



Newsletter 51 of EUROPT

EUROPT - The Continuous Optimization Working Group of EURO

<https://www.euro-online.org/websites/continuous-optimization/>

December 2023

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Words from the Chair

Dear Friends,

on behalf of the Managing Board welcome to the 51th EUROPT Newsletter. I hope you and your families are all healthy and safe while enjoying the Christmas season.

After the restart of live activities in the Summer 2022, our community had the chance to meet again this year. Our annual workshop took place at the Corvinus University in Budapest together with a summer school at the end of the last August. Participation to both was far beyond the most optimistic expectations. My heartfelt thanks go to all attendees for their enthusiastic participation and in particular to Tibor Illés and his group for the great organization of the 20th edition of the workshop. As previously announced, Coralia Cartis was named EUROPT Fellow for 2023 (just a few weeks before being included in the class of SIAM Fellows 2023) and delivered the Fellowship Lecture in Budapest. The newsletter reports on the workshop in details and it includes the laudatio for our new fellow as well.

Due to the huge number of attendees at our two workshops after the Covid break, the Managing Board decided to switch the name of our annual meeting from workshop to conference while keeping the numbering. So, let me address the news with the new name: our next conference - the 21st edition - is planned to take place at Lund University in Sweden on 26-28 June 2024, one week ahead of the EURO conference in the very close Copenhagen. It will be organised by Pontus Giselsson and his team, which I am very thankful to for taking on the duty. A preliminary announcement is included in the newsletter. More detailed news will follow, so stay tuned with us!

Beyond our own activities, announcements of some further events are included as well. In order to get other news in real-time you can freely join our mailing-list by sending a message to europa@di.unipi.it.

Looking forward to an exciting new year, we hope to meet many of you in Lund.

Enjoy reading the Newsletter!

Giancarlo Bigi, EUROPT Chair
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Laudatio for Coralia Cartis, EUROPT Fellow 2023



Coralia Cartis

University of Oxford
Mathematical Institute
Balliol College

EUROPT Fellow 2023

Coralia Cartis is Professor of Numerical Optimisation and Fellow and Tutor in Mathematics at the University of Oxford. She has been elected EUROPT Fellow 2023 for her exemplary research in continuous optimization as well as outstanding service to the community.

Professor Cartis is an outstanding researcher in the field of nonlinear optimization. Her main research interests involve in particular nonconvex problems, complexity analysis and applications of optimization.

On the global efficiency/computational complexity of algorithms, her work has answered fundamental and long-standing open questions regarding the worst-case efficiency of classical methods for optimization problems.

Professor Cartis has also been interested in intersections of optimization with other fields. In the field of machine learning, she extended classical ideas such as adaptive linesearch, trust region, and regularization to tackle problems where derivative information is only occasionally accurate and for stochastic problems.

Professor Cartis has also focused on the application of non-convex nonsmooth algorithms for compressed sensing and of sparse approximation and inverse problems in climate modeling.

Next to these activities, Coralia Cartis is an active member of the EUROPT Working group. She has served on the program committee for the EUROPT Glasgow, 2019. She also regularly participates in the organization of workshops on aspects of continuous optimization. She was co-organizer of the Continuous Optimization Workshop, 2014 (Montevideo), 2017 (Barcelona), 2020 (Vancouver); co-chair of the SIAM Conference on Optimization (SIAM OP 2023); member of ICCOPT Steering Committee, and ICCOPT Streams Organizer, 2016 (Tokyo) and 2019 (Berlin) for the International Conference on Continuous Optimization; member of the organizing committee of the IMA Conference on Numerical Linear Algebra and Optimization (2018, 2020), the IMA Conference on Inverse Problems (2019), SIAM Conference on Optimization (SIAM OPT 2017). She delivered plenary and keynote lectures at prestigious international congresses (among them EUROPT2018, EURO-k Conference 2021).

Coralia Cartis also acts as Associate Editor for leading journals.

Finally, Coralia Cartis is also recipient of other important prizes and awards, including Leslie Fox Prize in Numerical Analysis 2005 (second place), INFORMS Simulation Society Outstanding Paper Prize, 2021, and SIAM Fellow 2023.

Congratulations to Coralia Cartis who is an excellent choice for EUROPT Fellow 2023!

