

Publication citation examples relating to  
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# Information Institute® Facilitated Research Publications

A reference collection from  
2016 forward

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# Information Institute® Facilitated Research Publications

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## 2019, 2020 Sample Citations

Matthew **Anderson**, Matthew Williamson, and K. Subramani, Empirical analysis of algorithms for the shortest negative cost cycle problem. *Discrete Applied Mathematics*. Vol. 253, 30 January 2019.

Sajad Mousavi, Fatemeh Afghah, Jonathan **Ashdown**, Kurt **Turck**, "Use of A Quantum Genetic Algorithm for Coalition Formation in Large-scale UAV Networks", *Elsevier Ad Hoc Networks Journal*, vol. 87, pp. 26-36, May 2019.

A. Shamsoshoara, M. Khaledi, F. Afghah, A. Razi, J. **Ashdown**, "Distributed Cooperative Spectrum Sharing in UAV Networks Using Multi-Agent Reinforcement Learning", 2019 16<sup>th</sup> IEEE Annual Consumer Communications & Networking Conference, Las Vegas, January 2019.

A. Shamsoshoara, M. Khaledi, F. Afghah, A. Razi, J. **Ashdown**, "Distributed Cooperative Spectrum Sharing in UAV Networks Using Multi-Agent Reinforcement Learning", *IEEE Consumer Communications & Networking Conference (CCNC'19)*, Jan. 2019.

Stone, D. L., Shah, G., Motai, Y., & **Aved**, A. J. Vegetation Segmentation for Sensor Fusion of Omnidirectional Far-Infrared and Visual Stream. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 12(2), 614-626. (2019).

**Blasch**, E., Cruise, R., **Aved**, A., Majumder, U., & Rovito, T., Methods of AI for Multi-modal Sensing and Action for Complex Situations. *AI Magazine*. (2019).

**Blasch**, E., Liu, Z., Zheng, Y., Majumder, U., **Aved**, A., & **Zulch**, P. , Multisource deep learning for situation awareness. In *Automatic Target Recognition XXIX* (Vol. 10988, p. 109880M). International Society for Optics and Photonics. (2019, May).

Nikouei, S. Y., Xu, R., Chen, Y., **Aved**, A., & **Blasch**, E., Decentralized smart surveillance through microservices platform. In *Sensors and Systems for Space Applications XII* (Vol. 11017, p. 110170K). International Society for Optics and Photonics. (2019, May).

Nagothu, D., Chen, Y., **Blasch**, E., **Aved**, A., & Zhu, S., Detecting malicious false frame injection attacks on the internet of video things using electrical network frequency signals. *Sensors, Special Issue on Intelligent Signal Processing, Data Science and the IoT World*, 1-20. (2019).

Xu, R., Nikouei, S. Y., Chen, Y., **Blasch**, E., & **Aved**, A., Blendmas: A blockchain-enabled decentralized microservices architecture for smart public safety. *arXiv preprint arXiv:1902.10567*. (2019).

Nagothu, D., Chen, Y., **Blasch**, E., **Aved**, A., & Zhu, S., Detecting Malicious False Frame Injection Attacks on Surveillance Systems at the Edge Using Electrical Network Frequency Signals. *Sensors*, 19(11), 2424. (2019).

Bassey, J., Adesina, D., Li, X., Qian, L., **Aved**, A., & **Kroecker**, T., Intrusion Detection for IoT Devices based on RF Fingerprinting using Deep Learning. In *2019 Fourth International Conference on Fog and Mobile Edge Computing (FMEC)* (pp. 98-104). IEEE. (2019, June).

# Information Institute® Facilitated Research Publications

Version: 11 May 2020

Iyer, V., **Aved**, A., **Howlett**, T. B., Carlo, J. T., Mehmood, A., Pissniou, N., & Iyengar, S. S., Fast multi-modal reuse: co-occurrence pre-trained deep learning models. In Real-Time Image Processing and Deep Learning 2019 (Vol. 10996, p. 109960A). International Society for Optics and Photonics. (2019, May).

Xin Zhang, Jia Liu, Zhengyuan Zhu, and Elizabeth **Bentley**, Compressed Distributed Gradient Descent: Communication-Efficient Consensus over Networks, in Proc. IEEE INFOCOM, Paris, France, Apr. 2019.

M. S. Asif and A. **Prater-Bennette**. "Multilinear compressive sensing with tensor ring factorization", ICIP 2019, 2019 IEEE International Conference on Image Processing, April 2019.

