

ARROW IOT EXPO

April 2nd, 2020

**Indiana Wesleyan University
Cincinnati Campus**

9286 Schulze Drive
West Chester, OH 45069

Technical Classes Offered:

	Room 201	Room 202	Room 209
8:15 - 9:15	TE Connectivity	NimbeLink	Cypress (2 Hour Hands-On Lab)
9:30 - 10:30	Infineon	Nordic Semiconductor	
10:45 - 11:45	Analog Devices	Laird Connectivity	STMicroelectronics (2 Hour Hands-On Lab)
11:45 - 1:15	Lunch in Room 204 and Tradeshow in Rooms 217 and 218		
1:15 - 2:15	Digi	ON Semiconductor	STMicroelectronics (2 Hour Lab continued)
2:30 - 3:30	Murata	Microchip	Silicon Labs (2 Hour Hands-On Lab)
3:45 - 4:45	MultiTech	Panasonic	

Additional Manufacturers and Representatives in Attendance at the Tradeshow include:
Arrow Power and NXP

To register, please visit:

<http://tiny.cc/IOTexpo2020>

Our registration website uses Google Forms. If your company blocks this website, you can alternatively register using your smart phone or from your home computer.

8:15 – 9:15 Classes

TE Connectivity: Sensors in IoT Applications

TE Connectivity, a global leader in connectivity and sensor solutions, will provide an overview of the role of sensors in IoT applications. Current trends in sensor IoT applications will be discussed. We will also review TE's expansive range of digital sensor products (Pressure, Temperature, Humidity, Position, etc.), including multi-parameter sensor modules. An overview of our latest wireless accelerometer, humidity and temperature sensors will also be provided.

NimbeLink: Design an entire IoT system from the ground up in 60 mins

Come learn about all the key components of an IoT system. We will whiteboard an entire IoT solution from scratch using input from the class members and answer all your IoT system questions. From collection devices like sensors to the cloud to end-user applications, we will discuss every part of the IoT ecosystem.

Cypress: Designing BLE Mesh Products (2 Hour Hands-On Lab)

This session will include a technical overview of the BLE Mesh Protocol, detailed description of the Cypress devices used for BLE Mesh, overview of a typical Mesh firmware application, and a hands-on lab demonstrating provisioning and working with a BLE Mesh.

9:30 – 10:30 Classes

Infineon: What is Embedded Security?

Security is a crucial building block for any connected device. In this class, we will explore some of the basics including terminology used by the security industry, common use cases for security, and what are some of the best ways to implement security.

Nordic Semiconductor: Introduction to Nordic's wireless solutions

This class will discuss Nordic Semiconductor's industry-leading ultra-low-power Bluetooth LE, Cellular, and high-performance dual-core solutions enabling wireless for IoT!

Cypress: Designing BLE Mesh Products (2 Hour Hands-On Lab)

Part 2 of the morning lab. Please do not sign up for this session unless you have signed up for Part 1.

Arrow IOT Expo – ABSTRACTS – Page 2

10:45 – 11:45 Classes

Analog Devices: Rapid Prototyping with Raspberry Pi and ADI Sensors and AFEs

This is an introductory level session for engineers with limited SW background, or folks new to hacking with Raspberry Pi. We will provide the key links, tools, concepts and background to take a new Pi board, load it with the ADI Raspbian kernel, link the drivers and hardware for a given sensor or AFE, and have the system running and taking readings within about an hour.

Laird Connectivity: Reach the Pinnacle of IoT – Cloud Enabled BTv5 & CAT-M1/NB-IoT/LoRa Systems

Join Laird for this informative session covering technology selection for your IoT implementation. We will compare and contrast different technologies including cellular, Bluetooth and LoRa and give real world examples. There will also be a detailed view of low power wide area networks and power saving methods.

