

*Title:* Tackling Global Crises with OR: From Flood Mitigation to Healthcare

*Abstract:* The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, call for collective action to eliminate poverty, promote health and well-being, and address the climate crisis by 2030. Achieving these interconnected objectives demands innovative, data-driven strategies and robust interdisciplinary collaboration.

This talk showcases several research projects using Operational Research to tackle pressing development challenges in South East Asia and Sub-Saharan Africa. These include, for instance, the GCRF-OSIRIS project, which leverages optimisation modelling, stakeholder engagement, and cross-disciplinary methods to develop flood mitigation strategies for cities in Vietnam, contributing to SDG 11 (Sustainable Cities) and SDG 13 (Climate Action). Other examples focus on ongoing collaborations with CUAMM Doctors with Africa, to showcase how OR methodologies can be used to strengthen healthcare services in resource-constrained settings. These include health services in refugee camps in Ethiopia and mental health services for adolescents in Tanzania and Mozambique, contributing to SDG 3 (Good Health and Well-being) and SDG 10 (Reduced Inequalities).

The presentation will also discuss key lessons learned from these projects, offering practical insights for developing successful OR applications in developing countries.

*Speakers' Bio:* Maria Paola Scaparra is a Professor of Management Science at the University of Kent Business School, UK. Over the years, Paola held several leadership roles within the school, including Associate Dean of Research and Innovation, Head of the Management Science Group and Programme Director for the MSc Business Analytics. Paola holds an M.S. in Management Science and Engineering from Stanford University and a PhD in Mathematics Applied to Economic Decisions from the University of Pisa, Italy. Paola is passionate about developing OR tools for solving intractable challenges in developing countries and contributing to the achievement of the UN Sustainable Development Goals. She has led several international, multi-disciplinary and consultancy projects, including projects funded by the British Academy, the British Council, the Engineering and Physical Sciences Research Council (EPSRC), and Innovate UK.