EUROPT Conferences

Report on EUROPT 2023

20th EUROPT Workshop on Advances in Continuous Optimization

The continuous optimization working group was back home

August 23-25, 2023, Budapest, Hungary

www.europt.hu



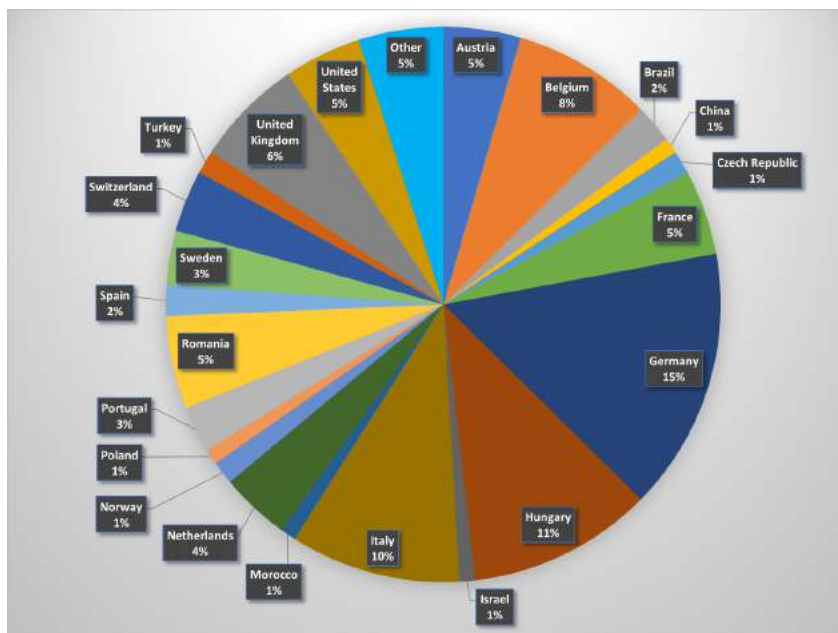
EUROPT - the continuous optimization working group of EURO was founded in Budapest on 14 July 2000 on occasion of EURO XVII. Since the foundation of the group the conference has been held almost every year and it is one of the major events for the European mathematical optimization community. The location of the workshop has been a European city except for 2011 in Ballarat, Australia, and 2017 in Montréal, Canada. In order to celebrate the 20th edition, the group was back to Budapest. The workshop was organized by the Corvinus Centre for Operations Research of Corvinus University of Budapest and the Hungarian Operations Research Society, with the sponsorship of the software company FICO, on 23-25 August.

Committees

The Program Committee was chaired by Tibor Illés (Corvinus University of Budapest) and co-chaired by Giancarlo Bigi (Università di Pisa) and Tamás Terlaky (Lehigh University), and it was composed by 28 EUROPT members, including the EUROPT Managing Board, as well as some EUROPT Fellows and EUROPT Past and Honorary Chairs. The Organising Committee was made by 8 people and chaired by Marianna E.-Nagy (Corvinus University of Budapest).

Geographical Distribution of the participants

EUROPT 2023 has been a great opportunity for the community to get together in person again and enjoying sharing the latest developments in continuous optimization. Registered participants were 229 from 34 countries, with the geographical distribution depicted in the figure below (the figure does not include countries with a single participant, namely Chile, Cyprus, Finland, India, Iran, Japan, Kazakhstan, Slovenia, South Korea, Taiwan, Ukraine). Among the participants, 80 were PhD students.



EUROPT 2023: Participation by countries

Scientific Program and EUROPT Fellow Lecture

The rich scientific program of the conference covered all aspects of continuous optimization, and was subdivided in 18 special streams that were held in 6 or 7 parallel sessions. Each session grouped 3 or 4 talks, each on a time slot of 25 minutes.

Three plenary lectures were delivered by distinguished scholars: Russell Luke (University of Göttingen) talked about *Proximal splitting algorithms in nonlinear spaces*, while Renata Sotirov (Tilburg University) about *A new perspective on mixed-integer semidefinite programming* and Aharon Ben-Tal (Technion - Israel Institute of Technology) about *An algorithm for maximizing a convex function based on its minimum and beyond*.

Every year, the EUROPT Working Group honours one outstanding researcher in continuous optimization by awarding the EUROPT Fellowship. The Fellowship is presented to the awarded researcher at the workshop and the Fellow delivers the EUROPT Fellowship Lecture as a plenary talk. The recipient of the 2023 award was Coralia Cartis (Oxford University) and she delivered her EUROPT Fellowship Lecture on *Tensor methods for nonconvex optimization*. Before her lecture, she addressed the audience with a moving thank-you speech and dedicated the award to the community and in particular to the youngest generation of researchers who were attending her talk and the workshop.