STMicroelectronics: Sensor Ecosystem makes Developing with Sensors Simple (2 hour hands-on session)

Please join us for a two hour hands-on workshop to learn how to design with motion MEMS and environmental sensors using ST's sensor development ecosystem, SensorTile box, a seamlessly integrated set of hardware and software development tools that make designing with sensors fast and easy. The SensorTile box connects to your smartphone via the ST BLE Sensor app for use in a wide range of applications. It features three modes: Entry, Expert and Pro to guide you from basic learning to custom applications without programming to full deep level designs. Finally, you will take home your own SensorTile box!

1:15 – 2:15 Classes

Digi: ConnectCore 8M Nano & ConnectCore8X comparison & applications + Digi Yocto demonstration

We will provide product training on the Digi ConnectCore portfolio including the ConnectCore6UL, ConnectCore8M Nano and ConnectCore 8x and the different features and specifications for each product. We will discuss Digi differentiators and how each product can be optimized to the specific customer situation to create a solution that will meet the customer needs. We will also discuss the Digi Embedded Yocto Board Support Package and features that are included to increase usability and shorten time to market.

On Semiconductor: Enabling the IoT through Low Power and High Performance Connectivity Solutions

This talk will provide an overview of the latest developments and offerings from ON Semiconductor to address various connectivity options. We'll cover how our industry's lowest power PAN connectivity solutions are enabling novel battery-free and maintenance-free applications. We will also provide a synopsis of industry leading WiFi platforms ideal for gateways and hubs. Several node-to-cloud platforms targeting industrial use cases and incorporating various connectivity technologies will also be highlighted during the talk.

STMicroelectronics: Sensor Ecosystem makes Developing with Sensors Simple (2 hour hands-on session)

Part 2 of the morning lab. Please do not sign up for this session unless you have signed up for Part 1.

2:30 – 3:30 Classes

Murata - Murata's Wireless Module and Sensing Solutions

Learn how to create practical battery powered sensor applications using products from Murata including WiFi and Bluetooth modules, best-in-class high resolution sensors and batteries. Customers will learn how to implement real-time monitoring and data collection of their systems in the field making their companies more efficient and cost effective. Murata's sensor portfolio includes: Actuators, Shock, Combo Acceleration and Gyro, Inclinator, Barometric Pressure, 3D AMR, Rotary Position, PIR, Ultrasonic, Thermistors and Ballistocardiography (BCG) sensors, offering numerous options in supporting connected device measurement and control.

Microchip: What is cloud edge compute?

Attendees will learn about cloud computing and why one would want to use cloud edge computing. Find out which markets are adopting the technology and the solutions that are available from Microchip.

Silicon Labs: Bluetooth Mesh (2 hour Hands-On Session)

Bluetooth Mesh is a networking standard based on BLE that allows for many-to-many communication over the Bluetooth radio. Attendees will learn more about this standard, how to decide if it is the right mesh standard for your application, and work hands on with a FREE development board to enable a Bluetooth Mesh project. Having the latest version of Simplicity Studio IDE on your machine is a requirement for this seminar as is having the latest BLE Mesh SDK (instructions will be sent separately to attendees in advance).

3:45 – 4:45 Classes

MultiTech: Embedding intelligence into Edge devices.

The more we connect, the more data we produce – and the more attack points we create for bad actors. These two realities are driving a movement to embed intelligence into edge devices. This session explains how MultiTech addresses these issues with the new MultiTech Conduit 300 gateway featuring mPower edge compute.

Panasonic: Bluetooth Low Energy 5.0 and the Smart Room Monitor

Come learn about Bluetooth Low Energy 5.0 with a smart room monitor utilizing the Panasonic PAN1780 BLE 5.0 module based on the Nordic nRF52840. Attendees will receive an overview of BLE and a hands-on demo of the BLE module.

Silicon Labs: Bluetooth Mesh (2 hour Hands-On Session)

Part 2 of the afternoon lab. Please do not sign up for this session unless you have signed up for Part 1.