.: Call for Papers :.

JIMIS – Journal of Interdisciplinary Methodologies and Issues in Science

Special Issue on

Analysis of Graphs and Complex Networks

Scope of the special issue

Networks have become invaluable to model and simulate a number of real-world systems: social, biological, computer-related, or otherwise. Thanks to their generic nature, it is possible to take a method designed to handle a specific system, and apply it in a completely different context. For instance, a method allowing to detect functionally important proteins in a biological network can be used to identify key-players in a social network. However, due to lexical, methodological and cultural differences, being aware of methods developed in other fields can be truly challenging for a researcher.

The goal of this special issue is to try to bridge this gap between scientific fields, by exposing researchers to different tools and usages of the concept of graph, coming from out of their field. The general idea is to describe graph analysis methods and/or their application to specific social systems. We are interested in works proposing new analysis or extraction methods, likely to be used in various very different application contexts. We are also interested in works describing how an existing method, initially developed for a given context, was adapted and/or applied to graphs representing completely different systems. Finally, we are interested as well in works dealing with systems whose unique properties require the design of domain-specific methods.

Topics of the special issue

For the **applications side**, all domains related to the representation or study of social relationships and interactions are concerned:

- Anthropology;
- Arts;
- Communication;
- Economics;
- Education;
- Geography;
- History;
- Law;
- Linguistics;
- Literature;
- Organizational studies;
- Political science;
- Psychology;
- Social psychology;
- Sociolinguistics;
- Sociology;
- Urban studies;

and others.

The **methodological aspects** of interest include, but are not limited to:

- Community detection, graph clustering, graph partitioning, overlapping communities, local communities, ego-communities, assessment of community detection methods, benchmarking;
- Frequent pattern mining;
- Visualization and exploration of large graphs;
- Node centrality, key-player identification;
- Analysis of other topological measures and properties;
- Modeling and/or control of diffusion processes;
- Evolution of dynamic networks, link prediction;
- Definition of generative models;
- Extraction of graphs from raw data (text, logs, measures...);
- Recommending systems, collaborative filtering;
- Extraction of graphs from raw data (texts, logs, numerical data…);
- Processing of enhanced graphs: directed, weighted, signed, spatial, multilayer, dynamic...;
- Multi-agent systems on networks;
- Study, modeling and simulation of processes taking place on networks.

About the journal

Since January 2016, JIMIS is an international platinum open-access (free for both authors and readers) peer-reviewed journal covering cross-disciplinary topics. It uses the Creative Commons license and is free for both authors and readers. Each issue is handled by guest editors and dedicated to a specific topic. The strongly interdisciplinary nature of the journal is enforced by gathering in one issue articles from Humanities and Social Sciences, and articles from Exact and Experimental Sciences. Papers co-signed by authors from different disciplines are very much welcome, but not mandatory.

Located off the beaten track, JIMIS has a wide and original scope. The goal of each issue is to emphasize a variety of points of view on a common cross-disciplinary topic. JIMIS aims at publishing high quality papers that would not find their place in traditional disciplinary journals, due to their strong connection with other scientific fields. For instance: tackling a problem which is multidisciplinary in nature, exposing alternative points of views coming from other fields, or transposing methods from one field to another.

Along with several other international journals, JIMIS is published under the aegis of Épisciences (http://episciences.org/), an offspring of the CNRS (French national center for scientific research http://www.cnrs.fr/). The steering committee of JIMIS is constituted of recognized international scientists representing a number of domains (http://jimis.episciences.org/page/comites). Each paper is reviewed by several reviewers in a standard single blind process.

Submission Notes

Full papers must be submitted using the EasyChair platform: the address will be indicated on the page dedicated to this special issue on the journal's website:

https://jimis.episciences.org/page/si-marami

Articles can be written either in English or French, with no page limit. Authors must follow the formatting guidelines of the journal, and use one of the supplied document models (with a preference for LaTeX):

- **LaTeX:** English, French – Template also available on Overleaf : English, French
- **MS Word:** English, French
- **OpenOffice:** English, French

Submitted articles must not have been previously published or currently submitted for conference/journal publication elsewhere. If the article is an extension of a previous paper, please cite it in the submitted article, explicitly describe the new contributions and explain how they are significant.

Important Dates

Paper submission deadline: 3 February 2019
First round of reviews: March/April 2019
Intended publication date: 2nd trimester of 2019

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