IEEE International Conference on Cyber Situational Awareness, Data Analytics and Assessment

Submitted by xavierbellekens on Mon, 10/30/2017 - 10:06am

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Call for Papers

IEEE is the Technical Co-Sponsor (TCS) of the International Conference on Cyber Situational Awareness, Data Analytics and Assessment (CyberSA 2018, an international refereed conference dedicated to the advancement of the principles, methods and applications of situation awareness on Cyber Systems, Business Information Systems (BIS), Computer Network Defence (CND), Critical National Infrastructures (CNI), Cyber Physical Systems (CPS) and Internet of Things (IoT)s).

The aim of the CyberSA 2018 is to encourage participation and promotion of collaborative scientific, industrial and academic inter-workings among individual researchers, practitioners, members of existing associations, academia, standardisation bodies, and including government departments and agencies. The purpose is to build bridges between academia and industry, and to encourage interplay of different cultures.

CyberSA 2018 invites researchers and industry practitioners to submit papers that encompass principles, analysis, design, methods and applications. All submitted papers are independently peer-reviewed.

The conference proceedings will be submitted for consideration for publishing and listing on the following bibliographic indexes: IEEE Computer Society Digital Library, IEEE Xplore Digital Library, DBLP Computer Science, Scopus, CiteSeerX, Computer Science Index, EI Compendex, Academic Search Complete, CiteULike, Google Scholar & Microsoft Academic Search.

**Details

CyberSA 2018 is co-located with other conferences as part of Cyber Science 2018.

Posters will be presented during the conference.
Industry track is available for discussing and publishing pilot and proof of concepts.
Work in Progress track is available for preliminary work.
Research Ideas track is available for ideas in early stages assessment.
PhD Seminar track is available for discussing and publishing early PhD thesis research.

***Submission Deadline***

Deadline for all paper submissions, that is, both full papers and extended abstracts for Poster, WIP, PoC, Research Idea and PhD Seminar presentations is 26th January 2018.

All Industry track, Work in Progress track, Research Ideas track and PhD Seminar track will be published in the conference proceedings. Interested participants, please submit your proposal using the online submission system hosted by Easychair Conference Portal.

***Topics of Interest***

Original papers are invited on recent advances in Cyber Situation Awareness, Data Analytics and Assessment. The topics in CyberSA 2018 include but not limited to:

**Situation Awareness in Emerging Areas**
- Situation Awareness in Software Defined Networks
- Security Monitoring, Scale of Things and Limits to Monitoring
- Block Chain Technology in Security
- IoT Detection and Software Driven Applications Security
- Situation Awareness in Mobile Computing
- Standardisation of Cyber Situation Awareness
- Search, Triage, Examination and Forensics in Cloud Computing
- Cyber SA in Chaotic Computing
- Cyber SA in Large Scale IDS Deployments

**Situation Awareness Assessments**
- Assessment models and methodologies for Cyber SA
- Cyber Situation Awareness Evaluation Recommendation
- Cyber SA Maturity Models and Frameworks
- Cyber SA for Social Networks

**Social Media Analysis**
- Social Network Interaction and Intelligence
- Web Analytics & Security Incident Response
- Organised and collaborative Maps and Networks
- Cyber Behavioural Analytics and Profiling
Collaborative Situation Awareness for Decision Making

**Collaborative Defense Approach**
Situation Assessment & Decision Making
Defense Strategy for the Enhancement of Situation Awareness
Situation Assessment, Resolution and Decision Loop
Individual vs. Team SA
Group and Team SA

**Risk Management, Governance and Compliance**
Trust, Privacy and Anonymity Issues
Digital Forensic Information Analysis
Enterprise Information Security Policies, Standards and Procedures
Risks posed by Wireless Networks, including through the use of Mobile Computing, BYOD, Wearable in CND environment

**Cyber Situation Awareness Tools & Techniques**
Fuzzy Logic
Rough Set
Artificial Neural Networks
Artificial Intelligence
Genetic Algorithm
Evidence Theory (DST)
Bayesian Networks & Set Theory
Big Data Analytics
Game Theory
Graph Theory

**Network Situational Awareness**
Cyber Attack Scenarios
Situation-Aware and Context-Aware Network Applications
CERTs and CSIRTs
Security Event and Information Management
Application Security, Audits and Penetration Testing

**Human Factor Cognitive**
Workload
Perception
Stress
Knowledge
Training and Expertise
Risk Assessment and Decision Making
Forecasting and Prediction
Operator SA & Team SA

**National and Critical Infrastructure Security Issues**
Information Security
Cyber Security
Database Security
Application Security
Law Enforcement and Surveillance
Border Protection and Controls
Cyber Warfare and Counter Terrorism

**Situation Awareness in Military Operations**
Military Doctrinal in Situation Awareness
C4ISR (Command, Control, Communications, Computers, Intelligence,
Surveillance and Reconnaissance)
Computer Network Operations
Computer Network Defense
Mission Awareness, Command and Control

**Cyber Situation Analytics**
Attack Graphs
Advanced Security Incident Analysis
Sensor Correlation and Cross-Correlation
Implementing Situation Awareness Systems
Information Security Metrics and Measurements

**Cyber Situation Awareness Frameworks**
Proactive Defense Strategies
Instance-Based Learning
Adaptive Neural Logic
Human-Assisted Decision Control
Human in the Loop
Automated Self-Responder

**Fusion Centres**
Tools for Metric Optimisation
Visualisation and Digital Analytics
Data Mining
Filtration, Selection, and Risk-Based Prioritisation
Metrics for Evaluation and Assessment
Usefulness of Multisensor Data Fusion
Information Data Fusion
Sensor Fusion for Security Incident Analysis
Security Incident Analysis
Data Association & Correlation
Security Information Visualisation
Data Analytics
Security Monitoring

**Situation Awareness Applications**
Situation Awareness in C4ISR
Situation Awareness in Cyber Command and Control Centres
Situation Awareness in Intrusion Defense
Situation Awareness in Cyber Physical Systems (CPS)
Situation Awareness for Internet of Things (IoTs), Enterprise Internet of Things (EIoTs)
Open Source Applications

**Cyber Situation Awareness Designs, Solutions and Services**
Functional Requirements for Situation-aware services
Non-Functional Requirements for Situation-aware Services and solutions
Interface Design
Interoperability
Dynamism
Complexity
Performance
Automation
Realtime Processing

**Situation Awareness Training**
Research and development in Situation Awareness
Simulation and Testbeds in Cyber Situation Awareness
Experimentation & Instrumentation
Modelling
Knowledge-base
Theoretical Underpinnings in Situation Awareness
Team and Group SA
Cyber Situation Awareness Methods, Training and Education

**Best Papers**

The best paper of each section will be selected and their author(s) will receive a corresponding Award Certificate. Authors of the Best 20%-25% papers presented at the conference will be invited to adapt their papers for their publication in one of the special issues peer reviewed journals.

**Sync this event to your calendar**

CPS Domains Research Program Overview conference IEEE situational awareness 2018 Announcement Call for Proposal Conference