CALL FOR PAPERS

Environmental Data Science

Thematic Issue with Environmental Modelling and Software, An Elsevier Journal

Getting decisional knowledge from data is nowadays one of the most reliable ways to better understand environmental processes, to go beyond the state-of-the-art in Environmental Sciences and to improve environmental systems management in most of their fields. The particular complexity of environmental processes requires new solutions able to integrate different information sources, such as qualitative and quantitative data, images, text, signals, etc., together with prior knowledge, as well as to deal with spatiotemporal frames and higher order interactions among variables.

Today, the multidisciplinarity required to face this kind of analysis, bridging the gap between data and decisions is promulgated by the Data Science discipline.

This Thematic Issue seeks for original papers in the emerging area of "Environmental Data Science" to provide an overview of how Data Science techniques and tools may help advance environmental sciences and address real-world challenges for sustainable development. We look for novel contributions that employ various data science methods to help better understand complex environmental processes. We especially encourage submissions that link data-driven methods in environmental sciences for actual decision making. We expect a variety of application fields, scales and geographical coverage.

The use of open data and reproducibility to ensure scientific integrity will be also valued. We believe that the focus should not be on the size of the data as this will overly restrict contributions in what is an emerging field.

The *Environmental Data Science* issue welcomes both theoretical and applied papers targeting challenging environmental problems, related to cover the complete process coming from data collection to decision-making. Submissions are expected to convey lessons learned beyond a single discipline, and be potentially useful for other environmental scientists.

International participation is expected, by providing a view of what is being done in this field in different countries all over the world, as well as the different environmental open challenges.

Subject Coverage:

Topics like preprocessing, knowledge production, data quality, heterogeneity of data, spatio-temporality, information granularity or even model granularity, multicriteria, multidisciplinarity, post-processing, bridging the gap data-mining/decision-making are pertinent.

Contributions related to, but not limited to, are welcomed:

a) different methodological aspects from the data treatment point of view (relevant topics, but not restrictive are: dealing with data heterogeneity, overcoming limitations of methods accepting only numerical data, or reducing computational cost of a certain data mining algorithm,...)

b) different environmental problems (covering applications on as much environmental areas as possible: water, air, land, forests, ecosystems, biodiversity, climate, and under different environmental perspectives like water management, land use, forests and ecosystems, biodiversity, air quality, water quality, climate change and related fields)

The Journal: *Environmental Modelling and Software* is a journal, published by *Elsevier*. The aim of the journal is to contribute to improve representation, understanding, prediction and management of the behaviour of environmental systems at all practical scales, and to communicate those improvement to a wide scientific and professional audience from both environmental and software sides. It covers the whole EMS community, both academic and industrial. It publishes high quality refereed articles and surveys and it is indexed by Thomson Reuters in Science Citation Index (IF 4,207).

Submission of manuscripts: High quality, original papers are expected, written in correct English, previously unpublished and not simultaneously submitted for publication elsewhere. The work must include a specific section on Related Work that deeply frame the paper contribution within the state of the art. Extended and revised versions of conference papers (from either iEMSs'2016 or elsewhere) are welcome, provided that a sufficient additional contribution is given with respect to the conference version of the paper, either on theoretical or experimental aspects. Authors should clarify the new material in their cover letter.

Full papers of a maximum extension of 12 pages should be prepared according to the *EMS* style guidelines described at the following link: https://www.elsevier.com/journals/environmental-modelling-and-software/1364-8152/guide-for-authors

Those interested in sending a submission, please submit an extended abstract about 1,000 words plus a bibliography by 15th October 2016. Submission of abstracts by email at edsemseds2017@mylist.upc.edu.

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Reviewing process and important dates: A standard single-blind reviewing process, in accordance with EMS requirements, will be followed.

15th October 2016: Submission of an extended abstract about 1000 words plus a bibliography. Please submit the abstract by email to the address: edsemseds2017@mylist.upc.edu.

30th October 2016: Guest editors decision on abstract (this does not guarantee final acceptance)

15th January 2017: Full papers submission. About 10-12 pages, following journal formats. Please submit through the EVISE system enabled by Elsevier:
(https://www.evise.com/profile/#/ENVSOFT/).
In the submission, *be sure you* properly specify you are submitting to the "*Thematic Issue: Environmental Data Science*". Authors should also include a cover letter indicating that the submission is for the Thematic Issue entitled *Environmental Data Science"*

1st March 2017: External peer review communication

10th April 2017: Revised manuscripts

August 2017: Issue

For more information, please contact any of the guest editors of this special issue, or write to edsemseds2017@mylist.upc.edu

Guest Editors
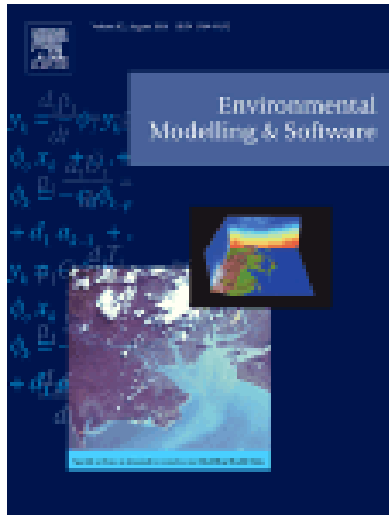
Karina Gibert
karina.gibert@upc.edu
Knowledge Engineering and Machine Learning group
Dpt. Statistics and Operations Research,
Universitat Politècnica de Catalunya-BarcelonaTech,
Barcelona, Catalonia, Spain

Geoff Holmes
sierra@iiia.csic.es
Department of Computer Science
University of Waikato, Waikato, New Zealand

Jeffery S. Horsburgh
jeff.horsburgh@usu.edu
Civil and Environmental Engineering Utah Water Research Lab.
Utah State University, USA

Ioannis Athanasiadis
ioannis@athanasiadis.info
Information Technologies Group
Wageningen University, The Netherlands