

KEY:  Graduate Students

 ECE or CASP Post-Doctorates

## Graduate Students' Conference Publications

**A. F. Baroughi** and S. A. Craver, "Additive Attacks on Speaker Recognition," *Proceeding of SPIE, Media Watermarking, Security, and Forensics 2014*, Vol. 9028 90280Q, doi: 10.1117/12.2040872, February 19, 2014.

**Z. Birnbaum**, **B. Liu**, **A. Dolgikh**, Y. Chen, and V. Skormin, "Cloud Security Auditing based on Behavioral Modeling," *IEEE 2013 1<sup>st</sup> International Workshop on Cloud Security Auditing (CSAW)*, Santa Clara, California, USA, June 27–July 2, 2013.

**Z. Birnbaum**, **A. Dolgikh**, and V. Skormin, "Intrusion Detection Using N-Grams of Object Access Graph Components," *8<sup>th</sup> International Conference on Digital Society (ICDS 2014)*, pp.209–215, Barcelona, Spain, March 23, 2014.

**Z. Birnbaum**, **A. Dolgikh**, V. Skormin, E. O'Brien, and D. Muller, "Unmanned Aerial Vehicle Security Using Recursive Parameter Estimation," *International Conference on Unmanned Aircraft Systems 2014 (ICUAS 2014)*, Orlando, Florida, USA, May 27, 2014.

**M. R. Blondet**, A. Badarinath, C. Khanna, and Z. Jin, "A Wearable Real-Time BCI System Based on Mobile Cloud Computing," *6<sup>th</sup> International IEEE EMBS Neural Engineering Conf. (NER)*, pp. 739-742, San Diego, California, USA, November 8, 2013.

**M. R. Blondet**, N. Khalian, K. J. Kurtz, S. Laszlo, and Z. Jin, "Brainwaves as Authentication Method: Proving Feasibility Under Two Different Approaches," *Proc. 40<sup>th</sup> Annual Northeast Bioengineering Conference (NEBEC)*, April 26, 2014.

**S. Chen**, **C. Dai**, **A. Fraiwan**, and S. Choi, "A Miniaturized Parallel Analyses Platform for Rapid Electrochemical Discoveries of Microbial Activities," *IEEE NEMS 2014*, pp. 639-642, April 13–16, 2014.

**C. Dai, S. Chen, A. Fraiwan**, and S. Choi, "Direct Visualization of Electrogenic Bacteria in a Microfabricated Microbial Fuel Cell," *IEEE Sensors*, pp. 636-639, Baltimore, Maryland, USA, November 4–6, 2013.

J. Fridrich and **T. Denmark**, "Detection of Content-Adaptive LSB Matching (a Game Theory Approach)," *Proc. SPIE, Electronic Imaging, Media Watermarking, Security, and Forensics 2014*, Vol. 9028, San Francisco, California, USA, February 2–6, 2014.

J. Fridrich, **T. Denmark**, and **V. Holub**, "Further Study on the Security of S-UNIWARD," *Proc. SPIE, Electronic Imaging, Media Watermarking, Security, and Forensics 2014*, Vol. 9028, San Francisco, California, USA, February 2–6, 2014.

**R. Dixit**, W. Zheng, A. Hatfield, J. Gerardi, G. Hickman, W. Doak, and D. Klotzkin, "Optical Backscatter Measurement of Cloud Particulates," *IEEE Sensors*, pp. 1-4, November 2013.

**A. Dolgikh, Z. Birnbaum**, Y. Chen, and V. Skormin, "Behavioral Modeling for Suspicious Process Detection in Cloud Computing Environments," *2013 International Workshop on Mobile Cloud Computing: Data, Management & Security (mCloud), in conjunction with the 14th IEEE International Conference on Mobile Data Management (IEEE MDM 2013)*, Milan, Italy, June 3–6, 2013.

**A. Dolgikh, Z. Birnbaum**, and V. Skormin, "Customized Behavioral Normalcy Profiles for Critical Infrastructure Protection," *2013 Annual Symposium on Information Assurance (ASIA)*, June 5, 2013.

**A. Emrani**, P. Vasekar, and C. Westgate, "CZTS Solar Cells With 5.75% Efficiency Using Sputtered Precursors," *39<sup>th</sup> IEEE, Photovoltaic Specialists Conference 2013 (PVSC 2013)*, pp. 2545-2547, June 16-21, 2013.

**A. Emrani**, T. Dhakal, and C. Westgate, "CZTS Solar Cells Fabricated by Fast Sulfurization of Sputtered Sn/Zn/Cu Precursors Under H<sub>2</sub>S Atmosphere," *40<sup>th</sup> IEEE, Photovoltaic Specialists Conference 2014 (PVSC 2014)*, June 8-13, 2014.