P. Zhou, N. **McDonald**, A. Edwards, L. Loomis, C. **Thiem**, J. Friedman, "Reservoir Computing with Planar Nanomagnet Arrays," *GOMACTech-20* (2020)

David Schwab, Puneet Singla, Joseph **Raquepas**, "Uncertainty Characterization and Surrogate Modeling for Angles-Only Initial Orbit Determination", 2019 AAS/AIAA Astrodynamics Specialist Conference, Portland, ME August 2019.

David Ciliberto, Puneet Singla, Joseph **Raquepas**, "Optimal Quadrature Based Filtering in Regularized Coordinates for Orbit Determination", 2019 AAS/AIAA Astrodynamics Specialist Conference, Portland, ME August 2019.

Atri Dutta, Joseph **Raquepas**, "Stochastic Optimization Framework for Spacecraft Maneuver Detection", 2020 AIAA SciTech Forum, Orlando FL, January 2020.

Xi Hang Cao, Xiaojiang Du, and E. Paul **Ratazzi**, "A Light-Weight Authentication Scheme for Air Force Internet of Things," in Proceedings of 2019 IEEE International Conference on Communications (ICC), Communication and Information Systems Security (CISS) Symposium, May 20-24, 2019.

Xu, Xuening, Chenglong Fu, Xiaojiang Du and Paul **Ratazzi**, "Effective UAV and Ground Sensor Authentication." In Proceedings of 2019 IEEE Global Communications Conference (GLOBECOM): Ad Hoc and Sensor Networks (AHSN). Dec. 9-13, 2019.

Zhao, Hong and Paul **Ratazzi**, "Providing Physical Layer Security for IoTs in the Last Mile." In submission, 2020.

Hu, Rui, Yuanxiong Guo, Paul **Ratazzi** and Yanmin Gong, "Resource-Efficient and Privacy-Preserving Distributed Machine Learning for Internet of Things." In submission, 2020.

## 2018 Sample Citations

C. Cafaro and P. M. **Alsing**, Decrease of Fisher information and the information geometry of evolution equations for quantum mechanical probability amplitudes, Phys. Rev. E 97, 042110; 2018.

C. Cafaro and P. M. **Alsing**, Theoretical analysis of nearly optimal continuous time quantum search algorithms, work in progress; 2018.

C. Cafaro and P. M. **Alsing**, Analog quantum search and time-dependent two-level quantum systems, work in progress; 2018.

C. Cafaro and P. M. **Alsing**, Decrease of Fisher information and the information geometry of evolution equations for quantum mechanical probability amplitudes, Phys. Rev. E97, 042110; 2018.

H. Peng, A. Razi, F. Afghah, J. **Ashdown**, "A Unified Framework for Joint Mobility Prediction and Object Profiling of Drones in UAV Networks", Journal of Communications and Networks, Vol:20, Issue: 5, Oct. 2018, JCN Special Issue on Amateur Drone and UAV Communications and Networks, 2018.

H. Peng, A. Razi, F. Afghah, J. **Ashdown**, "A Unified Framework for Joint Mobility Prediction and Object Profiling of Internet of Things with Flying Nodes", to appear in Journal of Communications and Networks (JCN), Special Issue on Amateur Drone and UAV Communications and Networks, 2018.

S. Mousavi, F. Afghah, J. **Ashdown**, K. **Turck**, "Leader-follower based Coalition Formation in Large-scale UAV Networks, A Quantum Evolutionary Approach", INFOCOM Wireless Sensor, Robot and UAV Networks Workshop (WiSARN), Honolulu, HI, April 2018.

"Multi-View Boosting with Information Propagation for Classification," Peng, J., **Aved**, A.J., **Seetharaman**, G., and K. Palaniappan, K., IEEE Transactions on Neural Networks and Learning Systems, Vol. 29, No. 3, pp. 657–669, 2018.

"Approximate regularized least squares algorithm for classification," Peng, J. and **Aved**, A. SPIE: Pattern Recognition and Tracking XXIX 10649, 2018.

Iyer, V. and Alex **Aved**, B. 2018. "AUTOENCODER versus PRE-TRAINED CNN NETWORKS: Deep-Features applied to accelerate computationally expensive object detection in real-time video streams". SPIE & DS (September, Germany).

