EIT Digital Master Programme in Intelligent Chips and Systems (ICS)

Local recruitment at BME

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Local Programme Lead, CS-Embedded Artificial Intelligence
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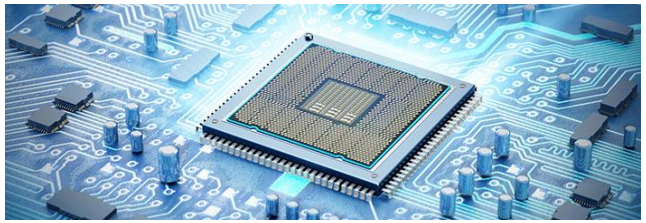
Focus

Microchips are everywhere

- design chips
- design embedded systems from chips
- design applications using embedded systems

Chips
&
Systems
&
Intelligence



source: https://www.stockbrokers.org.au/industry-insights/chipping-away-at-the-semiconductor-market

source: https://www.3erp.com/blog/reduce-cnc-machining-costs/

source: https://a.cision.com/volvo-cars-global/r/the-all-new-volvo-v40---safety---support--the-most-intellisafe-car-in-the-segment,c4202344

PROGRAMME STRUCTURE

Common Base covers the basic aspects of:

- Construction of Embedded Systems,
- Embedded Hardware
- Embedded Software
- Models and Methods for Embedded Systems

1st year

Common Base

- Polytechnic University of Turin (POLITO), Italy
- Polytechnic University of Milan (POLIMI), Italy
- University of Bologna (UNIBO), Italy
- University of Trento (UniTN), Italy
- University of Turku (UTU), Finland
- ISEN Méditerranée (ISEN), France

2nd year

Specialisation

Tallinn University of Technology (TalTech), Estonia	Polytechnic University of Turin (POLITO), Italy	University of Turku (UTU), Finland	Budapest University of Technology and Economics (BME), Hungary	University of Trento (UNITN), Italy	ISEN Méditerranée (ISEN), France	Tampere University (TAU), Finland	University of Bologna (UNIBO), Italy
Distributed Control for Embedded Systems	Energy-Efficient and Reliable Embedded Systems	Edge for AI and Robotics	Embedded Artificial Intelligence	High-Performance Embedded and Smart Systems	Analog and Digital conception of advanced IC and Embedded Systems	Embedded Systems Architecture and Software	Intelligent Embedded Systems

INTELLIGENT CHIPS & SYSTEMS (ICS)

Year 1
Entry University

- Polytechnic University of Milan
  ITALY
- University of Trento
  ITALY
- University of Bologna
  ITALY
- Polytechnic University of Turin
  ITALY
- University of Turku
  FINLAND
- ISEN Méditerranée
  FRANCE

Year 2
Exit University

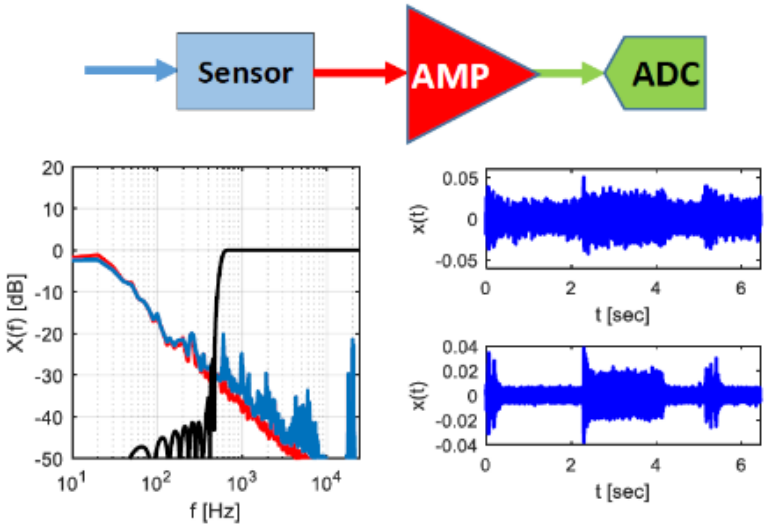
- Budapest University of Technology and Economics
  HUNGARY
- University of Trento
  ITALY
- University of Turku
  FINLAND
- ISEN Méditerranée
  FRANCE
- Tampere University
  FINLAND
- Polytechnic University of Turin
  ITALY
- University of Bologna
  ITALY
- Tallinn University of Technology
  ESTONIA