C. Peng, T. Dhakal, **A. Emrani**, et al, "Stability of CZTS Thin Film Solar Cells upon Accelerated Thermal Cycling and Damp Heat Exposure," *40<sup>th</sup> IEEE, Photovoltaic Specialists Conference 2014 (PVSC 2014)*, June 8-13, 2014.

**E. English, A. Hung, E. Kesten, D. Latulipe**, and Z. Jin, "EyePhone: A Mobile Human-Computer Interface Based on Wearable EEG Headset for Assistive Healthcare," *6<sup>th</sup> International IEEE EMBS Neural Engineering Conf. (NER)*, pp. 105-108, San Diego, California, USA, November 8, 2013.

- A. Fraiwan** and S. Choi, "A Multi-Anode Paper-Based Microbial Fuel Cell for Disposable Biosensors," *IEEE Sensors*, pp. 1908-1911, Baltimore, Maryland, USA, November 4–6, 2013.
- A. Fraiwan, C. Dai, N. K. Sidhu**, A. C. Rastogi, and S. Choi, "A Micro-Sized Microbial Fuel Cell with Electrochemical Sensing Functionality," *IEEE NEMS 2014*, pp. 635-638, Hawaii, USA, April 13–16, 2014.
- A. Fraiwan, C. Dai, T. H. Nguyen**, and S. Choi, "A Paper-Based Bacteria-Powered Battery having High Power Generation," *IEEE NEMS 2014*, pp. 394-397, Hawaii, USA, April 13–16, 2014.
- J. Fridrich and **M. Goljan**, "Estimation of Lens Distortion Correction from Single Images," *Proc. SPIE, Electronic Imaging, Media Watermarking, Security, and Forensics 2014*, Vol. 9028, San Francisco, California, USA, February 2–6, 2014.
- Q. Gui, B. Liu, X. Wang**, Z. Jin, and Y. Chen, "Finding Needles in a Haystack: Reducing False Alarm Rate Using Telemedicine Mobile Cloud," *1<sup>st</sup> Workshop on Mobile Cloud Computing in Healthcare (WMCCH), in conjunction with IEEE International Conference on Healthcare Informatics (ICHI 2013)*, Philadelphia, Pennsylvania, USA, Sept. 9–11, 2013.
- A. Hadiks**, Y. Chen, F. Li, and **B. Liu**, "A Study of Stealthy Denial-of-Service Attacks in Wi-Fi Direct Device-to-Device Networks," *11<sup>th</sup> Annual IEEE Consumer Communication & Networking Conference, Work-in-Progress (CCNC 2014, WiP)*, Las Vegas, Nevada, USA, January 10–13, 2014.
- J. Fridrich and **V. Holub**, "Challenging the Doctrines of JPEG Steganography," *Proc. SPIE, Electronic Imaging, Media Watermarking, Security, and Forensics 2014*, Vol. 9028, San Francisco, California, USA, February 2–6, 2014.
- J. Huang** and N. E. Wu, "A New Scalable Solution to Optimal PMU Placement under a Long-run Data Availability Criterion," *Proc. 2013 American Control Conference*, Washington, DC, USA, June 17–19, 2013.
- J. Hubbard, K. Weimer**, and Y. Chen, "A Study of SSL Proxy Attacks on Android and iOS Mobile Applications," *11<sup>th</sup> Annual IEEE Consumer Communication & Networking Conference (CCNC 2014)*, Las Vegas, Nevada, USA, January 10–13, 2014.
- J. Fridrich, **J. Kodovský**, and **V. Sedighianaraki**, "Study of Cover Source Mismatch in Steganalysis and Ways to Mitigate its Impact," *Proc. SPIE, Electronic Imaging, Media Watermarking, Security, and Forensics 2014*, Vol. 9028, San Francisco, California, USA, February 2–6, 2014.

**B. Liu**, Y. Chen, D. Shen, G. Chen, E. Blasch, and K. Pham, "A Holistic Cloud-Enabled Robotics System for Real-Time Video Tracking Application," *International Workshop on Cloud Enhanced Information Fusion (CloudFusion 2013)*, in conjunction with 8th FutureTech Conference, Gwangju, Korea, September 4–6, 2013.

**B. Liu**, E. Blasch, Y. Chen, D. Shen, and G. Chen, "Scalable Sentiment Classification for Big Data Analysis Using Naive Bayes Classifier," *Workshop on Scalable Machine Learning: Theory and Applications*, in conjunction with the 2013 IEEE International Conference on Big Data (IEEE Big Data 2013), Santa Clara, California, USA, October 6–9, 2013.

**B. Liu**, Y. Chen, D. Shen, G. Chen, K. Pham, E. Blasch, and B. Rubin, "An Adaptive Process-Based Cloud Infrastructure for Space Situational Awareness Applications," *2014 SPIE Defense, Security, and Sensing (DSS)*, Baltimore, Maryland, USA, May 5–9, 2014.

