

20th International
Command and Control
Research and Technology Symposium
June 16-19 - Annapolis, Maryland, USA

2015

CALL FOR PAPERS

History of the ICCRTS

In 1995, the DoD Command and Control Research Program (CCRP), within the Office of the Secretary of Defense, held the first International Command and Control Research and Technology Symposium (ICCRTS) at the National Defense University in Washington, D.C. This meeting built upon a series of meetings during the 1970s by the Office of Naval Research and the Massachusetts Institute of Technology that brought together interested researchers to exchange ideas on command and control (C2), its measurement and assessment, and the impact of new technologies on C2 processes.

The initial meeting was modest in size (63 participants) and included only a handful of non-U.S. participants. ICCRTS venues have included the United Kingdom, Sweden, Australia, Canada, and Denmark. Participation has grown substantially, to include hundreds of participants from dozens of nations. The Symposium provides an unparalleled opportunity for professional researchers, academics, active duty and reserve officers, and policy makers to interact with one another, understand the state of the art of C2, and influence the state of the practice with the United States and among its coalition partners.

The ICCRTS has consistently focused on leading-edge issues involving (a) new concepts in C2 (b) new technologies and their potential impact on C2, and (c) feedback and evidence from experiments, exercises, and real-world operations. The Symposium is also an important forum for discussion of coalition and collective C2 issues and for examining the complex endeavors (stabilization, operations, disaster relief) involving a variety of entities including military, civilian, government, international organizations, PVOs and NGOs.

Theme

The theme for the 20th International Command and Control Research and Technology Symposium is “C2, Cyber, and Trust” This year’s theme provides an opportunity to address the challenges of an evolving cyber environment and the critical role that trust plays in each of the three network genres (social, information, communications) that impact command and control. More networked enabled and more agile C2 requires the development of appropriate levels of shared awareness. This, in turn, depends upon the ability to ensure timely information flows that span organizational components and the range of participating entities. Among the questions to be addressed are - What evidence has been found to date that describes the impact of trust on C2 network behaviors and agility? How can trust be measured? Do trust-related impacts cascade across the network genres? Can improving trust in the social network compensate for a lack of trust in the communications and information networks? This theme will be explored in plenary presentations and panels as well as in track discussion periods.

Review and Acceptance Process

The study of Command and Control, and this Symposium have grown significantly over the years. This has resulted in an increasing number of paper submissions competing for the available time slots. Revised deadlines have been implemented to increase the amount of time for Track Chairs to review draft papers and provide detailed feedback to authors, as well as increase the amount of time for authors to revise their papers. This is our ongoing effort to ensure an event of the highest possible quality. We believe that these steps will allow authors to improve their papers and presentations, and thereby improve the overall value of the Symposium.

While we have found abstracts useful in identifying papers that are, for any number of reasons, not appropriate for this Symposium, abstracts do not provide enough information for decisions regarding paper acceptance. Therefore, while we will still continue to accept abstracts as first submissions, authors are urged to submit papers for review *as soon as possible*. We will make every effort to provide timely feedback to authors. This rolling review process enables us to give the required attention to all papers that are submitted and maximize the time available for authors to make modifications to improve their papers. We understand that many authors will be in the middle of projects when the time comes to submit first drafts of their papers. If this is the case, this should be noted and we will expect the author to update the paper and presentation prior to final submission.

Thank you for your participation in the ICCRTS. If accepted, your professional paper will be included in a CD of the Symposium proceedings and both your paper and your presentation will be posted on the ICCRTS section of www.dodccrp.org. Please review the author guidelines and timelines to ensure that you are aware of and adhere to the ICCRTS submission process.

Key Dates

Submit your abstract no later than November 28, 2014

You will receive an invitation to submit a formal draft paper by **December 19, 2014**

Your formal draft paper must be submitted by **February 6, 2015**

You will receive reviewer comments by **March 20, 2015**

Your final revised paper must be submitted by **April 24, 2015**

Your final presentation must be submitted by **May 22, 2015**

TOPICS

The 20th ICCRTS will be comprised of tracks on various topics that explore **C2** from a number of different perspectives. Authors are asked to think about this year's theme as they prepare their papers and discuss the theme in the context of their research and analyses.

Topic 1: Concepts, Theory, and Policy

The changing nature of the missions being carried out has created a new reality. This reality demands that existing concepts, theories, and policies be revisited and discarded or adjusted, as necessary and new concepts, theory, and policy be developed.

Topic 2: Organizational Concepts and Approaches

This topic examines designing, analyzing, and implementing various approaches that are designed to develop shared intent, awareness and understanding and facilitate collective action (e.g., C2, management, governance, self- synchronization, emergent behaviors).

