discussion on "Networking as a tool for career progression" with Prof. Anna Nagurney and leadership coach Margaret Collins, moderated by WISDOM chair Assoc. Prof. Paula Carroll.

Young Women for OR (YW4OR)

A visibility initiative for young women at the early stages of their career in OR. The special sessions are an opportunity to spotlight the recent and ongoing work of these researchers.



Memorial session



Jakob Krarup

Professor Jakob Krarup passed away in the beginning of 2023. He will be remembered for his huge engagement in EURO, which was a central part of his life for almost 50 years.

Jakob was president of EURO in 1989-1990, and he is the only person who has been chairman of the program committee at two EURO conferences.

In 2009, Jakob received the EURO Distinguished Service Medal for his work within EURO.

In memory of Jakob Krarup, we are hosted a memorial session with talks from people who knew him well.

Speeches at the memorial session

Speaker: Prof. Ulrike Leopold-Wildburger, University of Graz

Title: Jakob Krarup as permanent guest professor at Karl Franzens University Graz in Austria

Speaker: Prof. Dr. Gerhard Wilhelm Weber

Title: Some thoughts of sincere gratitude to Professor Jakob Krarup - our mentor and friend

Speaker: Prof. Stanislaw Walukiewicz

Title: Jakob Krarup. Very personal remarks

Speaker: Prof. Leonidas Sakalauskas, President of LitORS

Title: Cooperation with Jacob Krarup, his impact for OR development in Baltics

Speaker: Prof. Dr. Lidija Zadnik Stirn, University of Ljubljana

Title: A few souvenir photos of our friend Prof Jakob Krarup, a remarkable personality and great supporter of the EURO member societies

Closing:

We close the session by reading up a few words from Helle Welling, former Secretary of IFORS

Social program

Lunch and coffee breaks

The lunches were served in 5 strategic locations on campus. The lunch buildings were part of the buildings where the sessions were held, and they were planned to minimize participants walking distance. Though walking is healthy, DTU Campus is rather large, and even between the conference buildings the walking distance could be up to 10 minutes.

At EURO 2024, we decided not to deliver lunch tickets. This saved time during the breaks and reduced wasted paper. The lunch portions were large enough that we did not expect (and experienced) anyone having multiple servings.

All the lunches were mostly allergens free, except for gluten. A separate lunch and cake were offered to participants with gluten allergy.

Lunches were paired with local and organic soft drinks in the form of smoothies, cold teas, and flavored waters.

Coffee breaks were served in all conference buildings and offered coffee, tea, cake, and fresh fruit.



Welcome party

Summer in Denmark is unpredictable. It can rain, the sun can shine, it can be cold, it can be hot, and it can be all of this in just one day. This makes planning a party for over 3000 participants very difficult. With a plan B in mind, the local organizing committee kept a constant eye on the weather forecast. The days starts with a light rain, but it was estimated to end in the afternoon. The decision was made to go with plan A and host the welcome party outdoors.



During the closing session a new front of heavy rain starts, but it luckily ended as the session finished. Crisis averted!

As the participants exited the plenary auditorium, they were met by the Tivoli Youth Guards. The 100 youths that make up today's Tivoli Youth Guard is a tradition running back to 1844 when the world's first youth guard was established. After the first successful season in 1843 Tivoli's founder Georg Carstensen decided to give himself a Tivoli Youth Guard as a birthday present for the second season. And so it came to pass.

Like Tivoli itself, the Tivoli Youth Guard is well-known in many parts of the world. The Guard regularly travels abroad to represent Tivoli and Denmark through music and parades. The uniform of bearskin hat, red jacket and white trousers form a visual icon that instantly symbolizes much of the good that Tivoli and Denmark represent.

The guards marched and played music guiding the participants to Kemitorget where the welcome party took place. The participants were welcomed by a glass of sparkling wine, and finger food. As we were in Denmark, beer could not be missed. 3 beer stations provided 9 different kinds of draft beer from the local brewery Amager Bryghus.



Gala dinner

With over 3000 participants, the 700 available gala dinner tickets were sold out already before the early bird deadline. The dinner was held in Langelinie Pavilion, an iconic restaurant with Danish interior design, and located a few meters from the Copenhagen most visited sight, the Little Mermaid.

Contrary to tradition, and in line with the conference aim to reduce meat consumption, the default menu option was vegetarian. Participants had a chance to pay an extra fee to have the meat option.

After the first course, entertainment arrived. Singing is rooted in the Danish culture. Living in Denmark you will hear singing in churches, at birthday parties, weddings, schools, and around the Christmas tree. The organizing committee wanted the participants to experience this and invited Vigdis Vocal Ensemble to perform with traditional Danish songs.

Vigdis Vocal Ensemble is a choir of young women, established in Copenhagen in 2020 by a group of ambitious singers. The choir is organized in a way where the singers collectively drive forward the choir as an association, with music as the common interest and focus. The choir works with a mixed repertoire of classical, challenging and more modern





compositions, often in collaboration with other young artists and composers. They aim to reach a broad audience, open up the world of music to others, and bring something novel to the Copenhagen choir stage.

Tradition dictates that the EURO gala dinner must end at the dance floor. After clearing up a few tables, the DJ made his equipment ready, only to be taken over by the unofficial EURO DJ Prof. Bernard Fortz! Bernard has not only been relentlessly working on ensuring that the EURO

abstract system was up and running, he also managed to get people to dance until we kindly were asked to leave the venue. Thanks, Bernard, for this great success! The organizing committee can only recommend the next organizers to let Bernard take over once again.