S. Y. Nikouei, R. Xu, D. Nagothu, Y. Chen, A. **Aved**, and E. **Blasch**, "Real-Time Index Authentication for Event-Oriented Surveillance Video Query using Blockchain," 2018 IEEE International Smart Cities Conference (ISC2), Kansas City, MO, USA, Sept. 16 - 19, 2018.

F. Afghah, M. Zaeri Amirani, A. Razi, J. Chakareski, and E. **Bentley**, "A Coalition Formation Approach to Coordinated Task Allocation in Heterogeneous UAV Networks", IEEE American Control Conference ACC'18, Milwaukee, USA, 2018.

Fusion based Heterogeneous Convolutional Neural Networks Architecture, David Kornish, Soundararajan Ezekiel, Maria **Cornacchia**, AIPR 2018, Sponsored by IEEE, October 9-11, Washington DC.

# Information Institute® Facilitated Research Publications

Version: 11 May 2020

DCNN Augmentation via Synthetic Data from Variational Autoencoders and Generative Adversarial Networks, David Kornish, Soundararajan Ezekiel, Maria **Cornacchia**, AIPR 2018, Sponsored by IEEE, October 9-11, Washington DC.

Alvaro **Velasquez**, K. Subramani, and Steven L. **Drager**. Finding minimum stopping and trapping sets: An integer linear programming approach. In 5th International Symposium on Combinatorial Optimization (ISCO), 2018, Marrakesh, Morocco, April 11-13, 2018, Proceedings, 2018.

V. Nikulin, R. Fang, **D. Hughes** and S. Huerster, "Off-axis performance of Lyot filters in multi-access quantum communication receivers," *Proc. SPIE 10547, Advances in Photonics of Quantum Computing, Memory, and Communication XI*, 105470F, San Francisco, CA, Feb. 22. 2018.

Malware Classification using Deep Convolutional Neural Networks, David Kornish, Justin Geary, Victor Sansing, Soundararajan Ezekiel, Larry Pearlstein, Laurent **Njilla**, AIPR 2018, Sponsored by IEEE, October 9-11, Washington DC.

Tosh D.K., Shetty S., Foytik P., **Kamhoua** C., and **Njilla** L., "Blockchain Empowered Secure Internet-of-Battlefield Things (IoBT)", MILCOM 2018 – 2018 IEEE Military Communications Conference (MILCOM), 29-31 October 2018.

H. Zhao, L. Kwiat, K. **Kwiat**, C. **Kamhoua**, and L. **Njilla**, "Applying Chaos Theory for Runtime Hardware Trojan Monitoring and Detection", IEEE Transactions on Dependable and Secure Computing, 2018.

G. Grigoryan , and Y. Liu, L. **Njilla**, C. **Kamhoua** and K. **Kwiat** , "Enabling Cooperative IoT Security via Software Defined Networks (SDN)", IEEE ICC 2018, Kansas City, May 2018.

F. Afghah, A. Shamsoshoara, L. **Njilla**, and C. **Kamhoua**, "A Reputation-based Stackelberg Game Model to Enhance Secrecy Rate in Spectrum Leasing to Selfish IoT Devices", INFOCOM, Workshop on Advances in Software Defined and Context-aware Cognitive Networks (IEEE SCAN), Honolulu, HI, April 2018.

C.-T. Huang, M. Sakib, L. **Njilla**, C. **Kamhoua**, "A Game Theoretic Approach for Making IoT Device Connectivity Decisions During Malware Outbreak," 2019 International Conference on Computing, Networking and Communications (ICNC), 2018.

Tosh D.K., Shetty S., Foytik P., **Kamhoua** C., and **Njilla** L., "CloudPoS: A Proof of Stake Consensus Design for Blockchain Integrated Cloud", IEEE International Conference on Cloud Computing (CLOUD 2018).

Z. Guan, Nan Cen, T. Melodia, Scott **Pudlewski**, "Self-Organizing Flying Drones with Massive MIMO Networking," in Proc. of Mediterranean Ad Hoc Networking Workshop (Med-Hoc-Net), Capri, Italy, June 2018.

# Information Institute® Facilitated Research Publications

Version: 11 May 2020

A. Dutta and J. **Raquepas**, "Spacecraft Maneuver Detection using Optimal Control Problem and Relative Equation of Motion," AAS/AIAA Astrodynamics Specialist Conference, Snowbird UT, Aug 2018.

