NAME: Aono, Kenji

POSITION TITLE & INSTITUTION: Post Doctoral Research Associate, Washington University in St. Louis

(A) PROFESSIONAL PREPARATION

INSTITUTION	LOCATION	MAJOR / AREA OF STUDY	DEGREE	YEAR
Washington University in St. Louis	St. Louis, MO	Department of Electrical & Systems Engineering	Postdoctoral Fellow	2019 — present
Washington University in St. Louis	St. Louis, MO	Computer Engineering	PhD	2018
Michigan State University	East Lansing, MI	Electrical Engineering	PhD (Courses)	2015
Michigan State University	East Lansing, MI	Electrical Engineering	MS	2013
Michigan State University	East Lansing, MI	Computer Engineering	BS	2011
Michigan State University	East Lansing, MI	Electrical Engineering	BS	2011

(B) APPOINTMENTS

2020 – present   Co-founder, Free Dynamics Inc., Boston, MA
2020 – present   President, Infrastructure Analytic Company, Sheridan, WY
2019 – present   Post Doctoral Research Associate, Washington University in St. Louis
2018 – present   Senior Consultant, Kasol Ltd., Philadelphia, PA
2015 – present   Professional Aide, Michigan State University
2014   Fellow, Japan Society for the Promotion of Science, The University of Tokyo
2013 – 2018   Graduate Fellow, National Science Foundation
2012 – 2015   Graduate Fellow, Michigan Space Grant Consortium

(C) SELECTED PUBLICATIONS

1. Aono K, Chakrabartty S, Kondapalli S H, Pochettino O. *Autonomous Vehicle Support using Hybrid-powered Embedded Sensors*. US Patent App. 16/810,837, 2020.
2. Chakrabartty S, Alazzawi Y, Aono K, Scheller E L. *Methods and Apparatus for Wireless Power Delivery and Remote Sensing using Self-capacitances*. US Patent App. 16/789,007, 2020.
3. Mehta D, Aono K, Chakrabartty S. *A Self-powered Analog Sensor-data-logging Device based on Fowler-Nordheim Dynamical Systems*. NATURE COMMUNICATIONS. 2020 Oct, 11(5446). DOI: 10.1038/s41467-020-19292-w
4. Zhou L, Kondapalli S Harsha, Aono K, Chakrabartty S. *Desynchronization of Self-Powered FN Tunneling Timers for Trust Verification of IoT Supply Chain*. IEEE INTERNET OF THINGS JOURNAL. 2019 August; 6(4). DOI: 10.1109/JIOT.2019.2907930
5. Pochettino P, Kondapalli S H, Aono K, Chakrabartty S. *Real-time Infrastructure-to-Vehicle Communication using RF-Triggered Wireless Sensors*. IEEE 62nd MWSCAS. 2019 August; pp. 556 – 559. DOI: 10.1109/MWSCAS.2019.8885087
6. Aono K, Hasni H, Pochettino O, Lajnef N, Chakrabartty S. *Quasi-Self-Powered Piezo-Floating-Gate Sensing Technology for Continuous Monitoring of Large-Scale Bridges*. FRONTIERS IN BUILT ENVIRONMENT. 2019 March 26; 5. DOI: 10.3389/fbuil.2019.00029
7. Zhou L, Aono K, Chakrabartty S. *A CMOS Timer-Injector Integrated Circuit for Self-Powered Sensing of Time-of-Occurrence*. IEEE JOURNAL OF SOLID-STATE CIRCUITS. 2018 May; 53(5). DOI: 10.1109/JSSC.2018.2793531
8. Aono K. Nanopower Analog Frontends for Cyber-Physical Systems. Dissertation: Washington University in St. Louis; 2018. DOI: 10.7936/dj1v-6582
9. Zhou L, Aono K, Chakrabartty S. *Gaussian Process Regression for Improving the Performance of Self-powered Time-of-Occurrence Sensors*. IEEE 61st MWSCAS. 2018 August; pp. 996 – 999. DOI: 10.1109/MWSCAS.2018.8624046
10. Chakrabartty S, Shaga R K, Aono K. *Noise-shaping Gradient Descent-based Online Adaptation for Digital Calibration of Analog Circuits*. IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS. 2013 Jan; 24(4). DOI: 10.1109/TNNLS.2012.2236572

11. Aono K, Shaga R K, Chakrabartty C. *Exploiting Jump-Resonance Hysteresis in Silicon Cochlea for Formant Trajectory Encoding. IEEE 55th MWSCAS. 2012 August; pp. 85 – 88. DOI: 10.1109/MWSCAS.2012.6291963*

(D) SYNERGISTIC ACTIVITIES

1. Institute of Electrical and Electronics Engineers (IEEE), Member since 2008
   - HKN ΓZ Advisor 2010–2015, Michigan State University Student Branch Advisor 2012–2015
   - Elected as Chair for Education Society & Director of Circuits and Systems Society in SEM section
   - Reviewer for IoT-J, TBioCAS, JSSC, TNNLS, MWSCAS, BioCAS, ISCAS
   - IEEE RFID Mega Challenge Smart Cities, 2019 Winner
2. NSF/S&T I-Corp Sites Program, Spring 2020 Cohort
3. Skandalaris Center Leadership and Entrepreneurship Acceleration Program, 2019 and 2020 Awardee

(E) AREAS OF CURRENT INTEREST

1. Analog Circuits & Systems
2. Embedded Electronics
3. AI & Hardware Security
4. ASIC Circuit & System Design