

Call for Papers

IEEE Computational Intelligence Magazine

Special Issue on “Computational Forensics”

<http://decsai.ugr.es/~oibanez/COMFOR.html>

Aims and scope

For decades, forensic sciences have produced valuable evidence that has contributed to the successful prosecution and conviction of criminals, the exoneration of innocent people, or the identification of cadavers. However, reasoning and deduction are usually performed on the basis of partial knowledge, approximations, uncertainties and conjectures. This fact extremely complicates the forensic daily work, originating wrong conclusions that demonstrate the potential risk of giving undue weight to evidence and testimony derived from imperfect testing and analysis.

Computational Forensics (CF) is an emerging interdisciplinary research domain¹. It is understood as the hypothesis-driven investigation of a specific forensic problem using computers, with the primary goal of discovery and advancement of forensic knowledge. When computing capabilities are endowed with human-like intelligence, i. e. Computational Intelligence (CI) techniques, the resulting systems are able to process a large amount of uncertain, imprecise, and incomplete information in a reliable, unbiased, and automatic manner. The development of intelligent systems has attracted significant amount of attention recently from academia, industry, and government as well. Among many efforts toward this objective, CI research could provide important technical innovations to help the society to accomplish this goal.

The specific topics solicited for this special issue will be mainly focused on the new CI methods and techniques for applications in forensic sciences. The CI paradigms considered here are evolutionary computation, neural networks, fuzzy systems, or hybrid approaches of these paradigms.

Main topics of interest (but not limited to):

- Ballistics
- Biometrics (fingerprint, iris, face, voice, among others)
- Cloud forensics
- Crime scene reconstruction
- Digital crime scene investigation
- Document examination
- Fire investigation
- Intrusion detection
- Facial composition
- Forensic photography
- Forensic genetics
- Forensic anthropology, odontology, pathology, and entomology
- Facial composition
- Malware detection systems
- Meta-forensics
- Pathology
- Profiling
- Steganography
- Toxicology
- Tool marks

¹ Franke K., Srihari S.N.: Computational Forensics: An Overview. In Franke K. And Srihari S.N. (Eds.) Proc. Int. Workshop on Computational Forensics. Lecture Notes in Computer Sciences 5158, 2008, pp. 1-10.

Important Dates:

- Manuscript Submission: May 15, 2016
- Notification of Review Results: July 15, 2016
- Submission of Revised Manuscripts: August 19, 2016
- Submission of Final Manuscripts: September 23, 2016
- Issue Publication: February 2017

Submission process:

Submission should be made via [EasyChair](#).

The maximum length for the manuscripts included in this special issue will be 10 pages in double column, including figures and references. Authors of papers should specify in the first page of their manuscripts the contacts of the corresponding author and up to 5 keywords.

Additional information about submission guidelines and information for authors is provided at the IEEE CIM [website](#).

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