BRYAN PEARSON

PERSONAL INFORMATION

University: University of Central Florida
College Unit: College of Engineering and Computer Science (CECS)
Address: Research 1, University of Central Florida
Email: bpearson@knights.ucf.edu

BIOGRAPHY

Bryan Pearson joined the Department of Computer Science at the University of Central Florida as a Ph.D student in August 2018, under the supervision of Dr. Xinwen Fu. He received his B.S. in Computer Science from Stetson University (2014), with minors in Physics and Mathematics.

Bryan's research interests include security and forensics of wireless sensor networks (WSN) and Internet of Things (IoT) systems, networking quality of service (QoS), and IoT scalability. He has been publishing in several conferences and journals including IEEE International Conference on Communications, SoutheastCon, INFOCOM, and MDPI Sensors.

EDUCATION

University of Central Florida   *August 2018 - Present*
Ph.D in Computer Science
Focus: Internet of Things (IoT) security
Advisor: Dr. Xinwen Fu

Stetson University   *May 2018*
B.S. in Computer Science   *GPA: 3.507 / 4.000*
Minors in Math and Physics
Advisor: Dr. Daniel Plante

RESEARCH INTERESTS

- IoT security and forensics

- Applications and solutions of WSN and IoT

- Networking and computer systems QoS

- Light cryptography implementation and optimizations

WORK EXPERIENCE

Graduate Assistant   *August 2018 - Present*
Florida IT Pathways to Success (Flit-Path)

Graduate Research Assistant   *August 2018 - August 2019*
University of Central Florida, Department of Computer Science

Instructor   *June 2017 - July 2018*
ID Tech Camps

Clerical Assistant   *May 2017 - June 2018*
Stetson University, Departments of English/Computer Science

SCHOLARSHIPS AND GRANTS

University of Central Florida
Graduate Presentation Fellowship   *Spring 2020*
IEEE ICC NSF Student Travel Grant   *April 2019*
Graduate Presentation Fellowship   *February 2019*

Graduate ORC Doctoral Fellowship August 2018
Flit-Path NSF Grant August 2018

Stetson University
Presidential Scholarship August 2014 - May 2018
Federal Pell Grant August 2014 - May 2018
Bright Futures FASA August 2014 - May 2018

ACADEMIC ACTIVITIES

Committee Membership

1. Web Chair, *SecureComm Organizing Committee* 2019

Peer Reviewed Manuscripts

1. TGSM: Towards Trustworthy Group-based Service Management for Social IoT. *IEEE Internet of Things Journal.*

2. Missing value imputation for Industrial IoT sensor data with large gaps. *IEEE Internet of Things Journal.*

3. Online Optimization of Wireless Powered Mobile-Edge Computing for Heterogeneous Industrial Internet of Things. *IEEE Internet of Things Journal.*

PUBLICATIONS

1. B. Pearson, D. Plante. Secure Deployment of Containerized IoT Systems. *In proceedings of IEEE SoutheastCon 2020.* Raleigh, North Carolina. Mar. 2020.

2. Y. Zhang, J. Weng, Z. Ling, B. Pearson, X. Fu. BLESS: A BLE Application Security Scanning Framework. *In proceedings of IEEE INFOCOM 2020 - IEEE Conference on Computer Communications (INFOCOM).* Beijing, China. Apr. 2020.

3. B. Pearson, L. Luo, C. Zou, J. Brian, Y. Jin, X. Fu. Building a Low-cost and State-of-the-art IoT Security Hands-on Laboratory. *2nd IFIP Internation Internet of Things (IoT) Conference.* Oct. 31-Nov. 1, 2019. (Invited Paper.)

4. C. Gao, L. Luo, Y. Zhang, B. Pearson, X. Fu. Microcontroller Based IoT System Firmware Security: Case Studies. *In proceedings of IEEE International Conference on Industrial Internet (ICII)*, Orlando, FL, Nov. 2019. (**Best Paper Award.**)

5. B. Pearson, L. Luo, Y. Zhang, R. Dey, Z. Ling, M. Bassiouni, and X. Fu. On Misconception of Hardware and Cost in IoT Security and Privacy. *In proceedings of IEEE International Conference on Communications (ICC),* Shanghai, China, May 2019.

6. L. Luo, Y. Zhang, B. Pearson, Z. Ling, H. Yu, and X. Fu. On the Security and Data Integrity of Low-Cost Sensor Networks for Air Quality Monitoring. *Sensors (Basel).* Dec. 2018.

7. N. Domingo, B. Pearson, and Y. Jin. Exploitations of Wireless Interfaces Via Network Scanning. *In proceedings of IEEE International Conference on Computing, Networking and Communications (ICNC),* Santa Clara, CA, 2017.

TECHNICAL SKILLS

Languages: C, Python, Java, R, PHP, JavaScript, MatLab
Software: Arduino IDE, ESP-IDF, MatLab, Splunk, Wireshark, Mongoose OS, AWS, Google Cloud, Microsot Azure, Node.js, Apache, Nginx, Spark, Docker, Kubernetes

REFERENCES

Dr. Xinwen Fu (Primary Advisor)
Associate Professor of Computer Science *University of Central Florida*
Email: xinwenfu@ucf.edu

Dr. Cliff Zou (Co-advisor)
Associate Professor of Computer Science *University of Central Florida*
Email: changchun.zou@ucf.edu