WISDOM presents YoungWomen4OR in:
"OR in Sustainable Supply Chains and Supply Systems"
Join us for a coffee and a chat!

What: EURO WISDOM Forum YoungWomen4OR Talks[1]

Where: Zoom - Register in this Google Form to receive the Zoom link

When: 22nd November 2021, 15:00 – 16:30 (Central European Time)

Webinar Format

- Introductions/Webinar etiquette - Prof Ana Barbosa-Povoa, CEG-IST, University of Lisbon
- OR in Sustainable Supply Chains – YoungWomen4OR Talks:
  - Dr Cátia da Silva – 10 Minutes
  - Dr Bruna Mota - – 10 minutes
  - Dr Jessica Rodriguez Pereira: – 10 minutes
- Meeting the challenges - Overview/Current Challenges, synergies with existing work
  - Prof Grit Walther – 10/15 minutes
- Moderated open discussion with Coffee and Networking – 15 minutes

YoungWomen4OR Speakers

Dr Cátia da Silva: *DESIGN AND PLANNING OF SUSTAINABLE SUPPLY CHAIN INTEGRATING MONETIZATION STRATEGIES*. Throughout the years, the concern with environmental and social issues has grown as we begin to become aware of the fact that human actions could jeopardize future generations. This awareness also emerged in companies, which also started to integrate environmental and social components in their decisions. Indeed, companies and their decision-makers have an important role in the implementation of measures that promote sustainability throughout the supply chain. Though, the quantification of environmental and social impacts is not simple and the units into which these impacts are translated are not always easily understood, particularly by decision-makers. As main contribution, this research intends to: i) develop an optimization tool capable of modelling decisions that can be taken along the supply chain and that translates environmental impacts into units easily perceived by decision-makers; ii) integrate uncertainty and financial risk assessment that includes economic and environmental performance; iii) understand which methods allow the environmental impacts to be monetarily quantified and how they can influence the design and planning of supply chain; iv) provide managerial insights for companies to improve the impact of the performance of their supply chains. Supply chain case-studies are solved and based on the results insights are derived. See: https://sotis.tecnico.ulisboa.pt/researcher/ist165165

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WOMEN IN SOCIETY:
DOING OPERATIONAL RESEARCH
AND MANAGEMENT SCIENCE

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Dr Bruna Mota: *ToBLoOM – Triple Bottom Line Optimization Modelling: a modelling tool for sustainable supply chains*. ToBLoOM (Triple Bottom Line Optimization Modelling) is a decision support tool for the design and planning of sustainable supply chains. It encompasses support in decisions regarding: multi-facility location and capacity allocation; inventory planning; supplier selection and allocation; purchase planning; technology selection and allocation; production planning; transportation network definition (with unimodal and intermodal options); product recovery and remanufacturing planning. These decisions are supported considering the three pillars of sustainability: economic, environmental and social, using a multi-objective approach in an uncertain environment. This tool has been applied to several case-studies in different industries, exploring different supply chain sustainability characteristics and leading to managerial recommendations towards more sustainable supply chains. See: https://cegist.tecnico.ulisboa.pt/user/844

Dr Jessica Rodriguez Pereira: *Restoration of drinking water supply system in rural areas. Application to Nepal* The lack of access to drinking water is one of the most important humanitarian problems, mainly in remote areas of developing countries. After the 2015 Nepal earthquake, more than 1.1 million people were left without access to a protected water source, as the water supply systems were destroyed, especially in rural areas. The main goal is to model and solve a Water Supply System Design Problem based on a gravity-fed system. This is a hierarchical problem, whose primary objective is to determine the number and location of community water taps and the assignment of households under certain technical standards, while the secondary objective is to identify a minimum cost network connection from the water sources to the water taps. See: https://www.upf.edu/es/web/econ/entry/-/-/177964/adscripcion/jessica-rodriguez

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Expert panellist **Prof Grit Walther** is a Professor of Operations Management at RWTH Aachen University, Faculty of Economics. After studying geoecology in the natural sciences, she received her doctorate in 2004 at the chair for production and logistics at the TU Braunschweig. From 2004 to 2010 she headed the working group "Sustainable Value Creation Networks" at the Institute for Automotive Industry and Industrial Production at the TU Braunschweig and completed her habilitation in 2009 with a thesis on this topic. Before her call to Aachen, she held the chair for production and logistics at the Bergische Universität Wuppertal from 2010 to 2012. The research focus of the Chair of Operations Management lies in the application-oriented, techno-economic modeling and evaluation of logistics and production systems as well as value chains. Research fields include the market diffusion of new drive technologies in the automotive industry, network and infrastructure planning for alternative fuels, network planning for recycling and return logistics, the robust and multi-criteria optimization of value networks, sustainable supply chain management and the planning and control of sustainable mobility systems. The research projects of the chair are implemented in interdisciplinary cooperation with engineering and natural science research institutes, industrial companies and political decision-makers. See: https://www.om.rwth-aachen.de/lehrstuhlleitung/prof-dr-grit-walther/