

Multiple Criteria Decision Making - Methodologies and Applications to the Sustainable Development Goals



UNIVERSIDAD
DE MÁLAGA

| uma.es



THE ASSOCIATION OF
EUROPEAN OPERATIONAL
RESEARCH SOCIETIES

Practical information

- ▶ Web page: <http://eventos.uma.es/go/EUROPhD2024>
- ▶ Dates: November 4 - 15, 2024
- ▶ Location: Facultad de Comercio y Gestión, Universidad de Malaga - Campus de Teatinos. 29071, Malaga (Spain)
- ▶ Application deadline: July 17, 2024
- ▶ Notification of acceptance: September 13, 2024
- ▶ Maximum number of participants: 30
- ▶ ECTS Credits: 3 → 75 hours
 - Classes: 2-3 hours/day; Supervised training: 2-3 hours/day; Personal work: 2.5 hours/day
- ▶ An activity of the PhD Programme in Economics and Business, University of Malaga (Spain)

Organizing Committee

- ▶ Chair: FRANCISCO RUIZ
 - Address: FACULTAD DE COMERCIO Y GESTIÓN. UNIVERSIDAD DE MÁLAGA CAMPUS DE TEATINOS. 29071-MÁLAGA (SPAIN)
 - Phone: +34 951952020
 - E-mail: rua@uma.es

Scientific Committee

- ▶ AMELIA MARÍA BILBAO. Co-chair. (University of Oviedo, Spain)
- ▶ ANTONIO JIMÉNEZ. Co-chair. (Technical University of Madrid, Spain)
- ▶ ALESSIO ISHIZAKA (University of Portsmouth, UK)
- ▶ AMPARO MÁRMOL (University of Sevilla, Spain)
- ▶ KAISA MIETTINEN (University of Jyväskylä, Finland)
- ▶ JOSÉ MARÍA MORENO (University of Zaragoza, Spain)
- ▶ FRANCISCO RUIZ (University of Málaga, Spain)
- ▶ BEGOÑA VITORIANO (University Complutense of Madrid, Spain)

Contents

The aim of the PhD School is to introduce students in discrete and continuous Multiple Criteria Decision Making problems and their applications. To this end, contents are as follows:

1. Basic Concepts on Multiple Criteria Decision Making
2. Discrete Multicriteria methods: MAUT, AHP and outranking methods
3. Group Decision Making
4. Continuous problems: generating the efficient set
5. Goal Programming
6. Interactive methods

Provisional timetable

- ▶ Classes: 9:30h - 11:30h
- ▶ Supervised training: 12:00h - 13:30h & 15:00h - 16:30h
- ▶ Personal work: 16:30h - 19:30h

Week 1 - Discrete MCDM methods	
Day 1	Opening session. Introduction to MCDM problems
Day 2	Analytic Hierarchy Process
Day 3	Multi-Attribute Utility/Value Theory
Day 4	Outranking methods
Day 5	Posters Session

Week 2 - Continuous MCDM methods	
Day 1	Efficiency analysis
Day 2	Goal Programming
Day 3	Reference point and interactive Methods
Day 4	Caseworks
Day 5	Presentations of discrete and continuous caseworks

Methodology

- ▶ Students will work in groups.
- ▶ Two different problems (caseworks) will be assigned to each group on Day 1.
- ▶ Students will work on the assigned problems throughout the course, following each day this scheme:
 - 2-3 hours of theoretical classes where new concepts and methods are introduced,
 - 2-3 hours of supervised training in a computing classroom,
 - 2.5 hours of personal work.
- ▶ The problems will belong to different fields, especially focused on sustainability problems.

Instructors

- ▶ LAURA DELGADO ANTEQUERA - University of Malaga, Spain
- ▶ SAMIRA EL GIBARI BEN SAID - University of Malaga, Spain
- ▶ GABRIELA FERNÁNDEZ BARBERIS - University San Pablo CEU, Spain.
- ▶ SANDRA GONZALEZ GALLARDO - University of Malaga, Spain
- ▶ ALESSIO ISHIZAKA - University of Portsmouth, UK
- ▶ ANTONIO JIMÉNEZ - Technical University of Madrid, Spain
- ▶ DYLAN JONES - University of Portsmouth, UK
- ▶ KAISA MIETTINEN - University of Jyväskylä, Finland
- ▶ JOSÉ MARÍA MORENO - University of Zaragoza, Spain
- ▶ FRANCISCO RUIZ - University of Malaga, Spain

Terms & conditions

1. **Admission:** To apply to the EPS, candidates from a EURO member society country, or studying in a EURO member society country, should submit the following information to rua@uma.es:
 - curriculum vitae (including their academic track record)
 - a letter outlining their motivation to attend
 - a letter of recommendation from their supervisor
2. **Financial arrangements:** Registration fee → 200 €
 - All living costs (accommodation, meals, and travel within school activities) are supported by the EPS. No insurance will cover the participants
 - Travel costs should be covered by the participants
3. **Accommodation:**
 - Accommodation is provided in Albergue Inturjovent Málaga (Address: Plaza Pío XII, 6, 29007 Málaga)
4. **Social activities:**
 - Activities such as meals, tourist visits etc. will be organised for the participants (free of charge) in order to stimulate friendly relations.

Sponsors

- ▶ Theme Net on Multiple Criteria Decision Making (RED2022-134540-T).