



2nd IEEE CEDA Internet-of-Things (IoT) Student Challenge

Monday

**Join Texas Instruments and IEEE CEDA @DATE 2018
for an Exciting Day practicing with TI's SimpleLink
Technology**

The SimpleLink MCU platform from Texas Instruments is a single development environment that delivers flexible hardware, software and tool options for customers developing Internet of Things (IoT) applications. With a single software architecture, modular development kits and free software tools for every point in the design lifecycle, the SimpleLink MCU ecosystem allows great code reuse across the portfolio of microcontrollers; which supports a wide range of connectivity standards and technologies including RS-485, Bluetooth® low energy, Wi-Fi®, Sub-1 GHz, 6LoWPAN, zigbee®, Ethernet, Thread, RF4CE and proprietary RF. SimpleLink MCUs help manufacturers easily develop and seamlessly reuse resources to expand their portfolio of connected products. *TI and IEEE CEDA bring you the opportunity to get the tools, training and participate in an exciting challenge all for free!*



Agenda

Monday, 9:30 am – 12:30 pm

- Introduction to SimpleLink Technology
- Description of development tools
- Hands-on exercises with TI Senior System Engineer
- Practical information for the challenge
- Q&A

Monday, 13:30 – 17:30

- Participation in student challenge
- Students will develop a cloud project using TI Development tools, including CCS cloud, GUI Composer, Sensor BoosterPack, and Launchpad boards.
- Participants will program TI LaunchPad™ development kits to connect and send sensor data to a gateway via SubGHz RF, and then ultimately to the cloud.
- The challenge will lead students to the ultimately find the data in the cloud, display it locally on a PC, and find the code that will unlock the prizes for the winning teams.

Material provided to the students for free

Each participant will be offered a Launchpad and Sensors Boosterpack that will allow setting up their own Wireless Sensor Network during the tutorial. Winning teams will also receive the Gateway hardware for setting up a real cloud connection.

The CC1350 is the first device in the CC13xx and CC26xx family of cost-effective, ultra-low-power wireless MCUs capable of handling both Sub-1 GHz and 2.4-GHz RF frequencies. The CC1350 device combines a flexible, very low-power RF transceiver with a powerful 48-MHz ARM® Cortex®-M3 microcontroller in a platform supporting multiple physical layers and RF standards. The combination of easy mobile phone integration, with long-range connectivity, on-chip programmability, and the varied flow of data from multiple sensors will give you the opportunity to innovate in a broad range of personal or academic projects.

Prizes

All winning teams will receive the Gateway boards, as well as the sensor nodes used in the lab exercises. In addition they will receive -

- 1st team (2 people): 2 x MetaWatch with 2 additional SensorTags
- 2nd team (2 people): 2 x Power banks with 2 additional SensorTags
- 3rd team (2 people): 2 x drones with 2 additional SensorTags





How to Participate

Students interested in participating can register through [this link](#) (or using the QR code below) as a team (2 participants) by March 12th, 2018. If you want to participate but you do not have a partner, just register accordingly and we will find a partner for you. Once registered, you will receive further instructions to install on your laptop the required TI tools before the challenge. Then, stop by the DATE registration on Monday morning and you will get the access to the challenge, material, coffee breaks and lunch all free.

If you have any queries about the competition, please send an email to akash.kumar@tu-dresden.de.

