

ZACHARY RAUEN

www.ZackRauen.com | <https://github.com/rauenzi>

PROFILE Computer Engineer, with an innovative mind and drive, looking to change the world.

EDUCATION AND TRAINING

Clarkson University 2018 **Master of Science:** Electrical and Computer Engineering **3.9 GPA**
Clarkson University 2016 **Bachelor of Science:** Computer Engineering **3.67 GPA**
Awards: Presidential Scholar, Deans List, John B. Russell Award, Best Research
Minors in: Software Engineering, Computer Science, and Mathematics.

PROFESSIONAL EXPERIENCE

August 2016 - May 2018: HCI + Behaviometrics Researcher | Clarkson University – Potsdam, NY
Worked on a crowdsensing application framework that introduced gesture and sociability-based user authentication. Combined the fields of HCI and behaviometrics in crowdsensing through a novel approach. Ran multiple experiment sessions and analyzed the data to confirm original theory.

Summer 2015: Hardware & Software Developer | IBM – Poughkeepsie, NY
Used leadership and collaboration skills to develop a new tool to test the hardware recovery of Z and P series mainframes across multiple sites (international) of IBM. Designed and implemented the firmware for the tool hardware as well as a remote GUI interface while collaborating on hardware design.

Summer 2014: Biometrics Researcher | Clarkson University – Potsdam, NY
Designed and developed an algorithm for cyber security; user verification via keystroke biometrics. This included a basic computer learning aspect. User verification rates were increased from 80.2% to 96.8% and the false acceptance rates were decreased from 12% to 2.73%. Award won at the annual SURE Conference.

PUBLICATIONS & AWARDS

IEEE MobiWac Paper – October 2018
Zachary I Rauen, Fazel Anjomshoa, Burak Kantarci, “Gesture and Sociability-based Continuous Authentication on Smart Mobile Devices.” IEEE MobiWac 2018.

IEEE CAMAD Paper – September 2018
Zachary I Rauen, Fazel Anjomshoa, Burak Kantarci, “Empowering Human-Computer Interaction in Securing Smartphone Sensing” IEEE CAMAD 2018.

SCPE Journal – June 2017
Zhiliu Yang, **Zachary I Rauen**, Chen Liu, “Automatic Tuning on Many-Core Platform for Energy Efficiency via Support Vector Machine Enhanced Differential Evolution.” Scalable Computing: Practice and Experience.

OSN Journal – January 2017
Zachary I Rauen, Burak Kantarci, Hussein Mouftah, “Resiliency versus energy sustainability in optical inter-datacenter networks.” Optical Switching and Networking.

IEEE FEC Paper – March 2016
Zachary I Rauen, Burak Kantarci, Mahesh Banavar, Nick Rolfe, Will Freitag, “A Tool for Simulation and Visualization of Distributed Estimation in Wireless Sensor Networks.” IEEE Frontiers in Education Conference.

NSF Award – August 2014- May 2016
Stephanie Schuckers, Daqing Hou, **Zachary Rauen**, Andrew Hou, Adam Scott, “Long-term Active User Authentication Using Multi-modal Profiles.” CNS Division of Computer and Network Systems.

SKILLS & INDEPENDENT LEARNING

Software – Photoshop, Inventor, Multisim, Xilinx ISE & Vivado, Altera Quartus II, Git
Digital Design – Circuit Diagrams, FPGAs, Microcontrollers, Timing Analysis, Minimal DSP
Web Development – HTML5, CSS3, Sass/Scss, Less, PHP, SQL, Javascript, Node, React, Electron, WebGL
Computer Languages – C, C++, C#, Java, VHDL, Python, R, Assembly, OpenGL API
Miscellaneous Languages – Bash, LaTeX, Spice, XML, AHK, GML, MATLAB, Markdown

LANGUAGES **English:** Native fluency, **Spanish:** Advanced fluency
AFFILIATIONS **IEEE:** Graduate Member, **Table Tennis Club:** President, **Circle K International**