

WISDOM presents YoungWomen4OR in:
“OR in Healthcare and Logistics”
Join us for a coffee and a chat!

What: EURO WISDOM Forum YoungWomen4OR Talks¹

Where: Zoom - Register in this [Google Form](#) to receive the Zoom link

When: 27st September 2021, 15:00 – 16:30 (Central European Time)

Webinar Format

- Introductions/Webinar etiquette - Dr Paula Carroll, UCD, Chair EURO WISDOM Forum
- OR in Healthcare and Emerging Areas – YoungWomen4OR Talks:
 - Dr Beatriz Brito Oliveira – 10 minutes
 - Dr Lucy Morgan – 10 minutes
 - Dr Melanie Reuter-Oppermann – 10 minutes
- Meeting the challenges - Overview/Current Challenges, synergies with existing work
 - Prof Stefan Nickel – 10/15 minutes
- Moderated open discussion with Coffee and Networking – 15 minutes

YoungWomen4OR Speakers



Dr Beatriz Brito Oliveira “The capacity-pricing problem in car rental”. Car rental companies make fleet capacity decisions to meet the demand for vehicles, which is uncertain and price-sensitive, creating an interconnection between pricing and capacity. Moreover, since the products are rentals, the resources used by specific demand become available again to serve other requests. This creates a link between capacity and fleet deployment and other tools that

allow the company to meet demand, such as upgrades, transferring vehicles between locations, or temporarily leasing additional vehicles. We structure this integrated stochastic problem for car rental and propose a matheuristic solution method based on a co-evolutionary genetic algorithm, which provides good solutions and deals with demand uncertainty when little information is available. Beatriz is a Researcher at the INESC-TEC, Portugal. See: [Beatriz Brito Oliveira](#)



Dr Lucy Morgan “Modelling of Waiting Lists for Diagnosis and Treatment of Chronic Heart Failure Following the Covid-19 Pandemic” The Covid-19 pandemic has disrupted access to health services for patients with non-Covid-19 conditions due not just to increased demand but also as a result of the associated lockdowns and social distancing measures. We consider the impact of patients suffering from chronic heart failure and describe a discrete event

simulation model built to describe the impact of the pandemic and associated societal lockdowns on access to diagnosis procedures. The number of patients diagnosed with heart failure fell during the pandemic and in the UK, the number of GP referrals for diagnostic tests in November 2020

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>

were at 20% of their pre-pandemic levels. While the numbers in the system have fallen, clinicians believe that this is not reflective of a change in need, suggesting that many patients are delaying accessing care during pandemic peaks. While the effect of this is uncertain, it is thought that this could have a significant impact on patient survival. In this talk, we will describe the simulation model and present initial results that reproduce the observed increase in the number of patients waiting. Lucy is an AI and Optimisation Research Specialist at BT, UK. See: [Lucy Morgan](#)



Dr Melanie Reuter-Oppermann “Current challenges in EMS logistics” Emergency services in countries such as Germany are defined by a complex service network and a multitude of planning problems and necessary decisions. In case of an emergency, emergency medical service (EMS) providers send an ambulance to the patient, perform first treatment and then transport most patients to a hospital. In this talk, a short overview on EMS logistics is given and current challenges are discussed. Melanie is a

Post-doctoral Researcher at the Technical University of Darmstadt, Germany. See: [Melanie Reuter-Oppermann](#)



Expert panellist **Prof Stefan Nickel**, is a full professor at the Karlsruhe Institute of Technology - KIT (Germany) and one of the directors of the Institute of Operations Research. He obtained his PhD in mathematics at the Technical University of Kaiserslautern (Germany) in 1995. From 1995 to 2003 he was assistant and associate professor in mathematics at the Technical University of Kaiserslautern. After a full professor position at the Saarland University (Chair of Operations Research and Logistics) from 2003 to 2009, he joined the Karlsruhe Institute of Technology as the Chair in Discrete Optimization and Logistics in April 2009. From 2014-2016 he was the dean of the Department

of Economics and Management at the KIT. Stefan Nickel was also member of the scientific advisory board as well as of the management board of the Fraunhofer Institute for Applied Mathematics (ITWM) in Kaiserslautern from 2004-2016. Since 2011 he additionally holds the positions of one of the directors of the Karlsruhe Service Research Institute (KSRI) and of the Research Center for Computer Science (FZI). From 2006-2015 he was editor-in-chief of Computers & Operations Research. Moreover, he is editor-in-chief of Operations Research for Health Care. He has coordinated the Health Care working group within the German OR society (GOR) and has been the president of GOR from 2013-2014. Since 2019 Stefan Nickel serves as VP IFORS in the EURO executive committee and is member of the AC of IFORS.

Stefan Nickel has authored or co-authored 6 books as well as more than 120 scientific articles in his research areas Locational Analysis, Supply Chain Management, Health Care Logistics, and Online Optimization. He has been awarded the EURO prize for the best EJOR review paper (2012) and the Elsevier prize for the EJOR top cited article 2007-2011. In addition, he conducted several industry projects with well-known companies such as BASF, Lufthansa, Miele, or SAP. For more information see: <http://dol.ior.kit.edu/>