Physically-Constrained Inverse Optimal Control for Satellite Maneuver Detection, Richard Linares, University of Minnesota, Joseph B. **Raquepas** Air Force Research Laboratory, Rome, NY, 2018 AIAA/AAS Astrodynamics Specialist Conference.

Spacecraft Maneuver Detection Using Optimal Control Theory and Relative Equations of Motion, Atri Dutta, Wichita State University, Joseph B. **Raquepas**. AFRL/RI, 2018 AIAA/AAS Astrodynamics Specialist Conference.

Li, Ke, Xiangzhan Yu, Hongli Zhang, Longfei Wu, Xiaojiang Du, Paul **Ratazzi**, and Mohsen Guizani. "Security Mechanisms to Defend against New Attacks on Software-Defined Radio." In 2018 International Conference on Computing, Networking and Communications (ICNC), pp. 537-541. IEEE, 2018.

Jingwei Liu , Xiaolu Li , Rong Sun , Xiaojiang Du and Paul **Ratazzi**, "An Efficient Privacy-Preserving Incentive Scheme without TTP in Participatory Sensing Network," in Proceedings of 2018 IEEE International Conference on Communications (ICC), Cognitive Radio and Networks (CRN) Symposium, 20-24 May 2018.

Haotian Chi, Longfei Wu, Xiaojiang Du, Qiang Zeng, and Paul **Ratazzi**, "e-SAFE: Secure, Efficient and Forensics-Enabled Access to Implantable Medical Devices," in Proceedings of 2018 IEEE Conference on Communications and Network Security (CNS), 30 May-1 Jun 2018.

T. Yang, D. **Smith**, D. **Benincasa**, "I/Q Imbalances in QAM Communication Systems with Multi-antenna Receivers and IF Architecture", IEEE SouthEastCon, Tampa, Florida, April 2018.

## 2017 Sample Citations

- P. M. **Alsing**, E. E. Hach, III, C. C. Tison, and A. M. Smith “Quantum-optical description of losses in ring resonators based on field-operator transformations,” *Phys. Rev. A* 95, 053828; 2017.
- P. M. **Alsing** and E. E. Hach, III, “Photon pair generation in a lossy microring resonator. I. Theory,” *Phys. Rev. A* 96, 033847 (2017)
- P. M. **Alsing** and E. E. Hach, III, “Photon pair generation in a lossy microring resonator. II. Entanglement in the output mixed Gaussian squeezed state,” *Phys. Rev. A* 96, 033848; 2017.
- “Regularized Difference Criterion for Computing Discriminants for Dimensionality Reduction,” **Aved**, A.J., Peng, J., and **Blasch**, E., *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 53, No. 5, pp. 2372–2384, 2017.
- V. Venkateswaran, A. **Aved**, D. **Ferris**, and N. Sivi, “Critical Node Analysis On Interconnected Networks Under Cascading Failures,” manuscript under preparation, 2017.
- A. Razi, A. Valehi, E. **Bentley**, “Delay minimization by adaptive framing policy in cognitive sensor networks”, (WCNC), San Francisco, CA USA, March 2017.
- Fatemeh Afghah, Mohammad Zaeri Amirani, Abolfazl Razi, Jacob Chakareski, and Elizabeth **Bentley**, “A Coalition Formation Approach to Coordinated Task Allocation in Heterogeneous UAV Networks”, *IEEE American Control Conference (ACC)*, Milwaukee, USA, 2017.
- Jia Liu, Atilla Eryilmaz, Ness B. Shro, and Elizabeth S. **Bentley**, Understanding the Impacts of Limited Channel State Information on Massive MIMO Cellular Network Optimization, *IEEE Journal on Selected Areas in Communications (JSAC)*, vol. 35, no. 8, pp. 1715-1727, Aug. 2017.
- Jia Liu and Elizabeth S. **Bentley**, Hybrid-Beamforming-Based Millimeter-Wave Cellular Network Optimization," in *Proc. IEEE WiOpt*, Paris, France, May. 15-19, 2017.
- Fusion of Deep Convolutional Neural Network, Robert Suchy, Soundararajan Ezekiel, Maria **Cornacchia**, *AIPR 2017*, Sponsored by IEEE, October 10-12, Washington DC.
- A Novel and Unifying View of Trustworthiness in Cyberphysical Systems (with S. **Drager**), *Computer Network Security. Proc. MMM-ACNS 2017. Lecture Notes in Computer Science 10446*, Springer, 2017, pp. 327-338.
- D. **Hughes** and R. Erdmann, “Non-local correlations in a hyper-entangled circuit,” *Proc. SPIE*, 10118-19; 2017.
- C.-T. Huang, M. Sakib, C. **Kamhoua**, K. **Kwiat**, L. **Njilla**, “A Game Theoretic Approach to Online Malvertising Detection and Mitigation,” *Proceedings of IEEE ICC 2017*, May 2017.
- Tosh D.K., Shetty S., Sengupta S., Kesan J., **Kamhoua** C., “Risk Management using Cyber-Threat Information Sharing and Cyber-Insurance”, in *EAI International Conference on Game Theory for Networks*, 2017 (Invited).