Topic 3: Data, Information and Knowledge

This topic will address 1) how to obtain new data, information, and knowledge including detection, collection, and instrumentation, 2) how to move from data to information to knowledge, and 3) ways of enhancing the value of data, information, and knowledge by making it more discoverable, accessible, widely shared, and understandable.

Topic 4: Experimentation, Metrics, and Analysis

This topic includes experiments, metrics and analyses related to any aspect of command and control—networking, management or governance, information sharing, trust, shared awareness, shared understanding, decision-making, planning, execution, and assessment of ongoing operations.

Topic 5: Modeling and Simulation

This topic encompasses models and simulations that represent emergent behaviors in C2.

Topic 6: Cyberspace, Communications, and Information Networks

This topic addresses the management of cyberspace and the design, development, fielding, operations (including protection and assurance) of communications and information networks.

Topic 7: Autonomy

This topic addresses the issues related to the integration of autonomous entities, human and agent-based, into organizations, processes, and systems.

Topic 8: Social Media

This topic will address 1) methods and techniques to monitor (find trends and anomalies), filter, capture and store social media data (text, video, images, etc.), 2) methods and techniques for the analysis of the associated metadata (from where, when, and how are people communicating?), 3) methods and techniques to extract meaning from the content of the unstructured, messy social media content, and 4) experimental results using social media to explore social/cultural/political processes and behaviors. Experimental results should articulate how new knowledge can impact C2 Agility in a relevant operational mission.

Topic 9: C2-simulation Interoperability

This topic addresses the issues related to the ability of C2 (national and coalition) to interoperate with and incorporate simulation functionality. Of interest are simulation technology topics and the representation of transfer of command intent.

Topic 10: Operational Issues

This topic will address the operational needs, gaps, overlaps, lessons learned, and best practices working with "Mission Partners" (Ministries', Departments', Bureaus', Agencies', Governments', Militaries', Special Operations and Conventional Forces). The papers should articulate how "Mission Partner" engagements and relationships impact operational missions.

Topic 11: Agile C2 Security

This topic addresses the design, development and operation of composable, reconfigurable, and resilient security systems in C2 cyberspace.

Topic 12: ISR for Decision Making

This topic addresses how ISR support to operations will evolve in concert with C2 adaptations to emerging threats, new technologies, and the velocity of information. Papers should explore how future intelligence analysis processes, tools, and/or technologies will enable agile decision making across scales and organizational boundaries. Of particular interest are concepts that extend beyond "conventional" temporal, geo-spatial, and network-based representation of data.

Please email all submissions to: iccrt@dodccrp.org

Abstract Submission Requirements

All submissions must include the following information:

20th ICCRTS

Title of Paper (15 word max)

Topic(s) choose one primary topic and two alternates from the topics listed above.

Name of Author(s)

Student Paper (if appropriate, see eligibility requirements below)

Point of Contact (POC) who will be responsible for all correspondence with the ICCRTS team.

POC Name

POC Organization

POC Complete Address

POC Telephone

POC E-mail Address

Abstract (300 word maximum)

In addition to the abstract, we encourage authors to submit an outline for the full paper which will enable us to provide early feedback.

Eligibility for Student Paper

All students who are currently enrolled as graduate students and have earned 6 credit hours or more or are undergraduates and have 12 credit hours or more (or the European Credit Transfer and Accumulation System (ECTS) equivalent) of courses are eligible to submit ICCRTS abstracts/papers as a student. The level and current stage of study must be included (undergraduate: e.g., sophomore, or graduate: Master's or Research Doctoral degrees, number of years in program). Abstract submissions must provide proof of student status with either a written statement from the department chair or a copy of the college or university course schedule for the current or immediate past quarter or semester. When more than one author is listed on the paper, it may be designated as a student paper if and only if the student applicant is the primary author (listed first and identified as student). If the other authors are faculty members, the faculty adviser must provide a written statement affirming that the student contributed to over 50 percent of the content.

Paper Acceptance Criteria

The following criteria will be used by track chairs and symposium staff in their review process:

1. The paper is appropriate for the theme and topics of Symposium.
2. The paper is intellectually stimulating.
3. The literature review is adequate/appropriate.
4. The research design is adequate/appropriate.
5. The data analysis is adequate/appropriate.
6. The conclusions are reasonable.
7. The paper advances the state of knowledge.
8. The paper is logical and consistent.
9. The paper's argument is persuasive.
10. The writing is clear and readable.

Papers will not be accepted if:

1. Topics stray from the conceptual focus of the Symposium.
2. Attempts are made to promote or sell specific goods and/or services.
3. Claims are unsubstantiated or facts are inaccurate.
4. Scientific merit is lacking.
5. Writing/explanations are poor.