

# Special Session on

## Large Scale Group Decision Making for Sustainability

<http://iske2021.org/>

The 2021 IEEE International Conference on Intelligent Systems and Knowledge Engineering (ISKE 2021) is the 16th in a series of ISKE conferences. The conference will be held in Chengdu, a beautiful place in southwest of China.

The conference proceedings will be published by IEEE Press (EI indexed). Special issues of SCI indexed journals will be devoted to a strict refereed selection of extended papers presented at ISKE 2021.

### Scope and Motivation

In order to make population grow sustainable, world leaders adopted the Agenda 2030 and its 17 Sustainable Development Goals (SDG). The environmental deterioration we are suffering is causing most industrialized countries to design a regulatory response that responds to current environmental demands, reaching new agreements that reorient current modes of production. The enormous complexity of problems associated with climate change and action makes experts often come up with assumptions that fail to reflect the real world constraints to reduce such a complexity. Hence to meet several of the challenges of the Agenda 2030 the SD policies and plans become ever more crucial in which Intelligent Decision Making plays a key role. Many of the decision making problems that involves sustainability policy making and SD decision support are defined under contexts that demand the participation of many stakeholders, decision makers, experts and so on. Multi-Criteria Decision Making (MCDM) has long been used to address challenges and resolve problems associated with environmental, energy, and climate policy, and decision support systems have recently been developed, featuring the capacity to solve climate change-related MCDM problems from the perspective of multiple stakeholders. However, many of the current decision making problems that involves sustainability policy making and SD decision support are defined under contexts that demand the participation of many stakeholders, decision makers, experts and so on; in the decision making processes, hence these decision making problems become more complex. One topic that recently has grown up within decision making to deal with such a type of problems is Large-Scale Group Decision Making (LSGDM) in which, the complexity of dealing with a large number of experts implies new challenges in group decision making such as, polarization opinions, scalability and the uncertainty present in the experts' information.

Therefore, this special session aims at providing an opportunity for researchers working in LSGDM problems and its application to sustainability to discuss and share their new ideas, advances, original research results and practical experiences. Potential topics (but not limited) of this special session are as follows:

- Multi-Criteria group decision making models for dealing with large scale problems
- Consensus models for large scale group decision making
- Modeling the uncertainty of the large scale group decision making problems
- Data-driven decision making for sustainability
- Policy making for sustainability
- Decision Support Systems dealing with large scale decisions for sustainability problems
- Dealing with large scale group decision in applications such as, climate change, renewal energies, circular economy etc.

### Important Dates

- Full paper submission : June 30, 2021
- Acceptance notification: July 31, 2021
- Camera-ready paper submission: September 30, 2021

## Paper Submission

<https://easychair.org/conferences/?conf=iske2021>

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**Rosa M. Rodríguez** received her B.Sc, M.Sc. and PhD degrees in Computer Science, all of them from the University of Jaén in 2006, 2008 and 2013 respectively. She got the Extraordinary PhD award in 2017 by the University of Jaén. Currently, she has a Posdoct fellowship (Ramón y Cajal) at the University of Jaén, Spain. Her research interests include linguistic preference modelling, decision making, decision support systems and fuzzy logic based systems. She has more than 40 papers in journals indexed by the SCI. She is Editor Assistant in International Journal of Computational Intelligence Systems and Associate Editor in IEEE Transactions on Fuzzy Systems, International Journal of Fuzzy Systems and Journal of Intelligent and Fuzzy Systems. She received the IEEE Transactions on Fuzzy Systems Outstanding Paper Award 2012 (bestowed in 2015). She has been classified as Highly Cited Researcher in 2019 and 2020 according to the Essential Science Indicators of the Web of Science.

**Álvaro Labella** received his B.Sc, M.Sc. and PhD degrees in Computer Science, all of them from the University of Jaén in 2012, 2014 and 2021 respectively 2014 and 2021. Currently, he has a postdoctoral contract at the University of Jaén. He works in the area of decision making, computation with words and decision support systems development. He has published 16 articles in international journals, as well as 17 contributions in international conferences and 4 in national conferences. During his PhD he spent a stay at the School Of Electrical and Computer Engineering National Technical University (NTUA) in Athens, Greece and another one at Portsmouth Business School in Portsmouth, UK. In 2017 he was awarded by the University of Jaén the Ada Lovelace Award in the Best Application category, in 2019 he received the Best Student Paper Award at the International Conference on Intelligent and Fuzzy Systems in Istanbul, Turkey and the Best Paper Award at the International Conference on Intelligent Systems and Knowledge Engineering in Dalian, China.

**Luis Martínez** is M.Sc. and Ph.D. in Computer Sciences and Full Professor at the University of Jaén. His current research interests are fuzzy decision-making, computing with words and recommender systems. He has been main researcher in 16 R&D projects, and published more than 175 SCI-indexed journal papers. He is EiC of the International Journal of Computational Intelligence Systems. He received twice the IEEE Transactions on Fuzzy Systems Outstanding Paper Award 2008 and 2012. Eventually, he has been appointed as Highly Cited Researcher 2017-2020 in Computer Science according to the Web of Science.