# Information Institute® Facilitated Research Publications

Version: 11 May 2020

Ghosh, U., Chatterjee, P., Tosh D.K., Shetty S., Xiong, K., **Kamhoua** C., "A SDN based Framework for Guaranteeing Security and Performance in Information Centric Cloud Networks", in IEEE International Conference on Cloud Computing (CLOUD) (short paper), 2017.

Praveen Rao, Anas Katibz, Kobus Barnard, Charles **Kamhoua**, Kevin **Kwiat**, and Laurent **Njilla**. "Scalable Score Computation for Learning Multinomial Bayesian Networks over Distributed Data." In Proc. of AAAI 2017 Workshop on Distributed Machine Learning (DML 2017), pages 498-504, San Francisco, CA, February 2017.

Tosh D.K., Shetty S., Liang X., **Kamhoua** C., **Kwiat** K. and **Njilla** L., "Consensus Protocols for Blockchain-based Data Provenance: Challenges and Opportunities", 2017 IEEE 8th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), Oct 19-21, 2017.

Liang X., Shetty S., Tosh D.K., **Kamhoua** C., **Kwiat** K. and **Njilla** L., "ProvChain: A Blockchain-based Data Provenance Architecture in Cloud Environment with Enhanced Privacy and Availability", in Proceedings of the 17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID), pp. 468-477, 2017 (23% acceptance).

Tosh D.K., Vakili I., Shetty S., Sengupta S., **Kamhoua** C., **Njilla** L., **Kwiat** K., "Three Layer Game Theoretic Decision Framework for Cyber-Investment and Cyber-Insurance", 8th Conference on Decision and Game Theory for Security (GameSec), Vienna, Austria, October 23-25, 2017.

Ballistic Missile Boost Phase Acceleration Reconstruction, Colter Long, Soundararajan Ezekiel, Larry Pearlstein, Joseph **Raquepas**, AIPR 2017, Sponsored by IEEE, October 10-12, Washington DC.

P. Rao, C. **Kamhoua**, L. **Njilla**, and K. **Kwiat**. Methods to Detect Cyberthreats on Twitter. In Surveillance in Action - Technologies for Civilian, Military and Cyber Surveillance, Advanced Sciences and Technologies for Security Applications. Springer, 2017.

K. Namuduri, A. **Soomro** and S. K. Gottapu, "A Hierarchical Framework for Estimating the Performance of an Aerial Network", in Proc. Ad Hoc Networks 9th EAI International Conference, ADHOCNETS 2017, Niagara Falls, ON, Canada, Sept. 28-29, 2017, pp. 119-130, 2016 Invited Paper.

Justin Zhan, Timothy Rafalski, Gennady **Stashkevich**, Edward **Verenich**, Vaccination Allocation in Large Dynamic Networks, Journal of Big Data, 4:2, 2017.

Q. Jiang and B. **Suter**, Instantaneous frequency estimation based on synchrosqueezing transform, Signal Processing, 138; 2017.

## 2016 Sample Citations

A comparative study of multi-focus image fusion validation metrics, Michael Giansiracusa, Adam Lutz, Neal Messer, Soundararajan Ezekiel, Mark **Alford**, Erik **Blasch**, Adnan **Bubalo**, Michael **Manno**, Geospatial Informatics, Fusion and Video Analytics VI, SPIE Defense + Security, April 17-21, 2016, Baltimore, Maryland USA.

Multi-focus and multi-modal fusion: a study of multi-resolution transforms, Michael Giansiracusa, Adam Lutz, Soundararajan Ezekiel, Mark **Alford**, Erik **Blasch**, Adnan **Bubalo**, Millicent Thomas, Geospatial Informatics, Fusion and Video Analytics VI, SPIE Defense + Security, April 17-21, 2016, Baltimore, Maryland USA.