Social Program

EUROPT 2023 included some social events: a welcome party was held at Corvinus University on the evening of 22 August, after the end of the EUROPT Summer School that had just ended in the same location; a conference dinner took place in the city center on 24 August; a surprise “special session” to celebrate Tibor Illés’ 60th birthday was organised by his former PhD students Marianna and Petra, and it happened immediately after the closing session ended.



EUROPT 2023: participants group picture

The rich scientific and social programs of EUROPT 2023 made it a great event allowing the community to get together in a nice environment to enjoy advances in continuous optimization and the beauty of Budapest.

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21st EUROPT Conference on Advances in Continuous Optimization

June 26-28, 2024, Lund University, Lund, Sweden

europt2024.event.lu.se



The 21st EUROPT Conference on Advances in Continuous Optimization will be held at Lund University, Lund, Sweden, June 26-28, 2024. The conference will be organized by the Department of Automatic Control at Lund University and the EUROPT working group of EURO.

Scope

The 21st EUROPT conference focuses on advances in continuous optimization theory, complexity and convergence properties of optimization algorithms, optimization software, and continuous optimization in applications. The scope of the conference includes, but is not limited to:

- Derivative-free optimization
- First-order optimization
- Second- and higher-order optimization
- Complexity and efficiency of optimization algorithms
- Computed-aided algorithm analysis
- Stochastic optimization
- Distributed optimization
- Optimization software
- Non-smooth optimization
- Conic and semi-definite optimization
- Semi-infinite optimization
- Global optimization
- Multi-objective optimization
- Multi-level optimization
- Quantum computing optimization
- Optimization under uncertainty
- Complementarity and variational problems
- Monotone inclusion problems
- Computational game theory
- Computational mathematical optimization

Data-driven optimization
Optimization for learning and data analysis
Optimal control and applications
Optimization in industry, business, and finance
Applications of continuous optimization

Important Dates

Preliminary registration and abstract submission open: January 20, 2024
Deadline for abstract submission: March 30, 2024
Acceptance of the presentation based on the abstract: April 25, 2024
Deadline for early registration: May 5, 2024
Deadline for late registration: May 25, 2024

Venue

The 21st EUROPT Conference on Advances in Continuous Optimization will be held in the M-building at the Faculty of Engineering at Lund University, Lund, Sweden.

Contact

If you have questions related to the conference, please do not hesitate to contact:

Pontus Giselsson: pontus.giselsson@control.lth.se

Forthcoming events

Course on Discrete Choice Analysis

Ecole Polytechnique Fédérale de Lausanne, Switzerland

February 11 - 15, 2024

<https://transp-or-academia.epfl.ch/dca>

Discrete Choice Analysis: Predicting Individual Behavior and Market Demand

Accurate predictions of the demand and market shares are critical for a wide variety of businesses and public organizations. Examples of applications include: predicting demand for a new product under alternative pricing strategies; designing a business plan for a new technology; analyzing the impact of a merger on market shares; forecasting the ridership on a new metropolitan transit service; and analyzing competitive scenarios for introducing a new telecommunication service. To accomplish these tasks, discrete choice analysis provides powerful methodological tools. Based on the modeling of individual behavior, it is used to model in detail the structure of a market, and to predict the impact of various scenarios.

This one-week program undertakes an in-depth study of discrete choice models and their applications. It provides participants with the practical tools necessary for applying new discrete choice techniques. By examining actual case studies of discrete choice methods students will be familiarized with problems of data collection, model formulation, testing, and forecasting and will gain hands-on application experience by using readily available software to estimate and test discrete choice models from real databases. The course will emphasize applications of discrete choice methods to strategic and tactical marketing and to policy-related problems.

The lecturers will be **Moshe Ben-Akiva (MIT)** and **Michel Bierlaire (EPFL)**.

URL for information and registration: <https://transp-or-academia.epfl.ch/dca>

VOCAL Optimization Conference: Advanced Algorithms

The logo for the VOCAL Optimization Conference, featuring the word "VOCAL" in a bold, white, sans-serif font on a dark blue rectangular background.

VOCAL Optimization Conference: Advanced Algorithms
June 5-7, 2024, Budapest, Hungary

June 5-7, 2024, Budapest, Hungary

<https://vocal.p-graph.org/>

The 10th VOCAL Optimization Conference: Advanced Algorithms will be held at the Corvinus University of Budapest in Budapest, June 5-7, 2024.

Organized by:

Corvinus University of Budapest

Hungarian Operations Research Society

Conference scope

The VOCAL conference focuses on recent advances on optimization algorithms: continuous and discrete; complexity and convergence properties, high performance optimization software and novel applications are reviewed as well. We aim to bring together researchers from both the theoretical and applied communities in the framework of a medium-scale event.

