Proceedings of the 11th International Network Optimization Conference, INOC 2024

University College Dublin, Ireland, 11-13 March 2024

Editors

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Foreword

The International Network Optimization Conference (INOC) series provides a forum for researchers in the broad field of network optimization to present and publish their latest results and ongoing research. INOC is the conference of the EURO working group on Network Optimization (ENOG). The biennial INOC conferences have run since 2003. Previous editions were held in Paris (2003), Lisbon (2005), Spa (2007), Pisa (2009), Hamburg (2011), Tenerife (2013), Warsaw (2015), Lisbon (2017), Avignon (2019), and after a brief Covid-19 interruption, ran in hybrid form in Aachen (2022). We were delighted to resume in-person activities for INOC 2024 at the College of Business in University College Dublin (UCD) 11-13th March 2024.

INOC 2024 has two types of submissions: full research papers (4-6 pages long) and extended abstracts (at most 2 pages). Out of 23 submitted full research papers, 13 were selected to be published in this set of proceedings at OpenProceedings, http://openproceedings.org. In addition to contributed papers, three invited speakers presented keynote talks:

- Bernardetta Addis (Université de Lorraine, France), *From green networking to network virtualization: some interesting problems arising from telecommunication applications*;
- Stefan Schmid (TU Berlin, Germany), *Self-adjusting networks*;
- Ivana Ljubic (ESSEC Business School, France), *Benders Adaptive-Cuts Method Applied to Network Design and Facility Location Problems Under Uncertainty*.

We were also pleased to present two tutorial sessions:

- Scott McDonald and Kanika Sharma (Eaton) on *Buildings as Smart Grid Network Components*;
- Nam Tran (UCD) on *Optimization Methods for Large-scale Cell-free Massive MIMO*.

INOC relies on support and assistance from many people and organisations. We are grateful to all participants who make INOC a special place to come together and exchange ideas. We would like to thank the steering committee for their valuable advice, the members of the program committee for their active participation in the review process, and the organising committee for their creativity and flexibility which contributed to making INOC 2024 a unique experience.

ENOG and the INOC 2024 local organising committee took care to minimise our carbon footprint and to foster inclusion and diversity. ENOG are the first EURO WG to endorse the EURO WISDOM Forum objectives to support, empower and encourage the participation of all genders in Operational Research within EURO and ENOG. We aimed for as much gender balance as possible on our committees and speaker invitations, and achieved a gender balance of three male and three female keynote and tutorial speakers.

Our conference pack contained organic, locally sourced or recycled materials as much as possible including a reusable cup made from recycled plastic, and Irish handmade chocolates. The Wood turner problem is often mentioned in OR teaching and learning materials on Integer Linear Programming: a wood turner has limited locally sourced wood - whitethorn, oak and beech. We were delighted to gift the keynote speakers with decorative wood turned bowls made from Irish whitethorn.

Over 75 participants from North and South America, Europe, Middle East, India, China and Japan enjoyed the scientific programme and a range of social and cultural activities which took place on campus to minimise travel. In addition to a welcome cocktail and conference dinner, participants were treated to a traditional Irish music performance and several lunchtime

campus tours including a Medieval Roundhouse reconstructed by the UCD School of Archaeology, the UCD Classical Museum, the Irish Folklore collections, and the UCD District Heating Network which proved exceptionally popular and insightful for the Network Optimisation community.

Finally, we would like to thank our sponsors for their support: The UCD College of Business for making the spaces in the Quinn School of Business available to us; to EATON for tutorial speakers, pens and lanyards, and ENOG for financial support. For more details see the conference website: https://inoc2024.sciencesconf.org/.

Editors: Paula Carroll & Deepak Ajwani

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