

## **Title: New Wireless Security and Emergency Communications Opportunities for you**

### **Abstract:**

Wireless knowledge is needed today since this is a fundamental skill, along with programming and embedded hardware, to design Internet-of-Things (IoT) products. Examples of IoT products include remote internet-based cameras, remote temperature house control, and any monitoring device, or sensor, with a WiFi links. The Internet of Things (IoT) is a rapidly growing field, and this requires students and engineers with wireless expertise. Joe discusses and demos cool wireless programming tools and wireless security through live software-defined radio visual demos of aircraft digital and voice communications. Joe will also show how students can gain valuable disaster and emergency wireless communication knowledge through an Amateur Radio FCC License. In the recent Puerto Rican and Houston Hurricane disasters, licensed Amateur Radio operators were the FIRST to establish communications for the police, firefighters, the Red Cross, and other hurricane disaster victims. In fact, after 175 mph hurricane cat 4 & 5 winds quickly destroyed cellphone and even police communications in Puerto Rico (hurricane Maria), amateur radio operators as young as 15 rode with the police providing emergency communications!

### **BIO:**

Joseph Jesson has 25+ years in the embedded wireless system, Telemetry, Telematics, M2M, and the Internet of things (IoT) space. Joe is currently the Chair of the Princeton IEEE Life Group and CEO of RFSigint, a wireless & IoT patent/IP portfolio analytics company. Joe has held the Chief Technology Officer (CTO) position at General Electric, where he was awarded the GE Edison Award in 2007. Currently, he is Adjunct Professor at The College of New Jersey (since 2013) and teaches Digital Design, Circuit and Electronics Lab, Embedded Systems and Embedded Labs, Control Theory and Controls

Lab, etc. Joe has held CTO positions at Able Devices, Assurenet, Software and Systems Architecture positions at Amoco/ BP, Product Manager at OAK Technology, and staff engineering positions at Motorola and The University of Chicago. Joe has a Master's degree from DePaul University in Chicago and is currently working on his PhD dissertation at NJCU in Jersey City, NJ.