

Paper Submission

Authors are encouraged to submit high-quality, original work that has neither appeared in, nor is under consideration by, other journals.

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Manuscripts should be submitted to: <http://DAMI.edmgr.com>. This online system offers easy and straightforward log-in and submission procedures, and supports a wide range of submission file formats. The article type **SI: Intelligent Interactive Data Visualization** should be chosen when submitting a manuscript to this special issue.

Important Dates

- Manuscript submission deadline: September 1, 2011
- Notification of acceptance: November 1, 2011
- Revised manuscript submission: February 1, 2012
- Notification of acceptance for revised: April 1, 2012
- Final papers due: June 1, 2012

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Special Issue Call for Papers

Intelligent Interactive Data Visualization

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The increasing amount and complexity of electronic data poses problems for domain experts or users who analyze that data. They cannot rely on fully automatic techniques for data analysis and visualization, because effective modeling requires an iterative interaction between computerized processing and human analysis. Such a human-in-the-loop approach enables domain experts or users to interactively refine their hypotheses and modeling assumptions and arrive at conclusions that are impossible for the computer to reach on its own. Intelligent data visualization and its interaction with traditional machine learning serve a central role in this process.

The aim of the exciting new discipline of *visual analytics* is to develop intelligent interactive visualizations of data. Visual analytics intersects machine learning, intelligent systems, pattern analysis, visualization, computer graphics, and human computer interaction. Thus far, the visual analytics community has been somewhat disconnected from the machine learning community and machine learning researchers are largely unaware of the problems and opportunities in this area. This special issue is intended to encourage approaches of machine learning and intelligent systems to contribute to challenges in the emerging area of visual analytics and to more tightly integrate the two communities. We solicit papers in all areas related to visual analytics. A non-exhaustive list of several important challenges and open questions is listed below.

Topics covered, but not limited to, include:

- Dimensionality reduction and visualization of streaming data, non iid data, structured, or heterogeneous data
- Evaluation measures and canonical datasets for data visualization
- Practical case studies demonstrating successes and failures in modern domain areas
- Integration of domain knowledge into data visualization
- Iterative refinement of data visualization based on user feedback
- Theoretical issues concerning data visualization
- Computational issues including developing tractable approximations when needed
- Connections and reductions between visualization and other machine learning tasks, such as classification, clustering, regression, density estimation