

ICRA – Robotic Workshop Description (2-4 June 2026)

The conference offers (in collaboration with the TU Wien - Technical University Vienna) three educational robotic workshops on Tuesday, Wednesday, and Thursday from 9:00 to 12:00 in the morning.

Kids Workshop 1 / Tuesday, 2 June (with Habibe)

Future Researchers: Discover, Design and Explore Robotics

In this workshop, you will step into the role of a real researcher and dive deep into the fascinating world of robotics. Together with your robot partner Thymio, you will explore how machines perceive their environment and react to the world around them. You will discover step-by-step how **sensors** act as a robot's "eyes and ears" of the robot to gather information and use this knowledge to create your own ideas. Through the **Design Thinking process**, you will use your **creativity** to find innovative solutions for complex challenges. By **designing** your own unique robot behaviors, you will bring your ideas to life and shape the way your robot interacts with the world.

Recommendation: 6 - 12 years

Robot: Thymio, VPL (Visual Programming Language)

Language: Turkish, German, English

Kids Workshop 2 / Wednesday, 3 June (with Gerard)

From Idea to Robot: Understanding how Robots think

What does it take to turn an idea into a working robot? In this hands-on workshop, students explore how everyday intentions like playing, walking or talking, among others, can be transformed into real robotic behaviours. Using a micro:bit with :MOVE buggy, participants will break down these ideas into simple actions and bring them to life through movement, sensing and interaction. Rather than just coding, they discover how robots "think" by connecting what we want them to do with how they actually do it. A playful and engaging introduction to robotics that turns curiosity into understanding.

Recommended age: 10 - 14 years

Robot: Micro:bit with :MOVE buggy (Blockly)

Languages: Spanish, Catalan, French, English

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Kids Workshop 3 / Thursday, 3 June (with Richard)

Smart Robotics: Coding Real-World Solutions with mBot2

Take your coding skills to the next level by transforming a powerful robot into an intelligent machine. In this workshop, you will work with the mBot2, a next-generation robot designed to bridge the gap between simple play and real-world engineering. Using a "Scratch-like" block-based language, you will master the logic behind precise movements and learn how to process data from advanced sensors, such as ultrasonic distance sensors and quad-color sensors. After mastering the basics of navigation, you will apply your knowledge to solve practical challenges. Whether it's programming a precise line-following delivery robot, an autonomous vacuum cleaner that avoids obstacles, or even choreographing a complex robot dance, you will see how code directly impacts the physical world.

Recommended age: 12–15 years

Robot: mBot2 (powered by CyberPi)

Languages: Slovak, English

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