

Papers and Journals 2020

Allocation and Scheduling in a Multi-domain, Dynamic Environment

Authors: Katherine Guo, Jennifer Lautenschlager, VanB, Valerie Champagne, Luis Asencios Reynoso
AFRL/RI's Autonomous Command and Control Magazine | October

Chiplet Ecosystem for Mil-Aero Applications

Authors: Patrick Zarnas, Ben Sampson, Lezly Murphy, Rick Stevens
GOMACTech Conference 2020 | March 16-19

[Deinterleaving Pulse Trains via Interleaved Markov Process Estimation](#)

Authors: Gabriel Ford, Benjamin Foster, Stephen Braun
2020 IEEE Radar Conference | September 21

Galvanic Vestibular Stimulation Flyer

Authors: Raquel Galvan, Lisa Baraniecki
Demonstration event at the Lockheed Martin Center for Innovation | March 4

Hardware Architecture Resilience by Design

Authors: Brian Uhlhorn, Harsha Torke
GOMACTech Conference 2020

[In vitro Prototyping and Rapid Optimization of Biosynthetic Enzymes for Cell Design](#)

Authors: Michael Krein, Dave Coar
Nature Chemical Biology

[Long Low-PSL Binary Codes by Multi-Thread Evolutionary Search](#)

Author: Jon Russo
2020 IEEE International Radar Conference | April 27 – May 1

[Minesweeper: A Novel and Fast Ordered-Statistic CFAR Algorithm](#)

Authors: Carl Colena, Michael Russell, Stephen Braun
2020 IEEE High Performance Extreme Computing Conference (HPEC '20) | September 21

[On Distributed Online Convex Optimization with Sublinear Dynamic Regret and Fit](#)

Author: DJ Bucci
54th Annual Conference on Information Sciences and Systems IEEE | March

[Robust Dynamic Spectrum Access in Adversarial Environments](#)

Authors: Timothy Hu, Joseph Palombo, Michael Liston, DJ Bucci
2020 IEEE International Conference on Communications (ICC) | June 7

[Robust Stochastic Bandit Algorithms under Probabilistic Unbounded Adversarial Attack](#)

Authors: DJ Bucci, Timothy Hu, Joseph Palombo, Michael Liston
Thirty-Fourth AAAI Conference on Artificial Intelligence | February 7-10

[Systems Engineering of Autonomy: Frameworks for MUM-T Architecture](#)

Author: Jerry Franke
Defense Science Information Analysis Center's Summer Edition

[Wind Measurement and Simulation Techniques in Multi-Rotor Small Unmanned Aerial Vehicles](#)

Authors: DJ Bucci, Gabe Ford
IEEE Access | March

Papers and Journals 2019

[Bright Future for Integrated Magnetics](#)

Authors: Dev Palmer, David Kirkwood, Steve Gross, Michael Steer, Harvey S. Newman, Scooter Johnson
IEEE Microwave Magazine | June

[Communication Network Topology Inference Via Transfer Entropy](#)

Author: Donald J. Bucci
IEEE Transactions on Network Science and Engineering | January

[Decentralized Formation Coordination of Multiple Quadcopters Under Communication constraints](#)

Authors: Donald J. Bucci, Pramod Abichandani, Kyle Levin
IEEE International Conference on Robotics and Automation (ICRA) | May 24

[K-medoids Clustering of Data Sequences with Composite Distributions](#)

Authors: Donald J. Bucci, Tiexing Wang, Qunwei Li, Yingbin Liang, Biao Chen, Pramod K. Varshney
IEEE Transactions on Signal Processing, vol. 67, no. 8, pp. 2093–2106 | April

[Maximal 8×8 Binary MOCS Cliques from Scratch](#)

Author: Jon Russo
2019 IEEE Radar Conference | April 22-26

[Multi-Target Tracking with an Event-Based Vision Sensor and a Partial-Updated GMPHD Filter](#)

Author: Ben Foster
Imaging Science and Technology (IS&T) Electronic Imaging 2019 | January 13-18

[Profiles, Proxies, and Assumptions: Decentralized, Communications-Resilient Planning, Allocation, and Scheduling](#)

Authors: Brian Kettler, Katherine Guo, Martin Hofmann, Valerie Champagne, Jennifer Lautenschlager, Luis Asencios
Thirty-First Annual Conference on Innovative Applications of Artificial Intelligence (IAAI-19) | January 29-21

[Resolving Events Through Multi-Intelligence Fusion](#)