Students must choose a different country and university for entry AND exit years

eit Digital

Co-funded by the European Union

Embedded Artificial Intelligence – BME, Hungary



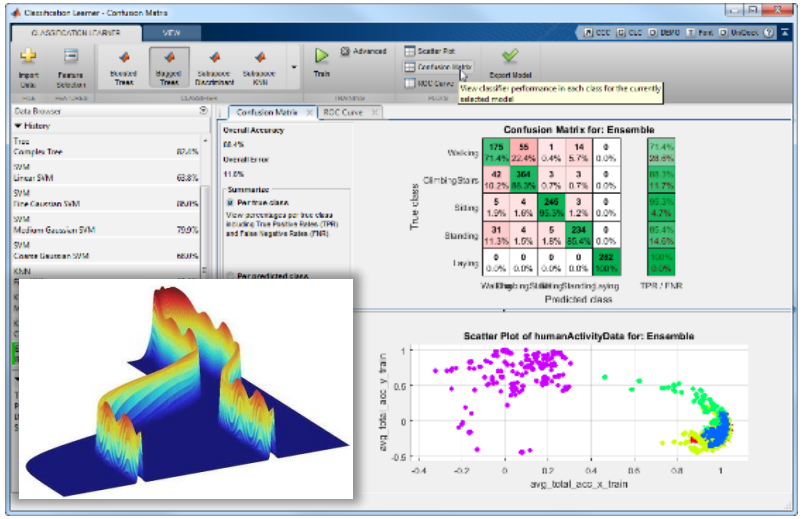
Budapest University of Technology and Economics (BME)

Budapest, Hungary

BME

Embedded Artificial Intelligence – Main topics

- Sensors and data processing
  - Sensing physical signals
  - Signal processing methods for typical sensors
- AI based algorithms
  - Processing and analysis of sensor data
  - Understanding physical processes
  - Implementation using embedded platforms
- Critical intelligent systems
  - Development process for safety-critical systems
  - Fault tolerant architectures and safety analysis
  - Systematic testing and verification



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Embedded Artificial Intelligence – Curriculum

Compulsory courses (3*5 + 30 + 6 ECTS)	Elective courses (2*5 ECTS from the set)
• Embedded Artificial Intelligence • Embedded Artificial Intelligence Laboratory • Safety Critical Embedded Systems	• Applications of Data Processing • Perception and Signal Processing • Intelligent Embedded Systems Laboratory • Artificial Intelligence Based Control … and possible others, depending on the semester and the number of applicants
• Diploma Thesis Design (at industry partners)	
• Innovation and Entrepreneurship Study	

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Embedded Artificial Intelligence – Contact Person

Prof. Tamás Dabóczi

Coordinator of the Embedded Artificial Intelligence specialization

Budapest University of Technology and Economics (BME)
Faculty of Electrical Engineering and Informatics
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https://www.vik.bme.hu/en/education/eit-digital-master-programmes

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Study Intelligent Chips and Systems (ICS) with EIT Digital

Are you considering a future in **microelectronics, intelligent chip design, or embedded systems engineering**? If you are exploring Master's study options in these areas and would like to understand whether the **EIT Digital** Intelligent Chips and Systems Master's Programme could be the right fit for you, we invite you to join a dedicated online information webinar.

📅 Date: 30 March 2026
🕐 Time: 17h-18h CET
📍 Online (Microsoft Teams)

Registration: