

Call for Papers:

Special issue on " Image Processing for Digital Art Work Investigation"

Signal Processing



Scope

Computer based image processing of digital images of artwork in support of art scholarship is an emerging and rapidly growing field of research. This domain is, in essence, cross-disciplinary and involves teams of academic image and signal processing scientists, art scholars and conservators. Meetings, recently held at the Van Gogh Museum in Amsterdam, and at the Museum of Modern Art in New York, SPIE Special sessions entitled Computer Vision and Image Analysis of Art, gathered large and motivated audiences of very different origins and yielded fruitful interactions, thus indicating a growing interest for joint research efforts. A recent and noticed contribution, issued in the IEEE Signal Processing Magazine ((37), 2008), reporting Computerized Analysis of Vincent van Gogh's Painting *Brushtokes*, paved the way toward more systematic collaborative works integrating signal/image processing methodologies and Art Work Investigation, with promising attempts along many different directions (texture characterization, canvas characterization, texture classification, stylometrics analysis, X-ray imaging and analysis, computed-aided lighting analysis, . . .).

Goals

In this context, the aim of this Signal Processing Special Issue is to report and promote significant contributions intending to bridge gaps between mathematical and statistical signal and image processing and computer sciences, with art history and art conservation. To that end, contributions that both propose up-to-date developments in Signal/Image Processing Methodologies and address art historical matters of interest will be favored. Topics relevant to the Special Issue include (but are not restricted to):

- Statistical image/signal processing to study questions of art historical interest (e.g., authorship, dating, painter's working method),
- Signal identification/classification or contour/texture characterization methods for art,
- Methods for creating virtual restorations or reconstructions of damaged or aging art,
- Signal processing tools designed to assist art historians/conservators (e.g. virtual top layer removals, automatic canvas weave analysis, or multispectral imaging data fusion),
- Computer vision based methods to analyze a work's lighting or subject,
- Signal/image processing methods to identify a work's pigments or material properties.

Format

Submitted contributions are expected not to exceed a 15 page limit (using the final double column Signal Processing format. LaTeX style files available at <http://www.elsevier.com/wps/find/authorsview.authors/elsarticle>, see also <http://www.elsevier.com/latex>).

Submissions must be uploaded directly to the Elsevier Editorial System (EES) at <http://ees.elsevier.com/sigpro/>.

Tentative Schedule

- Submission: June 30th
- Notification: August 31st
- Revision: September 30th
- Publication: End of Year 2011 (Electronic publication as soon as final versions are approved by authors)

Guest Editors

- S. Hughes, University of Colorado at Boulder, USA;
- I. Daubechies, Princeton University, USA;
- Don H. Johnson, Rice University, USA;
- E. Postma, Tilburg University, the Netherlands;
- P. Abry, CNRS, Ecole Normale Supérieure de Lyon, France;
- E. Hendriks, Head of Conservation at the Van Gogh Museum, Amsterdam, the Netherlands;
- J. Coddington, Chief Conservator at the Museum of Modern Art, New York, USA.

Contact

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