



Call for papers on Special Issue

Intelligent Systems for Environmental Applications

Motivation

Intelligent systems (IS) are of huge interest in relation to many environmental applications. The term refers to computing systems into which Artificial Intelligence and other computing technologies are woven and used to achieve specific goals for the user, the environment or both. Intelligent Systems have the ultimate objective of enriching user knowledge in order to better manage and increase user awareness of that environment. It is well known that the protection of the environment against factors such as climate change and environmental degradation are crucial for the perpetuation of human presence on earth. Likewise, optimum environmental management strategies are required to meet human demands (e.g. to increase food production). Thus, environmental applications comprise studies on the state of environmental media (e.g., soils, waters, sediments, wastes) for their protection or restoration from degradation and for optimal management. The development of IS has applications in a wide range of areas (e.g., mining, land contamination, agriculture, industrial processes) in which environmental matrices are affected and this development requires inputs from a range of disciplines.

Research in environmental applications often acknowledges the importance of intelligent systems, and vice versa, but IS publications usually lack clear environmental applications, and those on environmental applications rarely address intelligent systems directly. We therefore believe that there is a gap in knowledge related to the interaction between IS and environmental applications. Multidisciplinary teams (e.g., experts in mathematics/statistics, telecommunications, computer sciences, environmental sciences) can provide new insights through publications on IS for environmental applications.

We encourage authors to submit manuscripts on the use of IS to address important environmental issues. Where possible the papers should bring together knowledge from both scientific areas to provide insights at the interface between these disciplines. We encourage manuscripts that use environmental data to feed IS to provide a clear and recognisable output; or contributions that use other type of data (e.g., those provided by social media) that after, being processed by an IS, have an environmental meaning.

Submissions can build from work presented at a conference, but the paper submitted to the Special Issue must be significantly different, with greater scientific depth and content, in order to meet the standards required by the journal.

Topics

The Special Issue is devoted to the use of IS for environmental applications. We offer an opportunity for researchers and practitioners to identify new promising research directions as well as to publish recent advances in this area. All topics listed in this CFP are related to IS and need to have environmental applications as previously stated. The scope of this issue includes, but is not limited, to the following topics:

- Internet of things (IoT) in environmental applications
- Big Data for environmental protection focused on open data and social media
- Intelligent forecasting applications
- Intelligent applications for ecological disaster management
- Intelligent waste management
- Multi sensor and data fusion
- Smart farming

Submission Guideline

Contributions are expected to demonstrate the use of IS to understand, optimise or automate agricultural and environmental processes. This Special Issue will therefore focus on the use of IS to overcome the issues related to the lack of productivity of farming systems and to environmental degradation. This will involve the integration of solutions from different disciplines such as engineering, telecommunications, mathematics/statistics and agricultural, environmental, and computer science.

All papers will be peer-reviewed and assessed against the normal criteria for publication in Biosystems Engineering. All manuscripts and any supplementary material should be submitted through the new Elsevier submission, editorial and peer-review system Evisa. Once the submission window is open, in September 2017, authors should select “Intelligent Environments” when they reach the “Article Type” step in the submission process. The Evisa website is located [here](#).

Submission window opens on: September 25th, 2017

Submission deadline is expected to be: December 1st, 2017

Acceptance deadline is expected to be: May 4th, 2018

Expected publication date: July 2018

For more information, please contact guest editors:

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