

# CyberSA 2019

Submitted by Anonymous on Mon, 01/28/2019 - 5:10pm

[Jun 03, 2019 7:00 am - Jun 04, 2019 6:00 pm BST](#)

## IEEE International Conference on Cyber Situational Awareness, Data Analytics and Assessment (CyberSA 2019)

CyberSA 2019 is co-located with other conferences as part of Cyber Science 2019.

IEEE is the Technical Co-Sponsor (TCS) of the International Conference on Cyber Situational Awareness, Data Analytics and Assessment (CyberSA 2019, 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).

The aim of the CyberSA 2019 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 2019 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.

### \*\*\*Topics of Interest\*\*\*

Original papers are invited on recent advances in Cyber Situation Awareness, Data Analytics and Assessment. The topics in CyberSA 2019 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 (IoT), Enterprise Internet of Things (EIoT)

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

**Location:** Oxford, UK

**URL:** <https://www.c-mric.com/csa2019>

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[2019 Conference](#)

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