Paper Submission

Authors are encouraged to submit high-quality, original work that has neither appeared in, nor is under consideration by, other journals. All open submissions will be peer reviewed subject to the standards of the journal. Manuscripts based on previously published conference papers must be extended substantially.

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Important Dates

• Paper submission deadline:
   May 15, 2013

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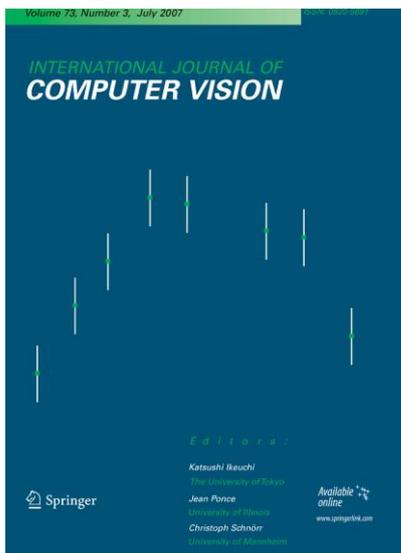
Special Issue Call for Papers

Big Visual Data

Guest Editors

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A recent paper from Google Research titled "The Unreasonable Effectiveness of Data" [Halevy, 2009] makes a strong case for the use of Big Data as a way of tackling a large class of difficult problems. The authors argue that while some fields, such as physics, have greatly benefited from elegant mathematics and parametric models, in others, such as economics or computational linguistics, it is the non-parametric methods utilizing huge amounts of raw data that have shown more promise. For instance, it was the availability of large quantities of real speech data, rather than any fundamental mathematical or algorithmic advances, that propelled speech recognition from a hard AI problem into a consumer application. In computer vision, researchers are beginning to be more receptive to the idea that many topics, such as object recognition and scene understanding, may benefit by considering this "unreasonable effectiveness" of Big Visual Data.

For this special issue of IJCV, authors are invited to submit manuscripts on any topic in computer vision and related fields where the use of Big Visual Data is somehow changing the nature of the problem. That is, we are soliciting contributions that go beyond simply applying standard algorithms to large datasets, but rather use the Big Visual Data itself to bring about new ways of looking at the vision problem. We also specially welcome contributions that argue *against* the use of Big Data methods in computer vision.

The list of topics where Big Visual Data issues can be relevant includes, but is not limited to, the following:

* **Opportunities for using Big Visual Data in:** Recognition, Reconstruction, Segmentation, Computer Graphics, Computational Photography, Visual Data Mining, etc.

* **Collecting Big Visual Data:** Issues in dataset creation, labeling, and maintenance. Metrics to evaluate dataset coverage and quality.

* **Handling Big Visual Data:** Technical and algorithmic challenges of storing and handling life-long visual data

* **Models for Big Visual Data:** large-scale non-parametric models (e.g. exemplar-based models, prototype-based models, etc); metric learning; deep learning models, etc.

* **Issues of supervision in Big Visual Data:** Models for diverse/inhomogenous supervision. Large-scale methods for unsupervised, semi-supervised and weakly-supervised learning; learning with partial and unreliable labels.

* **Challenges of Big Visual Data:** Will we ever have enough data? Dealing with bias and long tails. Is having lots of data enough? Dangers of big visual data