Authors: Jay Ritchie & Phil DiBona
Journal of DoD Research and Engineering, Vol 2, Issue 1 | February

[RF Active Optical Cable \(AOC\) Leveraging the AIM Photonics RF Analog KTMA](#)

Author: Michael Hoff
2018 ARM National Member Meeting | March 20-21

[Trust-Driven Privacy in Human-Robot Interactions](#)

Author: Tina Setter, Matthew Hale, Kingsley Fregene
American Control Conference (ACC) | July 12

Papers and Journals 2018

[Clustering Under Composite Generative Models](#)

Authors: Donald J. Bucci, Tiexing Wang, Yingbin Liang, Biao Chen, Pramod K Varshney
IEEE Conference on Information Sciences and Systems (CISS) 2018 | March 21–23

[DARKMENTION: A Deployed System to Predict Enterprise-Targeted External Cyberattacks Description \(PDF\)](#)

Authors: Timothy Siedlecki, Mohammed Almukaynizi, Ericsson Marin, Eric Nunes, Paulo Shakarian, Gerardo I. Simari, Dipsy Kapoor
IEEE Intelligence and Security Informatics (ISI) 2018 | November 9

[Distributed UAV Swarm Formation Control via Object-Focused, Multi-Objective SARSA](#)

Authors: Christian Speck & Donald J. Bucci
IEEE American Control Conference | June 29

[Exhaustive Search for Optimal-PSL Quad-Phase Codes](#)

Authors: Jon Russo & Gregory E. Coxson
IEEE Radar Conference | April 23–27

[Exponentially Consistent K-Means Clustering Algorithm Based on Kolmogorov-Smirnov Test](#)

Authors: Donald J. Bucci, Tiexing Wang, Yingbin Liang, Biao Chen, Pramod K Varshney
2018 IEEE International Conference on Acoustics, Speech, and Signal Processing | April 15–20

[Frontiers in Thermionic Cathode Research](#)

Authors: Dev Palmer, David M. Kirkwood, Steven J. Gross, Thomas John Balk, Matthew J. Beck, John Booske, Daniel Busbaher, Ryan Jacobs, Martin E. Kordesch, Bryan Mitsdarffer, Dane Morgan, Bernard Vancil, Joan E. Yater
IEEE Transactions on Electron Devices, vol. 65, no. 6, pp. 2061–2071 | June

[Influential Cognitive Processes on Framing Biases in Aging](#)

Authors: Alison M. Perez, Jeffrey Scott Spence, L. D. Kiel, Erin E. Venza, Sandra B. Chapman
Frontiers in Psychology, 9, 661. | June

[A Multi-Sensor Approach to Linking Behavior to Job Performance](#)

Authors: Alison Perez, Amanda Kraft, Raquel Galvan-Garza, Matt Pava, Matthias Ziegler
Human Computer Interaction International Conference | July 15–20

[Multi-Target Tracking with an Event-Based Vision Sensor and the GMPHD Filter](#)

Authors: Benjamin Foster, Dong Hye Ye, Charles A. Bouman,
2018 SPIE Defense and Commercial Sensing, Gaylord Palms Resort & Convention Center | April 15–19

[Nonparametric Composite Hypothesis in an Asymptotic Regime](#)

Authors: Donald J. Bucci, Qunwei Li, Tiexing Wang, Yingbin Liang, Biao Chen, Pramod K. Varshney
IEEE Journal of Special Topics in Signal Processing | August

[On Self-Localization and Tracking with an Unknown Number of Targets](#)

Authors: Donald J. Bucci, Pranay Sharma, Augustin-Alexandru Saucan, Pramod K. Varshney
Asilomar Conference on Signals, Systems, and Computers Conference | October 28–31

[Passive Multi-Target Tracking Using the Adaptive Birth Intensity PHD Filter](#)

Authors: Christopher Berry, Donald J. Bucci, Samuel Watt Schmid
21st International Conference on Information Fusion | July 11

[Reexamining Computational Support for Intelligence Analysis: A Functional Design for a Future Capability](#)

Authors: Kevin Barry, James Llinas, Galina Rogova, James Scrofani
SPIE Next-Generation Analyst VI Conference | April 16–17

STAPLE: Spatio-Temporal Precursor Learning for Event Forecasting

Author: Jim Starz

SIAM International Conference on Data Mining 2018 | May 3-5

Wireless Network Traffic Disaggregation using Bayesian Nonparametric Techniques

Authors: Gabe Ford, Rebecca Cargan, Ali Ahmed, Kevin Rigney, Chris Berry, DJ Bucci