The PCO of the conference, managed to secure a secondary dinner venue, which allowed 100 guests in the waiting list to join a gala dinner. In the heart of Copenhagen, below a bridge of the Copenhagen channel, you find KajakBar. As the name implies, this is a place for kayakers, or any other water sports enthusiast. You can reach the restaurant also by water, where you can dock your kayak or stand-up paddle board. It is not unusual to see guests in wetsuits, enjoying a quick lunch by the water.

Prof. David Pisinger from the organizing committee, took the opportunity to surprise the guests by arriving at the restaurant by water on his own kayak! David ensured that everyone had a good time also at this secondary location.

In retrospect, having a secondary location as a plan B when faced with a high demand seems to be a good idea, and we do recommend the next organizers to keep this in mind.



Farewell party

After the closing session, all the participants were invited to attend the farewell party at Kemitorved (the same venues as the welcome party). Guests were treated to some sparkling wine, draft beers from Amager Bryghus, and snacks. It was a nice a relaxing atmosphere where everyone had a chance to say farewell to colleagues and friends. A few minutes into the party, entertainment surprised everyone.

Copenhagen Drummers took the stage.



“A group of enthusiastic, drum playing bad asses, created from the passion to discover all aspects of drumming!”

The foundation for Copenhagen Drummers was built during our time as constables in the Royal Lifeguard’s Drum Corp. A world full of traditions and history. With a very routine weekly schedule and guidelines for how to play the drums in the guard, we had a need to express all the crazy ideas and thoughts about how drumming could also be performed. It was with those thoughts that Copenhagen Drummers was formed, an environment where the ideas and unique thoughts of how drumming could be made more fun and entertaining was encouraged.”

– Copenhagen Drummers

Copenhagen Drummers entertained us with a loud and engaging percussion show. They played not only on drums but also on trash cans and ladders. It was the perfect ways to end the conference with a bang!



Conference Balance

INCOMES

Participants	DKK
1479 attendee, early bird	4.364.210,00
442 attendee, regular fee	1.646.250,00
20 Low income countries, early bird	29.800,00
11 Low income countries, regular	24.750,00
814 PhD student/retired, early bird	1.212.860,00
166 PhD student/retired, regular fee	373.500,00
33 Accompanying Person	3.7125,00
3 Extra exhibitor badge	5.625,00
Cancelled participants	157.985,00
26 add a meat moderation	1.702,00
103 dinner at Kayakbar	75.950,00
631 dinner at Langelinie	619.080,00
Food & Beverage, meetings on Sunday, June 30	55.170,50
Cancelled dinners	4.906,00
Participant income in total	<u>8.608.913,50</u>
Sponsors /exhibition	358.920,00
Total income	<u>8.967.833,50</u>

EXPENSES

Venue	DKK
Video production	265.315,23
Signs and flowers	31.365,00
Security	74.202,96
Electricians	70.109,44
Movers	380.354,38
Total venue	<u>821.347,01</u>
Printed matters	
Logo design	6.625,00
Flyer for EURO 2022	2.406,25
Final program	29.646,88
Website	72.462,63
Volunteers app	25.000,00
USB-Keys	1.000,00
Banners	66.173,13
Sponsor signs (breaks)	1.312,50
Other	36.328,13
Total printed matters	<u>240.954,52</u>
PCO	
Project management	155.198,43
Staff on-site DTU	125.939,46
Secretary services	48.712,57
Food for staff	3.613,87
Travel and parking	8.800,36
Accommodation (EURO 2022)	991,88
Total PCO	<u>343.256,57</u>

Office expenses	DKK
Transport of conference material	3.000,00
Office supplies	3.208,50
Total office expenses	<u>6.208,50</u>
Speakers	
Travel	41.750,76
Accommodation	64.564,46
Total speakers	<u>106.315,22</u>
Organizing expenses	
Materials	3.355,31
Travel	5.831,70
Volunteers uniforms	31.160,00
Meetings	387,50
Food on-site	1.795,00
VIP Reception (aka President's dinner)	104.845,00
Accommodation	5.443,75
Volunteers (travel, gift, and other)	25.541,50
Volunteers and security manager	32.812,50
Promotion at EURO 2022	962,44
First Aid Kit	240,00
Total organizing expenses	<u>212.374,70</u>

Special arrangements	DKK
Food & Beverage, meetings on Sunday, June 30	55.610,50
Singers at gala dinner	25.000,00
Tivoli Guards and Copenhagen Drummers	72.737,50
DJ at gala dinner	16.250,00
Shuttle busses	334.362,00
Photographer	38.750,00
Total special arrangements	<u>542.710,00</u>
Other fixed expenses	
Set-up of Self-Print Kiosks	39.375,00
OC, PC, and Speaker presents	15.706,33
Total other fixed expenses	<u>100.081,33</u>
Program committee	
Travel	75.911,35
Accommodation	71.050,11
Total program committee	<u>146.961,46</u>

Variable expenses	DKK
PCO registration fee	846.807,50
EURO registration fee	362.774,74
Conference dinner	800.580,00
Water posts	15.187,50
Badges	54.150,00
Welcome and farewell reception	655.887,50
Water bottles	100.587,50
Loss on receivables (unpaid registrations)	138.815,00
Lunch and coffee breaks	2.486.500,00
Bank and credit card costs	300.020,72
Total variable expenses	<u>5.767.452,07</u>
Total incomes	8.967.833,50
Total expenses	8.242.661,38
Result	<u>725.172,12</u>

Note: the result corresponds to € 97.244,56