Bandelet-based image fusion: a comparative study for multi-focus images, Michael Giansiracusa, Adam Lutz, Neal Messer, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Geospatial Informatics, Fusion and Video Analytics VI, SPIE Defense + Security, April 17-21, 2016, Baltimore, Maryland USA.

Optimal multi-focus contourlet-based image fusion algorithm selection, Adam Lutz, Michael Giansiracusa, Neal Messer, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Geospatial Informatics, Fusion and Video Analytics VI, SPIE Defense + Security, April 17-21, 2016, Baltimore, Maryland USA.

"Mining Best Strategy for Multi-view Classification," Peng, J. and **Aved**, A.J., International Conference on Data Mining and Big Data, pp. 270-275, 2016.

Jia Liu, Atilla Eryilmaz, Ness B. Shroff, and Elizabeth S. **Bentley**, "Heavy-Ball: A New Approach to Tame Delay and Convergence in Wireless Network Optimization," in Proc. IEEE INFOCOM, San Francisco, CA, Apr. 10-15, 2016 (Best Paper Award).

J. Liu, A. Eryilmaz, N. B. Shroff, and E. **Bentley**, "Heavy-ball: A new approach to tame delay and convergence in wireless network optimization," in Proc. IEEE INFOCOM, 2016, (Best Paper Award).

A Framework for Measuring Security as a System Property in Cyberphysical Systems (with I. Buckley, B. Czejdo, S. **Drager**, A. Kornecki), *Information (Switzerland)*, Vol. 7, No. 2, 2016.

D. **Hughes**, Reinhard Erdmann, and V. Nikulin, "Quantum Operations on Entangled Photons Using Lyot Filters," *Proc. SPIE, 9996-16, Quantum Information Science and Technology II*, 99960H (24 October 2016), 2016. Edinburgh, United Kingdom | September 26, 2016.

V. Nikulin, D. **Hughes**, and J. **Malowicki**, "Effect of optical manipulation on the  $\alpha\eta$  protocol," *Proc. OPIC2016, Optical Manipulation Conference*, Yokohama, Japan, 18 – 20 May 2016.

C. **Kamhoua**, H. Zhao, M. Rodriguez, and K. **Kwiat**, "A Game-Theoretic Approach for Testing for Hardware Trojans", *IEEE Transactions on Multi-Scale Computing Systems*, vol. 2, 2016.

Praveen Rao, Anas Katibz, Charles **Kamhoua**, Kevin **Kwiat**, and Laurent **Njilla**. "Probabilistic Inference on Twitter Data to Discover Suspicious Users and Malicious Content." In the 2nd IEEE International Symposium on Security and Privacy in Social Networks and Big Data (SocialSec 2016), pages 407-414, Nadi, Fiji, December 2016.

# Information Institute® Facilitated Research Publications

Version: 11 May 2020

P. Rao, A. Katib, C. **Kamhoua**, K. **Kwiat**, and L. **Njilla**. Probabilistic Inference on Twitter Data to Discover Suspicious Users and Malicious Content, 2016 IEEE International Conference on Computer and Information Technology (CIT), 2016.

K. Namuduri and A. **Soomro**, “Reliability, Throughput and Latency Analysis of an Aerial Network”, in Ad Hoc Networks 8th EAI International Conference, ADHOCNETS 2016, Ottawa, Canada, Sept. 26-27, 2016, Revised Selected Papers, pp. 382-389, 2016.

## 2015 Sample Citations

Contourlet Image Preprocessing for Enhanced Control Point Selection in Airborne Image Registration, Theodore Sobolewski, Neal Messer, Adam Lutz, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Adnan **Bubalo**, AIPR 2015, Sponsored by IEEE, October 13-15, Washington DC.

Bandelet Transformation based Image Registration, Adam Lutz, Kendrick Grace, Neal Messer, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Adnan **Bubalo**, Maria **Cornacchia**, AIPR 2015, Sponsored by IEEE, October 13-15, Washington DC.

Contourlet Image Preprocessing for Enhanced Control Point Selection in Airborne Image Registration, Theodore Sobolewski, Neal Messer, Adam Lutz, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Adnan **Bubalo**, AIPR 2015, Sponsored by IEEE, October 13-15, Washington DC.

Bandelet Transformation based Image Registration, Adam Lutz, Kendrick Grace, Neal Messer, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Adnan **Bubalo**, Maria **Cornacchia**, AIPR 2015, Sponsored by IEEE, October 13-15, Washington DC.

