

24<sup>th</sup> INTERNATIONAL  
COMMAND AND CONTROL  
RESEARCH & TECHNOLOGY SYMPOSIUM  
29-31 OCTOBER - LAUREL, MARYLAND, USA

2019

Welcome !



International Command and Control Institute

# 24<sup>TH</sup> ICCRTS THANKS

ICCRTS was conceived with the goal of providing C2-related researchers with a venue and opportunity to present their ideas and findings, get feedback, and foster research collaborations

Thank you for sharing taking the time to write papers and participate in this year's event.

# 24<sup>TH</sup> ICCRTS THANKS

to our Host



Jimmie McEver

Kim Cavallo

and the entire APL team

# 24<sup>TH</sup> ICCRTS THANKS

to our  
Program Chair

Ken Teske

# 24<sup>TH</sup> ICCRTS THANKS TRACK CHAIRS

Russell Bryant  
Aletta Eikelboom  
Jade Freeman  
Kevin Galvin  
Patrick Guerin  
Frank Trethan Johnsen  
Marco Manso  
Mark Miller  
Adrienne Raglin  
Greg Robinson  
Robert Rosas  
Justin Schmidt  
Ken Teske

**23<sup>RD</sup> ICCRTS  
THANKS**

**to our many authors**

# **24<sup>TH</sup> ICCRTS**

## **BEST PAPER NOMINEES (1)**

Francois Rheume

**Risk-based cyber mission assurance model, process and metrics**

Anders Josefsson, Björn Marcusson, Joseph Anderson and Arne Norlander

**Mission Command when waging cyber operations**

Shaun Ball, Carien Van'T Wout and Rudolph Oosthuizen.

**A Framework for Implementing a Data Science Capability in a Military Intelligence System**

Rudolph Oosthuizen and Carien Van'T Wout

**A Sociotechnical System Perspective on Artificial Intelligence Implementation for Modern Intelligence Systems**

# **24<sup>TH</sup> ICCRTS**

## **BEST PAPER NOMINEES (2)**

Kevin Chan, Gregory Judd, Claudia Szabo, Vanja Radenovic, Peter Boyd and Kelvin Marcus  
**Networked information transfer strategies for Multidomain Command and Control**

Anderson Ferreira De Oliveira, Tomas Aquino Botelho and Manoel Pedro Sá  
**Command and Control Interoperability Middleware Architecture (INTERC2)**

Ritu Gill, Judith van de Kuijt, Magnus Rosell and Ronnie Johansson  
**Disinformation in the Cyber Domain: Detection, Impact, and Counter-Strategies**



# 24<sup>TH</sup> ICCRTS

## BEST PAPER NOMINEES (3)

Andrew Zschorn, Hing-Wah Kwok and Wolfgang Mayer  
Microservice API design to support C2 semantic integration

Frank Johnsen, Trude Bloebaum, Norman Jansen, Gerome Bovet,  
Marco Manso, Andrew Toth and Kevin Chan  
Evaluating Publish/Subscribe Standards for Situational Awareness using Realistic  
Radio Models and Emulated Testbed

Marius Vassiliou  
C2 in the Mafia

# Security

- ▶ The conference is an unclassified, open forum for presentations that do not involve sensitive or proprietary information
- ▶ ICCRTS is not an appropriate location for classified discussion
- ▶ Presentations will be posted to the IC2I website after the conclusion of the conference



**UNCLASSIFIED**

# Attribution

- ▶ Plenary presentations and Q&A are “not for attribution”
- ▶ This facilitates an full and frank exchange of views
- ▶ If you wish to quote a statement you must get explicit permission from the speaker



OPEN FORUM

- ▶ If you refer to the concepts and findings in any of the technical papers, please remember to cite the author and source.

# Welcome to the Kossiakoff Conference and Education Center



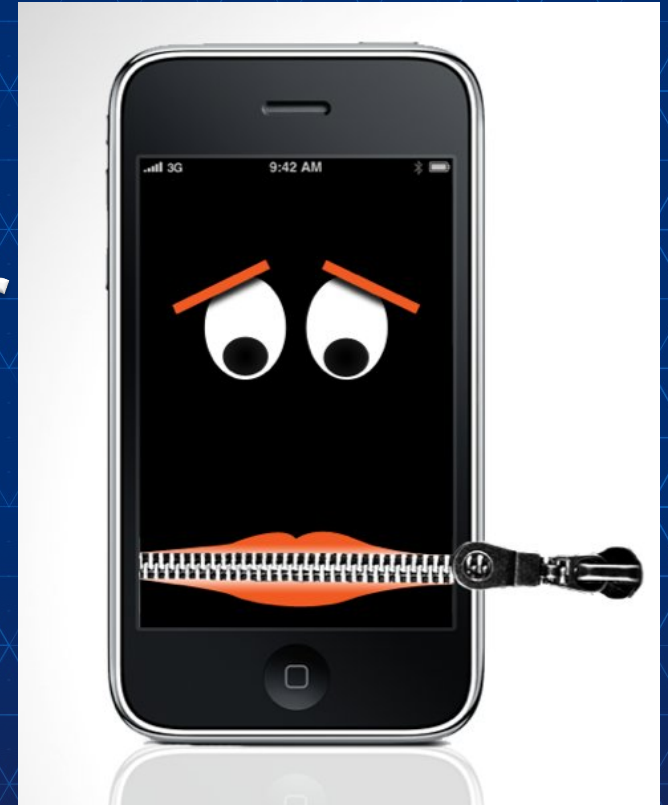
**Please note the  
Nearest EXIT**



**Please No  
refreshments  
in the Auditorium**



Please Silence your  
electronic devices



**Restrooms are  
located on the  
opposite side of  
the Lobby**





# Survey

- ▶ We want to hear from you
- ▶ The good... and the bad
- ▶ Suggestions for future Symposium
- ▶ Please take the time to fill in your forms

# International C2 Institute

- ▶ Participation at ICCRTS comes with a one-year membership
- ▶ New memberships begin the week after ICCRTS; existing memberships are extended
- ▶ New members will get instructions in an email

# 24<sup>TH</sup> ICCRTS OVERVIEW

## Today's Plenaries

**Cybersecurity and Risk to Mission**

– Don Heckman – Principal Deputy CIO (US DoD)

**ICCRTS Track Chairs Preview**

**Joint and Coalition Command and Control**

– Panel Discussion

**The Dragonfly Mission to Titan: C2 Challenges of Space Exploration**

– Mike Ryschewitsch and Ken Hibbard

# 24<sup>TH</sup> ICCRTS OVERVIEW

## Tomorrow's Plenaries

JHUAPL Welcome

– Tim Galpin Assistant Director for Programs

Reflections

Introduction to ELICIT Ecosystem

– Dr. David S. Alberts

Command and Control Research Challenges

– Dr. Craig Lawrence

Managing Cyber Risk to Mission in the National Security Enterprise

– Panel Discussion

# 23<sup>RD</sup> ICCRTS OVERVIEW

## Thursday's Plenaries

### Reflections

**Cyber Risk to Mission: Operating in a Cyber Contested Environment**  
– John J. Garstka Director, Cyber (OUSD A-S)

### Best Paper Award

# **Social Events**

**Reception Tonight from 5:50pm to 7:00pm**

**25<sup>TH</sup> ICCRTS  
CALL FOR PARTICIPATION**

**Week of 2 November 2020**

**Southampton, England**

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