

International Conference on



*Computational Intelligence in
Security for Information Systems*

2020



Special Issue Proposal

<http://cisisconference.eu>

Special Issue Proposal



Title: Computational Intelligence Applied to Cybersecurity

Purpose and scope

This Special Issue of the [Wiley Journal Expert Systems: The Journal of Knowledge Engineering](#) aims to compile cutting-edge research under the topic of “**Computational Intelligence Applied to Cybersecurity**”. Best papers accepted for the 13th International Conference on Computational Intelligence in Security for Information Systems (CISIS 2020) will be invited to submit significantly extended versions to this special issue.

CISIS aims to offer a meeting opportunity for academic and industry-related researchers belonging to the various, vast communities of Computational Intelligence, Information Security, and Data Mining. The need for intelligent, flexible behaviour by large, complex systems, especially in mission-critical domains, is intended to be the catalyst and the aggregation stimulus for the overall event.

It is a high quality international conference that has a long tradition of meeting varied authors (both from industry and academia) to discuss technical and scientific aspects of computational intelligence applications to the cybersecurity field. Submitted papers are peer reviewed by at least two members from the international Program Committee (a list of the members that have confirmed up to now is available at [this link](#)). Accepted papers are included in conference proceedings, published by Springer in its Advances in Intelligent Systems and Computing Series.

CISIS has been included in the prestigious CORE Conference Ranking (B category), published by the Computing Research and Education Association of Australasia in 2008, 2010, 2013, 2014, 2017 and 2018.

CISIS 2020 website: <http://2020.cisisconference.eu/>

Expert Systems website: <https://onlinelibrary.wiley.com/journal/14680394>

Possible contributors

Best papers accepted for the 13th International Conference on Computational Intelligence in Security for Information Systems (CISIS 2020), related to the journal topics, will be selected and their authors invited to submit (significantly) extended versions of the manuscripts to present special issue.



Topics

The topics of interest include, but are not limited to (related to Security for Information Systems):

- Machine Learning for Data Mining
- Data Mining Methods for Security
- Agent and Multi-Agent Systems
- Hybrid Systems
- Unsupervised Learning
- Classification Methods
- Novelty Detection
- Intrusion Detection Systems
- Log Correlation Methods
- Adaptive Defense of Network Infrastructure
- Adaptive Reasoning
- Information Forensics
- Document Classification and Processing
- Ontologies and Conceptual Information Processing
- Semantic Information Representation
- Natural Language Acquisition
- Web Semantics in Intelligence and Law-Enforcement
- Industrial and Commercial Applications of Intelligent Methods for Security
- Intelligent Control and Monitoring of Critical Systems
- Dynamic Adaptive Railway Operation
- Centralized Control Systems
- Adaptive Planning for Strategic Reasoning
- Intelligent Methods in Energy and Transportation
- Planning and Automated Reasoning in Large System Control
- Biometric Identification and Recognition
- Biometric Surveillance
- Biometric Access Control
- Extraction of Biometric Features (fingerprint, iris, face, voice, palm, gait)
- Cryptography
- Applied Cryptography and provably-secure cryptographic protocols
- Design and analysis of efficient cryptographic primitives:
 - public-key and symmetric-key cryptosystems, block ciphers, and hash functions
 - Economic fraud on the Internet: phishing, pharming, spam, and click fraud
 - Email and web security
 - Intellectual property protection:
- metering, watermarking, and digital rights management.
- Computer Science, namely on HPC and Grid computing issues
- Computational Sciences, with requirements in HPC and Grid
- Computational Engineering with a similar focus.
- Grid Middleware, Grid Computing, Data and Networking Infrastructures
- Distributed and Large-Scale Data Access and Management
- Data Repositories, Distributed Resource Management and Scheduling
- Supercomputer/cluster/grid integration issues
- Grid Performance Evaluation, QoS and SLA Negotiation
- Grid and HPC Applications, including e-Science in general and also Science Gateways, Nanomaterials, High Energy Physics, e-Health, e-Business, e-Administration, Life Sciences, Earth Sciences, Civil Protection, Computational Sciences and Engineering, ...
- User Development Environments and Programming Tools for Grid Computing.
- Infrastructure as a service (IaaS)
- Virtualization in data centers
- Virtualization for resource management and QoS assurance
- Security aspects of using virtualization in a distributed environment
- Virtual networks
- Virtual data, storage as a service
- Fault tolerance in virtualized environments
- Virtualization in P2P systems
- Virtualization-based adaptive/autonomic systems
- The creation and management of environments/appliances
- Virtualization technologies
- Performance modeling (applications and systems)
- Virtualization techniques for energy/thermal management
- Case studies of applications on IaaS platforms
- Deployment studies of virtualization technologies
- Tools relevant to virtualization

Paper Submission

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Manuscripts must be prepared according to journal's instructions, available at <https://onlinelibrary.wiley.com/page/journal/14680394/homepage/forauthors.html>

Papers must be written in English. If it is not the authors' first language, the manuscript must be proofread by a native speaker.

Every submission is expected to be longer through the addition of unreported research. Papers must differ from the conference version by more than 30%, and must include extra work of depth in the area.

Manuscripts must be submitted to the journal's [online system](#). All invited papers will be refereed by experts in the field based on originality, significance, quality and clarity. Every submitted paper will be reviewed by at least three reviewers. The final acceptance is the Editor-in-Chief's decision.

Schedule

- CISIS 2020 conference: 16th-18th September, 2020
- Author invitation: 15th October, 2020
- Submission deadline: 1st March, 2020
- Deadline for reviews: 1st July, 2021
- Author initial notification: 1st August, 2021
- Revised paper submission: 1st October, 2021
- Review of revised papers: 15th December, 2021
- Author final notification: 15th January, 2021
- Source files submission: 1st February, 2021