

## Seminar on Multi-Criteria Decision Making Application in Urban and Regional Sustainability

September 11-13, 2023  
Politecnico di Milano  
Via Giuseppe Colombo, 40, Milano, Italy

The seminar *Multi-Criteria Decision Making Application in Urban and Regional Sustainability* – organized by [Poliedra](https://www.poliedra.polimi.it/en/homepage/) (<https://www.poliedra.polimi.it/en/homepage/>) and [DAStU](https://www.dastu.polimi.it/en/department/) (<https://www.dastu.polimi.it/en/department/>) within the context of the [UR-DATA](https://urdataport.com/) (<https://urdataport.com/>) project – mainly focuses on the Multi-Criteria Decision Making (MCDM) application in urban sustainability assessment.

The aim of the seminar is both to share results and to connect with other experts in order to plan further research and publications.

### Organizing Committee

Marta GALLIANI (Poliedra-Politecnico di Milano, Italy)  
Alessandro LUÈ (Poliedra-Politecnico di Milano, Italy)  
Simona MURATORI (Poliedra-Politecnico di Milano, Italy)

### Scientific Committee

Marta BOTTERO (Politecnico di Torino, Italy)  
Alberto COLORNI (Poliedra-Politecnico di Milano, Italy)  
Peter NIJKAMP (Open University, Heerlen, Netherlands)  
Alessandra OPPIO (Politecnico di Milano, Italy)  
John ÖSTH (OsloMet, Oslo, Norway)  
Jason PAPATHANASIOU (University of Macedonia, Thessaloniki, Greece)  
Payle PETROVIĆ (Serbian Academy of Science and Arts, Serbia)  
Aura REGGIANI (University of Bologna, Italy)  
Carlo SESSA (ISINNOVA, Rome, Italy)  
Jelena J. STANKOVIĆ (University of Niš, Serbia)  
Alexis TSOUKIAS (Paris Sciences & Letters University, France)

## Program:

### September 11

11.00-13.30: meeting of the Organizing and Scientific committee (*only for members of the committees and UR-DATA partners, Poliedra meeting room, 32.1 building*)

13.45-18:00: Session 1 presentations (*EPI room, 32.3 building*)

### September 12

9.00-12.40: Session 2 presentations (*EPI room, 32.3 building*)

13.00-14.30: Lunch and informal discussions (*only for speakers and UR-DATA partners*)

14.30-16.20: Session 3 Cross fertilization: UR-DATA&RETURN projects (*EPI room, 32.3 building*)

16.20-17.40: Session 4 presentations (*EPI room, 32.3 building*)

### September 13

9.30-12.30: discussion among UR-DATA partners about opportunities for new researches, project proposals and publications (*only for UR-DATA partners, at Poliedra meeting room, 32.1 building*)

## September 11, Session 1 – 13.45-18.00

### 13.45-14.15 Registration of participants

#### 14.15-14.40 Conference opening

- Welcome speech, *Francesco Ballio*<sup>1</sup>, *Alessandro Luè*<sup>1</sup>
- The context: the UR-DATA project, *Jelena J. Stanković*<sup>2</sup>
- Introduction to the Seminar, *Simona Muratori*<sup>1</sup>

#### 14.40-15.00 Methodological frontiers of MCDM

- Python based implementations of Multiple Criteria Decision Aid methods: a comprehensive approach, *Jason Papathanasiou*<sup>3</sup>

#### 15.00-16.00 Mobility issues

- Multi-Criteria Life-Cycle Assessment of Local Public Transport fleets renewal, *Pierluigi Coppola*<sup>4</sup>, *Marco Boccione*<sup>4</sup>, *Emanuela Colombo*<sup>5</sup>, *Francesco De Fabiis*<sup>4</sup>
- Implementing New Bike-Sharing Stations in Urban Areas: A Multi-Criteria Approach, *Michele Rabasco*<sup>6</sup>, *Caterina Malandri*<sup>6</sup>, *Roberto Patuelli*<sup>6</sup>, *Aura Reggiani*<sup>6</sup>, *Rebecca Rossetti*<sup>6</sup>
- Accessibility Indices as a Decision Support Tool in Land-use Planning, *Eirik Melå Skjelsvik*<sup>7</sup>

#### 16.00-16.20 Coffee break

### 16.20-17.40 Quality of life and smartness

- Measuring Territorial Quality of Life and Regenerative Regional Economy impact, **Carlo Sessa**<sup>8</sup>
- Quantifying Smartness and Urban Development in European Cities, **Ivana Marjanović**<sup>2</sup>, **Žarko Popović**<sup>2</sup>
- Neighborhoods in Multiple-criteria decision analysis, **John Östh**<sup>9</sup>
- A Multidimensional Profile Assessment of Stellar Cities by means of Dea Modeling, **Peter Nijkamp**<sup>10</sup>, **Karima Kourtiti**<sup>10</sup>, **Soushi Suzuki**<sup>10</sup>