Using ROC Curves and AUC to Evaluate Performance of No-Reference Image Fusion Metrics, Michael H Ferris, Michael McLaughlin, Samuel Grieggs, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Adnan **Bubalo**, Maria **Cornacchia**., National Aerospace and Electronics Conference (NAECON), Dayton, Ohio June 16-19, 2015.

Bandelet Denoising in Image Processing, Michael H Ferris, Michael McLaughlin, Samuel Grieggs, Soundararajan Ezekiel, Erik **Blasch**, Mark **Alford**, Adnan **Bubalo**, Maria **Cornacchia**., National Aerospace and Electronics Conference (NAECON), Dayton, Ohio June 16-19, 2015.

ROC Curve Analysis for Validating Objective Image Fusion Metrics, Neal Messer, Soundararajan Ezekiel, Michael H. Ferris, Erik **Blasch**, Mark **Alford**, Adnan **Bubalo**, Maria **Cornacchia**, AIPR 2015, Sponsored by IEEE, October 13-15, Washington DC.

D. B. Uskov, P. Lougovski, P. M. **Alsing**, M. L. **Fanto**, L. Kaplan, A. M. Smith, *Optimal mode transformations for linear-optical cluster-state generation*, Phys. Rev. A 91, 062318; 2015.

D. B. Uskov, P. M. **Alsing**, M. L. **Fanto**, L. Kaplan, A. M. Smith, *Resource-efficient generation of linear cluster states by linear optics with postselection*, 2015 J. Phys. B: At. Mol. Opt. Phys. 48 045502.

Information fusion performance evaluation for motion imagery data using mutual information: initial study, Samuel M. Grieggs, Michael J. McLaughlin, Soundararajan Ezekiel, Erik **Blasch**, Geospatial Informatics, Fusion and Video Analytics V, SPIE Defense + Security, April 20-24, 2015, Baltimore, Maryland USA.

Modeling Resiliency and Its Essential Components for Cyberphysical Systems (with S. **Drager**, W. **McKeever**, A. Kornecki, B. Czejdo), *Proc. FedCSIS 2015, Federated Conference on Computer Science and Information Systems*, September 13-16, 2015, Lodz, Poland, pp. 107–114.

# Information Institute® Facilitated Research Publications

Version: 11 May 2020

V. Nikulin, D. **Hughes**, J. **Malowicki** and V. Bedi, "Analysis of the secrecy of the running key in quantum encryption channels using coherent states of light," *Proc. SPIE*, Vol. 9500, *Quantum Information and Computation XIII*, 950009, Baltimore, MD, 20 – 24 Apr. 2015.

Tosh D.K., Sengupta S., Mukhopadhyay S., **Kamhoua** C., and **Kwiat** K., "Game Theoretic Modeling to Enforce Security Information Sharing among Firms", in Proceedings of the 2nd IEEE International Conference on Cyber Security and Cloud Computing (CSCloud), pp. 7–12, 2015.

H. Zhao, K. **Kwiat**, C. **Kamhoua**, and M. Rodriguez, "Applying Chaos Theory for Runtime Hardware Trojan Detection", CISDA 2015, IEEE Symposium on Computational Intelligence for Security and Defense Applications, Verona, New York, USA, May 26 – 28, 2015.

**Kamhoua** C., Martin A., Tosh D.K., **Kwiat** K., Heitzenrater C., and Sengupta S., "Cyber-threats Information Sharing in Cloud Computing: A Game Theoretic Approach", in Proceedings of the 2nd IEEE Intl. Conf. on Cyber Security and Cloud Computing (CSCloud), pp. 382–389, 2015.

Tosh D.K., Molloy M., Sengupta S., **Kamhoua** C., and **Kwiat** K., "Cyber-investment and cyber-information exchange decision modeling", in Proceedings of the 7th IEEE International Conference on Cyberspace Safety and Security (CSS), pp. 1219–1224, 2015.

Tosh D.K., Sengupta S., **Kamhoua** C.A., **Kwiat** K.A., Martin A.: "An Evolutionary Game-Theoretic Framework for Cyber-threat Information Sharing", in Proceedings of IEEE International Conference on Communications (ICC), pp. 7341–7346, 2015.

S. **Pudlewski**, N. Cen, Z. Guan, and T. Melodia, "Video Transmission over Lossy Wireless Networks: A Cross-layer Perspective," *IEEE Journal on Selected Topics in Signal Processing*, vol. 9, no. 1, pp. 6-22, Feb. 2015.

