DESCRIPTION

*Digital Investigation* is now continued as *Forensic Science International: Digital Investigation*, advancing digital transformations in forensic science.

*FSI Digital Investigation* covers a broad array of subjects related to crime and security throughout the computerized world. The primary pillar of this publication is digital evidence and multimedia, with the core qualities of provenance, integrity and authenticity. This publication promotes advances in investigating cybercrimes, cyberattacks and traditional crimes involving digital evidence, using scientific practices in digital investigations, and reducing the use of technology for criminal purposes.

This widely referenced publication promotes innovations and advances in utilizing digital evidence and multimedia for legal purposes, including criminal justice, incident response, cybercrime analysis, cyber-risk management, civil and regulatory matters, and privacy protection. Relevant research areas include forensic science, computer science, data science, artificial intelligence, and smart technology. This journal is used by investigative agencies and forensic laboratories, computer security teams, practitioners, researchers, developers, and lawyers from industry, law enforcement, government, academia, and the military to share their knowledge and experiences, including current challenges and lessons learned in the following areas:

- **Research and development**: Novel research and development in forensic science, computer science, data science, and artificial intelligence applied to digital evidence and multimedia. New methods to deal with challenges in digital investigations, including applied research into analysing digital evidence and multimedia, exploiting specific technologies, and into preparing for and responding to computer security incidents.

- **Cyber-criminal investigation**: Develop new methods of online investigation and analysis of financially motivated cyber-crime such as banking Trojans, phishing, ransomware and other forms of cyber-fraud. In addition, researching future criminal activity involving peer-to-peer payments and crypto currencies.

- **Cyber-risk management**: Improved ways of using digital evidence to address security breaches involving information systems, methods to find zero day attacks and to perform cyber threat intelligence. The techniques and findings of digital investigations are essential in drawing post-incident conclusions, which are vital feedback components of the security policy development process, and managing risk appetite.

- **Case Notes**: Brief investigative case studies with practical examples of how digital evidence is being used in digital investigations, forensic analysis, and incident response. Case Notes can also describe current challenges that practitioners are facing in cybercrime and computer security, highlighting areas that require further research, development or legislation. The format for Case Notes is simple and short: case background, any technical or legal challenges, the digital evidence and multimedia involved, processes and/or tools used, and outcomes (e.g., solutions, barriers, need for R&D). Please check the following example for preferred Case
Scientific practices: Novel approaches to strengthening the scientific foundation and rigor of digital investigations, and to increasing the reliability of and confidence in processes, analysis methods, results, and conclusions involving digital evidence and multimedia. Effective practices: Studies that assess new practices in digital investigations and propose effective approaches to handling and processing digital evidence. Survey papers: Discussion of current methods and future needs relevant to digital investigations, including analysing digital evidence and multimedia from computers, smart technology, mobile phones, memory, malware, network traffic, as well as systems that support enterprises, telecommunications, and satellites. In addition, advanced approaches to analysing digital evidence and multimedia, including novel applications of artificial intelligence and data analytics.

Application analysis: Novel approaches to analysing applications on mobile devices and computers from a digital forensic perspective. Analysis may include configuration and log data, network telemetry and cloud storage, live memory artifacts, and indications of compromised and abused applications. Proposed methods should go beyond a single version of an application and be generalized to multiple versions of an application, or a general category of applications (e.g. social networking), on multiple platforms (Android, iOS). In addition, strong work in this area will extend the functionality of an existing open source tool, or provide a new open source tool. Also of interest are approaches to performing validation and quality assurance of forensic software that must be updated frequently to support new applications. Such papers should be structured around investigative questions that are commonly encountered in digital investigations, concentrating on the users and their activities rather than only on technical elements.

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Future challenges: Analysis of new technologies, vulnerabilities and exploits which may create opportunities for criminality and/or computer security incidents, but which require further work in order to determine how their use can be investigated and the evidential opportunities they may create.

Registered reports: Studies that assess methods critically, and evaluating the reliability, statistical power, and reproducibility of results. Such reports can include tests and experiments with negative results, not just positive.

Legal analysis and updates: Carefully considered commentary by legal experts on recent cases involving digital evidence and multimedia, forensic applications and computer security risk management, relevant legal developments, privacy issues, and legislative limitations. Evidence accessibility: exploring safe, fair, and feasible methods of acquiring digital evidence from protected sources such as DRM, encrypted traffic, encrypted storage, and locked proprietary devices, while taking individual privacy and ethical aspects into consideration.

Author Note: General methods for detecting forgery in digital photographs or videos are not within scope of Forensic Science International: Digital Investigation, and will be rejected without review. To be within scope of this Journal, any novel forgery detection method must be evaluated using datasets that are representative of actual digital investigations. In addition, improvements over existing methods must be clearly demonstrated. It is recommended that authors provide a working implementation of their proposed method to enable others to test it using their own datasets for comparison with existing methods.

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• Make sure you use uniform lettering and sizing of your original artwork.
• Save text in illustrations as "graphics" or enclose the font.
• Only use the following fonts in your illustrations: Arial, Courier, Times, Symbol.
• Number the illustrations according to their sequence in the text.
• Use a logical naming convention for your artwork files.
• Provide captions to illustrations separately.
• Produce images near to the desired size of the printed version.
• Submit each figure as a separate file.

A detailed guide on electronic artwork is available on our website:
https://www.elsevier.com/artworkinstructions

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats
Regardless of the application used, when your electronic artwork is finalised, please "save as" or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
EPS: Vector drawings. Embed the font or save the text as "graphics".
TIFF: color or grayscale photographs (halftones): always use a minimum of 300 dpi.
TIFF: Bitmapped line drawings: use a minimum of 1000 dpi.
TIFF: Combinations bitmapped line/halftone (color or grayscale): a minimum of 500 dpi is required.
DOC, XLS or PPT: If your electronic artwork is created in any of these Microsoft Office applications please supply "as is".

Please do not:
• Supply embedded graphics in your wordprocessor (spreadsheet, presentation) document;
• Supply files that are optimised for screen use (like GIF, BMP, PICT, WPG); the resolution is too low;
• Supply files that are too low in resolution;
• Submit graphics that are disproportionately large for the content.

All illustrations should be large enough to withstand 50% reduction and still be easily readable

Color artwork
Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF), or MS Office files) and with the correct resolution. If, together with your accepted article, you submit usable color figures then Elsevier will ensure, at no additional charge, that these figures will appear in color online (e.g., ScienceDirect and other sites) regardless of whether or not these illustrations are reproduced in color in the printed version. For color reproduction in print, you will receive information regarding the costs from Elsevier after receipt of your accepted article. Please indicate your preference for color: in print or online only. Further information on the preparation of electronic artwork.

Figure captions
Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Text graphics
Text graphics may be embedded in the text at the appropriate position. If you are working with LaTeX and have such features embedded in the text, these can be left. See further under Electronic artwork.

Tables
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

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Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999)…. Or, as demonstrated (Jones, 1999; Allan, 2000)… Kramer et al. (2010) have recently shown …'

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Examples:
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Reference to a chapter in an edited book:

Reference to a website:

Reference to a dataset:
Note shortened form for last page number. e.g., 51–9, and that for more than 6 authors the first 6 should be listed followed by "et al." For further details you are referred to "Uniform Requirements for Manuscripts submitted to Biomedical Journals" (J Am Med Assoc 1997;277:927–34) (see also Samples of Formatted References).

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