### 17.40-18.00 Data exchange

- E015 Data Space enabling Multi-Stakeholders Data Exchange to improve Sustainability, **Emiliano Sergio Verga**<sup>12</sup>, **Michele Bonardi**<sup>12</sup>, **Marco Rocco**<sup>12</sup>

## September 12, Session 2 – 9.00-12.40

### 9.00-9.20 Registration of participants

### 9.20-10.40 Sustainability I

- Flood damage assessment and mapping: the MOVIDA project, **Alberto Colorni**<sup>1</sup>, **Daniela Molinari**<sup>13</sup>, **Simona Muratori**<sup>1</sup>, **Paola Tresca**<sup>1</sup>
- Multiobjective analysis of the impact of agro farming on air quality and GHG emissions in the Po Valley, **Michele Francesco Arrighini**<sup>14</sup>, **Apu Basak**<sup>15</sup>, **Claudio Carnevale**<sup>15</sup>, **Giorgio Guariso**<sup>16</sup>, **Andrea Tonola**<sup>15</sup>, **Laura Zecchi**<sup>14</sup>, **Marialuisa Volta**<sup>15</sup>
- A spatial composite index for landscape strategic assessment, **Sebastiano Barbieri**<sup>17</sup>, **Caterina Caprioli**<sup>17</sup>, **Marta Bottero**<sup>17</sup>
- MCDM to assess municipalities' inclination to heritage-based development processes in inner areas, **Marco Rossitti**<sup>18</sup>, **Francesca Torrieri**<sup>19</sup>

### 10.40-11.00 Coffee break

### 11.00-12.40 Sustainability II

- A methodological framework to assess Nature-Based Solution (NBS) through Multicriteria Analysis (MCA), **Giulia Datola**<sup>18</sup>, **Alessandra Oppio**<sup>18</sup>
- A multidimensional evaluation framework to assess the Ecosystem Services provided by green roofs, **Alessandra Oppio**<sup>18</sup>, **Caterina Caprioli**<sup>17</sup>, **Marta Dell'Ovo**<sup>18</sup>, **Marta Bottero**<sup>17</sup>
- Mapping and Bundling Ecosystem Services for Spatial planning with the AHP technique. A Case-Study in Tuscany (Italy), **Massimo Rovai**<sup>20</sup>, **Tommaso Trinchetti**<sup>20</sup>, **Francesco Monacci**<sup>20</sup>
- Addressing decisions about courthouse's siting, **Marta Dell'Ovo**<sup>18</sup>, **David Casagrande**<sup>22</sup>, **Alessandra Oppio**<sup>18</sup>
- Multi-criteria analysis for identifying suitable sites for multi-purpose artificial reservoirs, **Matteo Masi**<sup>23</sup>, **Chiara Arrighi**<sup>23</sup>, **Fabio Castelli**<sup>23</sup>

## September 12, Session 3 – 14.30-16.20

### 14.30-16.00 Cross fertilization: UR-DATA&RETURN projects

- The UR DATA–Twinning for Excellence in Smart and Resilient Urban Development: Advanced Data Analytics Approach–project, **Jelena J. Stanković<sup>2</sup>**
- The RETURN–multi-Risk sciEnce for resilienT commUnities undeR a changiNg climate–project and its WP2 about “Innovative tools to evaluate risk mitigation effectiveness”, **Daniela Molinari<sup>13</sup>, Daria Ottonelli<sup>24</sup>**
- Discussion

### 16.00-16.20 Coffee break

## September 12, Session 4 – 16.20-17.40

### 16.20-17.40 Sustainability III

- Advancing Sustainability Assessment in Port Regions: Utilizing an MCDM Approach for Composite Index Development, **Jelena J. Stanković<sup>2</sup>, Saša Drezgić<sup>25</sup>**
- A Multi-Criteria Tool for Urban Renewable Energy Community Projects, **Sibilla Ferroni<sup>5</sup>, Francesco Causone<sup>5</sup>**
- Continuity, transformation, sustainability: a framework to design and evaluate emergency scenarios for the city of Kharkiv (Ukraine), **Vanessa Assumma<sup>27</sup>, Francesco Pittau<sup>19</sup>, Lidia Bernasconi<sup>28</sup>, Alice Ghezzi<sup>28</sup>, Elisabetta Valsecchi<sup>28</sup>**
- Evaluation of the most economically advantageous tender in public procurement procedures: the main evidence provided by the multi-criteria decision-making approaches, **Debora Anelli<sup>29</sup>, Pierluigi Morano<sup>29</sup>, Francesco Tajani<sup>30</sup>, Tiziana Acquafredda<sup>29</sup>**

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