## 2014 Sample Citations

Modified Deconvolution using Wavelet Image Fusion, McLaughlin M., Ezekiel S., **Blasch E.**, **Bubalo A.**, **Cornacchia M.**, **Alford M.**, Thomas M. AIPR 2014, Sponsored by IEEE, October 14-16, Washington DC.

Multi-Resolution Deblurring, Lin E., McLaughlin M., Ezekiel S., **Blasch E.**, **Bubalo A.**, **Cornacchia M.**, **Alford M.**, Thomas M., AIPR 2014, Sponsored by IEEE, October 14-16, Washington DC.

No-reference Blur Metric using and Dual-Density and Dual-Tree Two-Dimensional Wavelet Transformation, Ezekiel S., Harrity K., **Alford M.**, **Blasch E.**, **Ferris D.**, **Bubalo A.**, National Aerospace and Electronics Conference (NAECON), Dayton, Ohio June 25-27, 2014.

Blur and Sharpness metric for no-reference digital images using wavelet transformation with morphological operations, Ezekiel S., Harrity K., **Alford M.**, **Ferris D.**, **Bubalo A.**, **Blasch E.**, **Scalzo M.**, National Aerospace and Electronics Conference (NAECON), Dayton, Ohio June 25-27, 2014.

Double –Density, Double- Tree Wavelet-based Polarimetry Analysis, Ezekiel S., Harrity K., **Alford M.**, **Blasch E.**, **Bubalo A.**, National Aerospace and Electronics Conference (NAECON), Dayton, Ohio June 25-27, 2014.

Denoising an Image using Contourlets and Curvelets, Moore R., **Alford M.**, **Blasch E.**, Ezekiel S., National Aerospace and Electronics Conference (NAECON), Dayton, Ohio June 25-27, 2014.

Denoising a One-Dimensional Signal using Contourlets and Curvelets, Moore R., **Alford M.**, **Blasch E.**, Ezekiel S. National Aerospace and Electronics Conference (NAECON), Dayton, Ohio June 25-27, 2014.

Reference-free multiscale blur detection tool for content-based image retrieval, Ezekiel S., Stocker R., Harrity K., **Alford M.**, **Ferris D.**, **Blasch E.**, Gorniak M. Geospatial InfoFusion and Video Analytics IV, SPIE Defense + Security, May5-9, 2014, Baltimore, Maryland USA.

Comparative analysis of fusion metrics across anomaly detection algorithms, **Blasch E.**, Harrity K., Ezekiel S., **Alford M.**, **Ferris D.**, Geospatial InfoFusion and Video Analytics IV, SPIE Defense + Security, May5-9, 2014, Baltimore, Maryland USA.

Wavelet based Polarimetry analysis, Ezekiel S., Harrity K., Farag W., **Alford M.**, Geospatial InfoFusion and Video Analytics IV, SPIE Defense + Security, May5-9, 2014, Baltimore, Maryland USA.

E. E. Hach, III, S. F. Preble, A. W. Elshaari, P. M. **Alsing**, and M. L. **Fanto**, “Scalable Hong-OuMandel manifolds in quantum optical ring resonators,” Phys. Rev. A89, 043805; 2014.

Extension of No-Reference Deblurring Methods through Image Fusion, Ferris M., **Blasch E.**, McLaughlin M., Ezekiel S. AIPR 2014, Sponsored by IEEE, October 14-16, Washington DC.

Measuring Security: A Challenge for the Generation (with S. **Drager**, W. **McKeever**, A. Kornecki), *Proc. FedCSIS 2014, Federated Conference on Computer Science and Information Systems*, Warsaw, Poland, September 7-10, 2014, pp. 131–140.

# Information Institute® Facilitated Research Publications

Version: 11 May 2020

T. Yang, Y. **Salama**, J. **Matyjas**, R. **Michalak**, "Study of the I/Q Imbalance Problem in Adaptive Beamforming Receivers", 2014 NSF/INL (Idaho National Laboratory) National Wireless Research Collaboration Symposium, pp. 95-99, Idaho Falls, Idaho, May 2014.

Ashrafi, S. **Wenndt**, "Classification of Sonorant Consonants Utilizing Empirical Mode Decomposition," 48<sup>th</sup> Asilomar Conference on Signals, Systems and Computers, Asilomar, CA, Nov 2014.

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