

ESC Boston 2019 AGENDA AT A GLANCE

Wednesday, May 15

| Time | HARDWARE | SOFTWARE | IOT & CONNECTIVITY | FOCUS ON FUNDAMENTALS | FOCUS ON FUNDAMENTALS SATELLITE | ENGINEERING THEATER |
|---------------------|---|---|---|---|---|--|
| 8:00 am – 9:00 am | How to Build a Scalable Infrastructure for Embedded Systems Development | Understanding Shared Memory | NFC-Connected Phone as a User Interface? There's an App for That! | Using the Proper Tools When Debugging RTOS-Based Applications | | |
| 9:00 am – 10:00 am | | | | Jump Starting Code Development to Minimize Software Bugs | An Intro to RTOS | |
| 10:00 am – 10:15 am | Morning Break | | | | | |
| 10:15 am – 11:00 am | FPGA Open-Source Workshop | C & C++ vs. Python: The Rise of Scripting Languages | How to Secure Your IoT Project | Using a Memory Protection Unit (MPU) with an RTOS | Tips & Tricks for Debugging with any Debugger | Trends in Robotics |
| 11:00 am – 11:45 am | ESC Career Mentoring with Alumni & Advisors (New) | | | | | ESC Sponsored Session |
| 11:45 am – 1:45 pm | Lunch & MassMEDIC Keynote Speaker Scott Hueneekens, Former VP at Verb Surgical 1:00 – 1:45 pm | | | | | Panel on Workforce Development |
| | | | | ADVANCED TECHNOLOGIES | | |
| 2:00 pm – 2:45 pm | RF Embedded System Bringup | Creating Safe, High-Performance Automotive Applications | Novel Energy-Harvesting Technologies for Energy-Independent IoT Devices | Panel: Beyond the Buzz: Why Machine Learning Is Important in Embedded | Hardware Security Basics | D&M Sponsored Session |
| 3:00 pm – 3:15 pm | Afternoon Break | | | | | |
| 3:15 pm – 4:00 pm | RISC-V Based Linux for Embedded Applications | Are Open Source & Critical Software Like Oil & Water? | Understanding Bluetooth Mesh Networking | 5G Support for Enterprise IoT Use Cases & Ultra-Reliable Low Latency Communications | | Panel Discussion: I Knew Better Than That! |
| 4:00 pm – 5:00 pm | Consumer Robots from Smartphone SoCs | Simplifying Time-Deterministic Programming | Successful Threat Modeling for Connected Devices | Endpoint AI for the IoT with NN: Introducing CMSIS-NN for ARM | | |
| 5:00 pm – 6:00 pm | Conference Networking Reception | | | | | |

Thursday, May 16

| Time | HARDWARE | SOFTWARE | IOT & CONNECTIVITY | FOCUS ON FUNDAMENTALS | FOCUS ON FUNDAMENTALS SATELLITE | ENGINEERING THEATER |
|---------------------|--|--|--|---|--------------------------------------|--------------------------------|
| 8:00 am – 9:00 am | Implementing ARM Cortex M1 & M3 in FPGAs | Simplify Multi-Core Debugging in Your SoC Development Workflow | Securing the IoT with ARM TrustZone for the Cortex-M | Choose Java for Your Next IoT Project | | |
| 9:00 am – 10:00 am | | | Embedded Systems Through the Eyes of a Hacker | Writing Secure & Reliable C/C++ Code | Embedded Systems Architecture Basics | |
| 10:00 am – 10:15 am | Morning Break | | | | | |
| 10:15 am – 11:00 am | | 42 Reasons Using FreeRTOS Should Scare You | Firmware Analysis & Extraction | Introduction to the Robot Operating System | | Max "The Magnificent" Maxfield |
| 11:00 am – 11:45 am | ESC & Career Mentoring with Alumni & Advisors (New) | | | | | D&M Sponsored Session |
| 11:45 am – 1:45 pm | Lunch & ESC Keynote Speaker Kevin Blankespoor, VP of Product & Engineering at Boston Dynamics 1:15 – 1:45 pm | | | | | Robotics Panel |
| | | | | ADVANCED TECHNOLOGIES | | |
| 2:00 pm – 3:00 pm | Common Mistakes by Embedded Systems Designers: What They are and How to Fix Them | Customizing Dynamic Memory Management in C++ | How to Migrate Intelligence from the Cloud to Embedded Devices at the Edge | Building an Edge Device: Neural Networks on Microcontrollers | | Q&A with Boston Dynamics |
| 3:00 pm – 3:15 pm | Afternoon Break | | | | | |
| 3:15 pm – 4:00 pm | Novel Power Distribution System Design | Avoid Unsafe & Insecure Complex Software | Session to be Announced | Designing Intelligent Systems using Resource Constrained Edge Devices | | ESC Sponsored Session |
| 4:00 pm – 5:00 pm | Session to be Announced | Advanced Compiler Optimizations for the Smallest, Fastest Code | Understanding the ARM Processor Roadmap | Integrating Intelligent Vision into Your Embedded System | | |