Important dates

Preliminary registration and abstract submission open: February 5, 2024

Deadline for Abstract Submission: March 15, 2024

Acceptance of the presentation based on the abstract: March 29, 2024

Deadline for early Registration: April 12, 2024

Deadline for short paper submission: April 19, 2024

Deadline for on-line registration: May 17, 2024

Conference begins on June 5 and ends on June 7, 2024

25th International Symposium on Mathematical Programming



July 21-26, 2024, Montréal, Canada

Call for contributions – <https://ismp2024.gerad.ca/>

The International Symposium on Mathematical Programming is the largest mathematical optimization conference in the world and the flagship conference of the Mathematical Optimization Society (MOS, www.mathopt.org). Each edition attracts some 2,000 specialists in mathematical optimization, the discipline that leads to the creation of algorithms for a wide range of applications in machine learning, transportation, logistics, finance, healthcare and engineering, among others.

The 25th International Symposium on Mathematical Programming (ISMP 2024) will be held in downtown Montréal, Canada, from July 21 to 26, 2024 at the Palais des Congrès. We are delighted to solicit your participation in this esteemed world congress on mathematical optimization. Scientists, industrial researchers, and users of mathematical optimization are all encouraged to actively engage and share their insights at this event. Presentations cover the development of mathematical algorithms, their theoretical analysis and their applications in various sectors. Held every three years, the event features some 1,500 presentations divided into 35 parallel themes. Plenary and keynote speakers appear on the conference website <https://ismp2024.gerad.ca/speakers/>.

Important dates

Symposium:	July 21-26, 2024
Banquet:	Thursday, July 25, 2024
Welcome cocktail and badge pick-up:	Sunday July 21, 2024
Abstract submission:	Up to April 19, 2024
Stream submission:	Up to February 29, 2024
Registration	
- Late:	June 21, 2024 and after
- Normal:	March 1 to June 20, 2024
- Early bird:	October 26, 2023 to February 29, 2024

Information on the scientific program and practical information on the venue, accommodations, sponsorship opportunities and registration are continuously updated on the conference website. Please note that obtaining a visa for Canada can be a lengthy process, so please act promptly if a visa is required from your country.

OR 2024 - International Conference on Operations Research 2024

Data, Learning, and Optimization

September 3-6, 2024, Munich

<https://or2024.de/>

The International Conference on Operations Research is jointly organized by the German Operations Research Society (GOR), the Austrian Society for Operations Research (ÖGOR), and the Swiss Operations Research Society (SVOR/ASRO).

This conference is a place to exchange ideas and interact with other academics, researchers, and practitioners in the fields of Operations Research, Management Science, Data Science, and Analytics. The OR 2024 will take place from September 3-6, 2024 on the downtown campus of the Technical University of Munich.

We invite academics, researchers, and practitioners from around the world to attend and submit a paper to OR 2024. The conference is a great platform to share your research findings, discover new applications and practices, discuss trends and interact with professionals and leading experts. Join us in this experience!

Timeline

February 1, 2024: Abstract submission opening

April 1, 2024: Registration opening

April 30, 2024: Abstract submission deadline

May 15, 2024: Acceptance notification

May 30, 2024: Early-bird registration deadline

June 30, 2024: Presenting author registration deadline

September 2, 2024: Preconference workshops

September 3-6, 2024: Conference

For further information, visit <https://or2024.de/>.



<https://icieng.eu/ICIE'2024>

International Conference INNOVATION IN ENGINEERING

June 26th-28th, 2024

**Povoação - São Miguel Island
Azores - PORTUGAL**

Organizers

ICIE'2024 will be the 3rd edition of this conference in the successful series of conferences on Innovation in Engineering. It will be organized at **School of Engineering of University of Minho, by METRICs and Algoritmi Research Centres.**

Scope

ICIE is an event that is not based only in a purely academic but also technological and innovative dimensions, across the most diverse sectors of activity. The objective of this conference is to make this moment an opportunity to show the set of innovations and engineering achievements, as well as to transmit to all participants an overview about potentiating the foundations for the creation of networks of knowledge and entrepreneurial cooperation, involving Innovation, Engineering and Entrepreneurship stakeholders. This edition is specially focused on new achievements brought from Academia to Industry and Society.

Topics

***Innovation, Engineering, Systems and Applications, Societal challenges and Industrial Property
in the following areas:***

Aerospace Technology and Astronautics, Agricultural Processes, Applied Mechanics, Automotive Engineering, Biotechnology, Biomechanics, Collaborative projects, Control theory and architectures, Control technology, Decision theory and algorithms, Dynamical Systems, Discrete-event systems, Distributed and networked control, Economic models, Engine Technology, Engineering Design, Engineering education, Engineering Thermodynamics, Heat and Mass Transfer, Entrepreneurial Academia, Fault-tolerant control, Fluid Mechanics, Fuzzy and neuro-fuzzy systems, Genetic algorithms and Nonlinear control, Hardware for control systems, Image processing and computer vision, Industrial automation, Industrial networking, Industry-Academia interactions, Innovation and entrepreneurship, Instrumentation, sensors and actuators, Internationalization, Machinery and Machine Elements, Manufacturing Engineering, Manufacturing systems and scheduling, Marketing and entrepreneurship, Marine control, Materials Engineering Mechanical Systems Design, Mechanical Structures and Stress Analysis, Mechanical Vibrations, Mechatronics Design, Mechatronics modelling, simulation and identification, Medical Devices, MEMS, Modeling and identification, Nanotechnology and Microengineering, Neural networks, Open innovation, Power systems, Precision Engineering, Instrumentation, Measurement, Process control, Real time systems architectures, Rehabilitation Devices, Remote and virtual laboratories, Renewable energy systems, Robust control, Robotics, Synergy between EU research, innovation and development funds, Social and Industrial entrepreneurship, Sustainability successful practices, Theoretical and Applied Mechanics, Transportation systems, Tribology and Surface Technology, Web remote control, Wellbeing, Wireless applications and systems.

Publication

All submitted papers will be peer reviewed by, at least, three reviewers. Accepted papers will be published by **Springer** as **Lecture Notes in Mechanical Engineering** series. The books of this series are submitted to, among others, ISI Proceedings (Web of Science) and SCOPUS. Papers must be prepared using Springer guidelines, **with maximum of 12 pages length.**

Selected papers, from conference, will be published by WoS and/or SCOPUS indexed journals

Steering Committee

Bogdan Gramescu, Politehnica University of Bucharest, RO
Camelia Avram, Technical University of Cluj-Napoca, RO
Eduardo Perondi, Federal University of Rio Grande do Sul, BR
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Vitalii Ivanov, Sumy State University, UA
Vitor Carvalho, Polytechnic Institute of Cávado and Ave, PT

Important Dates

Full paper Submission: **January 15th, 2024;**
Notification of Acceptance: **February 19th, 2024;**
Camera Ready: **February 26th, 2024;**
Early Registration: **March 11th, 2024;**
Conference days: **June 26th – 28th, 2024;**

Contact

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For further information please visit the website:

<https://icieng.eu/>

Conference location

The conference will be held in June 26th-28th, 2024, at Municipal Auditorium of Povoação, in Povoação town, São Miguel Island - Azores, a Portuguese wonderful and beautiful place, at 55 kilometers from Ponta Delgada airport.



Contacts

EUROPT: <https://www.euro-online.org/websites/continuous-optimization/>

People wishing to submit an announcement to the EUROPT mailing list should address their message to europt@di.unipi.it. The message will then be distributed upon approval by the EUROPT Managing Board.

For specific questions, the members of the Managing Board can be contacted:

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Editor's notes

Dear members of EUROPT, dear readers,

As this year 2023 draws to a close, it is our pleasure to report on the event that successfully gathered our community, and to announce next exciting events.

It is in particular a pleasure to reflect on the resounding success of our recent conference EUROPT 2023, that was held in Budapest, where EUROPT was founded in July 2020. During the conference, Coralia Cartis, who has been elected EUROPT Fellow 2023, delivered her Fellow lecture. We are delighted to include in this newsletter a laudatio for our new Fellow. We are pleased to inform the community that the success of EUROPT events, witnessed by the huge number of attendees in last years, made the Managing Board to decide to switch the name of our annual meeting from *workshop* to *conference*.

Looking ahead, we are excited to announce a series of upcoming events designed to further enrich our community. We are pleased to announce our next conference, EUROPT 2024, that will be held in Lund (Sweden) next 26-28 June. The year 2024 will be rich in important events for our community. Please find in this newsletter the announcements of these events, and add the dates to your agenda!

Many thanks to all contributors to this Newsletter.
Looking at the coming year, let us continue together to explore new horizons and make lasting contributions to our EUROPT community.

My best wishes for the Holiday season and for a bright 2024!

The Newsletter Editor

Sonia Cafieri

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