IEEE Conference on Information Sciences and Systems (CISS) 2018 | March 21-23

Papers and Journals 2017

Autonomy V&V Workshop Trip Report

Author: Dan Lordan

Verification and Validation (V&V) of Autonomous Systems Workshop, Center for Leadership Excellence | August 29-30

[Binary Complementary Code Structure via a Simple Necessary Condition](#)

Authors: Gregory E. Coxson, William Haloupek, Jon Russo

IEEE Transactions on Aerospace and Electronic Systems; Year: 2017, Volume: 53, Issue: 4

[Challenges and Opportunities in Gray Zone Combat](#)

Authors: Mark Hoffman & Martin Hofmann

8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017),

6th International Conference on Cross-Cultural Decision Making | July 17-21

[Communications Aware Decentralized Model Predictive Control for Path Planning within UUV Swarms](#)

Authors: Alex Abad, Nick DiLeo and Kingsley Fregene

2017 IEEE Conference on Control Technology and Applications (CCTA)

[Decentralized Model Predictive Control for UUV Collaborative Missions](#)

Authors: Alex Abad, Nick DiLeo, Kingsley Fregene

OCEANS | September 18-21

[Enabling Mixed Method Modeling Through the Use of Causal Networks](#)

Authors: James Starz, Jennifer Lautenschlager, Tim Siedlecki, Luis Asencios Reynoso

8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017),

6th International Conference on Cross-Cultural Decision Making | July 17-21

[Enhanced Spectrum Awareness using Bayesian Nonparametric Pattern Recognition Techniques](#)

Authors: Gabriel Ford, Sean Mason, Kevin Rigney

IEEE 2017 Conference on Information Sciences and Systems | March 22-24

[Enumeration and Generation of PSL Equivalence Classes for Quad-Phase Codes of Even Length](#)

Authors: Gregory Emmett Coxson & Jon Carmelo Russo

IEEE Transactions on Aerospace and Electronic Systems; Year: 2017, Volume: 53, Issue: 4, Pages: 1907-1915

A fast track approach towards automatic detection of Gray Zone activities from text

Authors: Jason Schlachter & Jennifer Lautenschlager

8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017),

6th International Conference on Cross-Cultural Decision Making | July 17-21

[Geo-tagged Social Media Data as a Proxy for Urban Mobility](#)

Authors: Cheng Qian, Philipp Kats, Sergey Malinchik, Mark Hoffman, Brian Kettler, Constantine Kontokosta, Stanislav Sobolevsky

8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017),

6th International Conference on Cross-Cultural Decision Making | July 17-21

[How Intelligence Analysts are Using Artificial Intelligence - WEBT article](#)

Authors: Phil DiBona & Samantha Kupersmith

Lockheed Martin "We're Engineering a Better" campaign

[Human/Autonomy Collaboration for the Automated Generation of Intelligence Products](#)

Authors: Phil DiBona & Jason Schlachter

SPIE Defense + Commercial Sensing: Next-Generation Analyst V Conference | April 10

[Interactive Pattern Discovery in High-Dimensional, Multimodal Data using Manifolds](#)

Authors: Katherine Guo & Martin Hofmann
CAS 2017 | October 30-November 1

[Integrated Photonics Technology and RF over Fiber](#)

Authors: Brian Uhlhorn & Rick Stevens
Government Microcircuit Applications & Critical Technology (GOMACTech) Conference 2017 | March 20-23

[Keeping Autonomy in Mind: Building Closed-Loop Human-Machine Team Performance Improvement Systems](#)

Authors: Matthew Pava, Bartlett Russell, William Casebeer
IEEE CogSIMA 2017 | March 26

[Neurofeedback for Personalized Adaptive Training](#)

Authors: Matthias Ziegler & Amanda Kraft
8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017),
6th International Conference on Cross-Cultural Decision Making | July 17-21

[A Systematic Approach to Developing Near Real-Time Performance Predictions Based on Physiological Measures](#)

Authors: Bartlett Russell, William Casebeer, Matthias Ziegler, Amanda E. Kraft, Jon Russo, Michael Krein
IEEE CogSIMA 2017 | March 27-31

[Underwater Image Mosaicking and Visual Odometry](#)

Authors: Firooz Sadjadi, Sekhar Tangirala, Scott Sorber
SPIE Automatic Target Recognition Conference | April