**V. N. Parinam**, **C. Vootkuri**, and S. A. Zahorian, "Comparison of Spectral Analysis Methods for Automatic Speech Recognition," *Proc. Interspeech 2013*, September 4, 2013.

**M. Pourhomayoun**, P. Dugan, M. L. Fowler, J. Zollweg, M. Popescu, D. Ponirakis, and C. Clark, "Underwater Noise Analysis of Massachusetts Bay: Acoustical Recordings Using High Performance Computing System," *MTS/IEEE OCEANS 2013*, San Diego, California, USA, September 23–26, 2013.

**Q. Qin** and N. E. Wu, "Control Reconfigurability-based Placement Strategy for FACTS Devices," *Proc. 2013 American Control Conference*, Washington, DC, USA, June 17–19, 2013.

**J. Reale**, **L. Huie**, and M. L. Fowler, "Locating Closely Spaced Coherent Emitters Using TDOA Techniques," *IEEE Asilomar Conference on Signals, Systems, and Computers*, Monterey, California, USA, November 2013.

Z. Jin, **X. Wang**, **Q. Gui**, **B. Liu**, and S. Song, "Improving Diagnostic Accuracy Using Multiparameter Patient Monitoring Based on Data Fusion in the Cloud," *Proc. International Workshop on Cloud Enhanced Information Fusion (CloudFusion)*, in conjunction with 8th FTRA International Conf. on Future Information Technology (FutureTech), pp. 473-476, September 6, 2013.

X. Li and **C. Xiong**, "Performance Analysis of Coexisting Secondary Users in Heterogeneous Cognitive Radio Network," *51st Annual Allerton Conference on Communication, Control and Computing*, Monticello, Illinois, USA, October 2–4, 2013.

X. Li, **C. Xiong** and J. Feldman, "OFDM Transmission Scheme for Asynchronous Two-way Multi-Relay Cooperative Networks with Analog Network Coding," *International Workshop on Emerging Technologies for LTE-Advanced and Beyond-4G, IEEE GlobeCom'2013*, Atlanta, Georgia, USA, December 9–13, 2013.

X. Li and **C. Xiong**, "Markov Model Bank for Heterogenous Cognitive Radio Networks with Multiple Dissimilar Users and Channels," *International Conference on Computing, Networking and Communications (ICNC'2014)*, Honolulu, Hawaii, USA, February 3–6, 2014.

X. Li, **C. Xiong**, and **W. Cadeau**, "A Polynomial Rooting Approach for Analysis of Competition among Secondary Users in Cognitive Radio Networks," *IEEE DySPAN 2014*, McLean, Virginia, USA, April 1–4, 2014.

**W. Yang**, Z. Jin, C. D. Thiem, B. Wysocki, D. Shen, and G. Chen, "Autonomous Target Tracking of UAVs based on Low-Power Neural Network Hardware," *Proc. SPIE Defense, Security, and Sensing (DSS) Symposium*, May 9, 2014.

**S. Yoon**, **H. Lee**, **A. Fraiwan**, **C. Dai**, and S. Choi, "A Micro-Sized Microbial Solar Cell," *IEEE NEMS 2014*, pp. 265-268, Hawaii, USA, April 13–16, 2014.

## Graduate Students' Journal Articles

**W. Cadeau**, X. Li, and **C. Xiong**, "Markov Model Based Jamming and Anti-jamming Performance Analysis for Cognitive Radio Networks," *Communications and Network*, Vol. 6, No. 2, pp. 76-85, May 2014.

**C. Dai** and S. Choi, "Technology and Applications of Microbial Biosensor," *Journal of Applied Biosensor*, Review Article, Vol. 2, pp. 83-93, 2013.

**A. Emrani**, P. Vasekar, and C. Westgate, "Effects of Sulfurization Temperature on CZTS Thin Film Solar Cell Performances," *Solar Energy*, Vol. 98, Part C, pp. 335-340, December 2013.

**A. Fraiwan**, S. Mukherjee, **S. Sundermier**, H. Lee, and S. Choi, "A Paper-Based Microbial Fuel Cell: Instant Battery for Disposable Diagnostic Devices," *Biosensors and Bioelectronics*, Vol. 49, pp. 410-414, 2013.

**A. Fraiwan**, D. F. Call, and S. Choi, "Bacterial Growth and Respiration in Laminar Flow Microbial Fuel Cell," *Journal of Renewable and Sustainable Energy*, Vol. 6, pp.023125, 2014.

**Z. Ge**, **P. Rajbhandari**, **J. Hu**, **A. Emrani**, T. P. Dhakal, C. R. Westgate, and D. Klotzkin, "Enhanced Omni-directional Performance of Copper Zinc Tin Sulfide Thin Film Solar Cell by Gradient Index Coating," *Applied Physics Letters*, Vol. 104, pp. 101104, March 2014.

