Papers and Journals 2021

Band Structure Critical Point Energy in Germanium – Tin Alloys with High Tin Contents
Author: Dominic Imbrenda
Applied Physics Letters (APL) | October 2021

Command and Control Across Air, Space and Cyber Domains at Speed and Scale for Dynamic Targets
Authors: Jinhong K Guo, Jennifer Lautenschlager, David Van Brackle, Val Champagne
26th International Command and Control Research and Technology Symposium | October 25-29

A Comparison of Common Video Game Heads-Up-Displays versus Real-World Designs for the Purpose of Target Localization and Identification
Authors: Gina Notaro, Raquel Galvan-Garza, Jim Allen, Matthias Ziegler, et al
2021 IEEE International Symposium on Mixed and Augmented Reality Adjunct (ISMAR-Adjunct) | October

The Effect of Noisy Galvanic Vestibular Stimulation on Learning of Functional Mobility and Manual Control Nulling Sensorimotor Tasks
Author: Raquel Galvan-Garza
Frontiers Neuroscience Journal

Implementation of Decentralized Reinforcement Learning-Based Multi-Quadrotor Flocking
Authors: Donald J Bucci, Christian Speck, et al
IEEE Access | November

On Distributed Online Convex Optimization with Sublinear Dynamic Regret and Fit
Author: Donald J Bucci
Asilomar Conference on Signals, Systems, and Computers | November 1

Part-X: A Family of Stochastic Algorithms for Search-based Test Generation with Probabilistic Guarantees
Author: Mauricio Castillo-Effen
Computing Research Repository (CoRR) | October 20

The Path Towards Trustworthy AI and Autonomy
Author: Mauricio Castillo-Effen
NVIDIA's GTC 2021 Conference | November 9

The Path Towards Trustworthy AI and Autonomy
Author: Mauricio Castillo-Effen
Workshop On Safe Autonomy and Practical AI | November 12

Proceedings of the Workshop on Artificial Intelligence Safety 2021
Author: Mauricio Castillo-Effen, et al
The Thirtieth International Joint Conference on Artificial Intelligence (IJCAI 2021) | August

Programmatically Identifying Cognitive Biases Present in Software Development
Authors: Amanda Kraft, Matthew Widjaja, Trevor Sands, Brad Galego
SciPy Conference 2021 (virtual)

Shared-ACS Binary Code Pair Search Exploiting Coupled Symparity
Author: Jon Russo
IEEE Transactions on Aerospace and Electronic Systems (T-AES) journal | March

Shared-Autocorrelation Binary Code Pair Search Exploiting Coupled Parity
Author: Jon Russo
IEEE 2020 Conference on Information Sciences and Systems | June 1

Soft Actor-Critic Solution to a Security Game With Deception and an Informant
Authors: Jinhong K Guo, Martin Hofmann, Carter Veldhuizen, Valerie Champagne
26th International Command and Control Research and Technology Symposium | October 25-29

Towards Assurance Case Evidence Generation Through Search-based Testing
Author: Mauricio Castillo-Effen, et al
Proceedings of the 2021 International Conference on Embedded Software (EMSOFT '21) | October 8-15

Unknown Signal Detection in Interference and Noise Using Hidden Markov Models
Authors: Gabe Ford and Ben Foster
IEEE Statistical Signal Processing Workshop 2021 | July 11-14

US versus China: Promoting 'Constructive Competition' to Avoid 'Destructive Competition' Chapter 6. An Approach to Managing the "Complex Adaptive System" That Is Peer Competition
Author: Mark Hoffman
SMA Perspectives Emergent Issues for US National Security | May

Wearable Brain and Body Sensing for Multimodal Assessment of Cognitive Workload and Training
Authors: Amanda Kraft and Matthias Ziegler
Human Factors & Medicine Research Symposium | October

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