

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	Build a Basic AXI Module in Verilog & Connect it to an Embedded Processor	C & C++ vs. Python: The Rise of Scripting Languages	How to Secure Your IoT Project	Using a Memory Protection Unit (MPU) with an RTOS		Robotics Between Fantasy & Reality
11:00 am – 11:45 am		New: ESC Career Mentoring with Alumni & Advisors (Room 108)				ESC Sponsored Session
11:45 am – 1:45 pm	Lunch & MassMEDIC Keynote Speaker Scott Huennekens, Former VP at Verb Surgical 1:00 – 1:45 pm					Robots Aren't Just Coming, They're Here ... And That's a Good Thing
				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	Effective PCB Design: Techniques to Improve Performance	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	Expo closes at 4:00 pm					
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		Customizing Dynamic Memory Management in C++	Embedded Systems Through the Eyes of a Hacker	Writing Secure & Reliable C/C++ Code	Developing Reusable Device Drivers for Microcontrollers	
10:00 am – 10:15 am		Morning Break				
10:15 am – 11:00 am		RTOS Task Switch Tracing: Live and in Real Time	Firmware Analysis & Extraction	Introduction to the Robot Operating System		Max "the Magnificent" Maxfield: Radio Hats, Audio-Responsive Artifacts & 4-Bit Computers, Oh My!
11:00 am – 11:45 am	New: ESC Career Mentoring with Alumni & Advisors (Room 108)					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 – 2:30 pm					Panel: Building the 21st Century Workforce
				ADVANCED TECHNOLOGIES		
2:00 pm – 3:00 pm	Common Mistakes by Embedded Systems Designers: What They are and How to Fix Them	42 Reasons Using FreeRTOS Should Scare You	How to Migrate Intelligence from the Cloud to Embedded Devices at the Edge	AI at the Edge: A Review of Toolsets Available When Building an Edge Device		Aerospace & Defense session (TBD)
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	Expo closes at 4:00 pm					
4:00 pm – 5:00 pm	How to Design Mission Critical FPGA Systems	Advanced Compiler Optimizations for the Smallest, Fastest Code	Understanding the ARM Processor Roadmap	Integrating Intelligent Vision into Your Embedded System		