

WISDOM presents YoungWomen4OR in:
“Multiobjective Optimization and Fair Allocation”
Join us for a coffee and a chat!

What: EURO WISDOM Forum YoungWomen4OR Talks¹

Where: Zoom - Register in this [link](#) to receive the Zoom link - The webinar is going to be recorded and made available afterwards

When: June 5, 2025, 17:00 – 18:30 (Central European Time)

Webinar Format

- Introductions/Webinar etiquette - Prof. Sibel Salman, Koç University
- Multiobjective Optimization and Fair Allocation – YoungWomen4OR Talks:
 1. Fairness in Healthcare: Investigating the Impact of Conflicting Stakeholders’ Goals Through Multi-Objective Formulations, *Valentina Bonomi* – 10 minutes
 2. Balancing operational costs and service levels in dynamic waste collection, *Dilay Aktas Dejaegere* – 10 minutes
 3. Fair Allocation of In-kind Donations in Post-disaster Phase, *Zehranaz Varol* – 10 minutes
- *Subject expert:* Meeting the challenges - Overview/Current Challenges, synergies with existing work, *Prof. Walter Gutjahr* – 10/15 minutes
- *Moderated open discussion* with Coffee and Networking – 15 minutes

YoungWomen4OR Speakers

Dr. Valentina Bonomi



Title: “Fairness in Healthcare: Investigating the Impact of Conflicting Stakeholders’ Goals Through Multi-Objective Formulations”

Abstract: In Home Healthcare applications, optimization models often focus on minimizing costs or maximizing hospital profits, overlooking the needs of patients and caregivers. However, building an effective Home Healthcare system requires balancing the often-conflicting interests of all stakeholders. This talk introduces a fairness-driven lexicographic approach to a Tri-Objective Vehicle Routing Problem (VRP), optimizing nurse routing while considering hospital, employee, and patient-centered objectives. Results on small-size instances highlight the interplay of these factors. The talk concludes with insights on Multi-Objective VRP modeling for Home Hospitalization and future research directions. See: [Valentina Bonomi](#)

¹ WISDOM is a forum to support, empower, and encourage the participation of all genders in Operational Research and Management Science. It is an initiative supported by EURO, the Association of European Operational Research Societies. Please visit: <https://www.euro-online.org/web/pages/1654/wisdom>

Dr. Dilay Aktas Dejaegere



Title: “Balancing operational costs and service levels in dynamic waste collection”

Abstract: Waste collection is a critical public service with significant costs, traditionally managed through static routing based on historical data. However, waste generation varies with factors like weather and local events, leading to inefficiencies. Leveraging smart bins with real-time fill-level data, we propose a dynamic waste collection approach balancing service levels and operational costs. Two optimization perspectives are

explored: minimizing costs with service guarantees, and maximizing service within a cost budget. A conditional re-optimization strategy adapts decisions based on sensor data, addressing the trade-offs inherent in dynamic, data-driven waste management. See: [Dilay Aktas Dejaegere](#)

Dr. Zehranaz Varol



Title: “Fair Allocation of In-kind Donations in Post-disaster Phase”

Abstract: Ensuring equitable and timely distribution of scarce relief items is a key challenge in disaster response. This talk addresses the allocation of limited resources to multiple demand points over a multi-period planning horizon, incorporating mobile facilities for greater flexibility. We propose a multi-criteria location-inventory model with coverage constraints, focusing on deprivation costs and minimizing victims’ travel efforts. Using the epsilon-constrained method, we analyze trade-offs through a case study based on

real-world data, and assess the added value of dynamic facility relocation in enhancing fairness and accessibility. See: [Zehranaz Varol](#)

Subject expert

Prof. Walter Gutjahr



Walter J. Gutjahr received his doctoral degree in Mathematics from the University of Vienna in 1985. After a career in industrial software engineering management at Siemens Corporation, he returned to the University of Vienna, where he held positions as an associate professor and later as a full professor of Applied Mathematics and Computer Science. In 2018, he retired, but is still affiliated with his university as a senior research fellow. His current research interests include multi-criteria decision analysis, stochastic optimization, project management and scheduling, healthcare management, and humanitarian logistics. He has published more than 120 peer-reviewed articles, most of them in high-level international journals, and has been invited keynote speaker of several international conferences. He serves as a department editor of “OR Spectrum” and as a member of the editorial boards of several other journals. See: [Walter Gutjahr](#)