J. Fridrich and **V. Holub**, "Random Projections of Residuals for Digital Image Steganalysis," *IEEE TIFS*, Vol. 8, Iss. 12, pp. 1996—2006, December 2013.

**J. Hu**, **Z. Ge**, A. Piquette, K. Mishra, and D. Klotzkin, "Design and Fabrication of a Combined Three-layer Coating including Gradient Refractive Index Films for Broadband Antireflection on Silicon," *Microwave and Optical Technology Letters*, Vol. 56, Iss. 1, pp. 256-259, November 2013.

**J. Huang**, N. E. Wu, and **M. Ruschmann**, "Data Availability-Constrained Placement of PMUs and Communication Links in a Power System," *IEEE Systems Journal*, Vol. 8, pp. 483-492, October 2013.

**J. Huang** and N. E. Wu, "Minimum Cost Upgrade of PMU Networks for Synchrophasor Availability," *International Journal of Robust and Nonlinear Systems*, Vol. 24, pp. 1341-1360, May 2014.

J. Fridrich, **V. Holub**, and **T. Denemark**, "Universal Distortion Function for Steganography in an Arbitrary Domain," *EURASIP Journal on Information Security (Section: SI: Revised Selected Papers of ACM IH and MMS 2013)*, December 2013.

J. Fridrich and **J. Kodovský**, "Effect of Image Downsampling on Steganographic Security," *IEEE TIFS*, February 2014.

**T. H. Nguyen**, **A. Fraiwan**, and S. Choi, "Paper-based Batteries: A Review," *Biosensors and Bioelectronics*, Vol. 54, pp. 640-649, 2014.

**G. P. Pandey** and A. C. Rastogi, "Poly(3,4-ethylenedioxythiophene)-Graphene Composite Electrodes For Solid-State Supercapacitors with Ionic Liquid Gel Polymer Electrolyte," *ECS Transactions*, Vol. 45, Iss. 29, pp. 173-181, July 2013.

**G. P. Pandey**, A. C. Rastogi, and C. R. Westgate, "Polyacrylonitrile and 1-Ethyl-3-methylimidazolium Thiocyanate based Gel Polymer Electrolyte for Solid-State Supercapacitors with Graphene Electrodes," *ECS Transactions*, Vol. 50, Iss. 43, pp. 145-151, July 2013.



**G. P. Pandey** and A. C. Rastogi, "Polyaniline-MnO<sub>2</sub> Nanocomposite Supercapacitor Electrodes Prepared by Galvanic Pulse Polymerization," *ECS Transactions*, Vol. 50, Iss. 43, pp. 71-78, July 2013.

**G. P. Pandey**, A. C. Rastogi, and C. R. Westgate, "All-solid-state Supercapacitors with Poly(3,4-ethylenedioxythiophene)-Coated Carbon Fiber Paper Electrodes and Ionic Liquid Gel Polymer Electrolyte," *Journal of Power Sources*, Vol. 245, pp. 857-865, January 2014.

**M. Pourhomayoun**, Z. Jin, and M. L. Fowler, "Indoor Localization, Tracking, and Fall Detection for Assistive Healthcare Based on Spatial Sparsity and Wireless Sensor Network," *International Journal of Monitoring and Surveillance Technologies Research (IJMSTR)*, Vol. 1, No. 2, pp. 72-83, June 2013.

**M. Pourhomayoun**, Z. Jin, and M. L. Fowler, "Accurate Localization of In-Body Medical Implants Based on Spatial Sparsity," *IEEE Transactions on Biomedical Engineering*, Vol. 61, No. 2, pp. 590 – 597, February 2014.

**R. R. Thankalekshmi** and A. C. Rastogi, "Synthesis and Properties of Zn(Cu-Mn)O Dilute Magentic Semiconductor Thin Films by Chemical Spray Pyrolysis Technique," *Journal of Analytical and Applied Pyrolysis*, Vol. 107, pp. 183-190, March 2014.

**X. Wang, Q. Gui, B. Liu**, Z. Jin, and Y. Chen, "Enabling Smart Personalized Healthcare: A Hybrid Mobile-Cloud Approach for ECG Telemonitoring," *IEEE Journal of Biomedical and Health Informatics (JBHI)*, Vol. 18, No. 3, pp. 739-745, May 2014.

**S. Yoon, H. Lee, A. Fraiwan, C. Dai**, and S. Choi, "A Microsized Microbial Solar Cell: A Demonstration of Photosynthetic Bacterial Electrogenic Capabilities," *IEEE Nanotechnology Magazine*, Vol. 8, pp. 24-29, March 2014.