RESEARCH LABORATORY
HUMAN COMPUTER INTERACTION

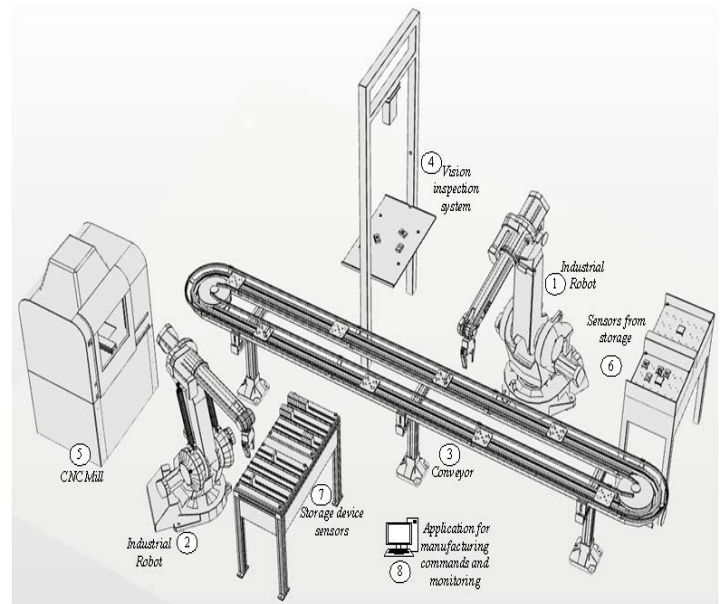|	
Research profile	Human Computer Interaction and Computer Vision
Competences / Infrastructure	Computers and Laptops (Intel 7, 8- 16 GB RAM), 4 hamlets EPOC Emotive for BCI, 6 Leap Motion Devices, Remote Eye Trackers, Glasses Vuzix for Eyetracking, Kinectics V1 and V2, Bracelets for EMG, Oculus Rift, Texas instruments DRV2603 Vibration Kit, Myo gesture Control Armband, Triple source HM 8040-3, Function Generator HM 8030-6, P Samsung SNH-E6411 Video Cam; IMU Sensors, Kinect V2, haptic devices.

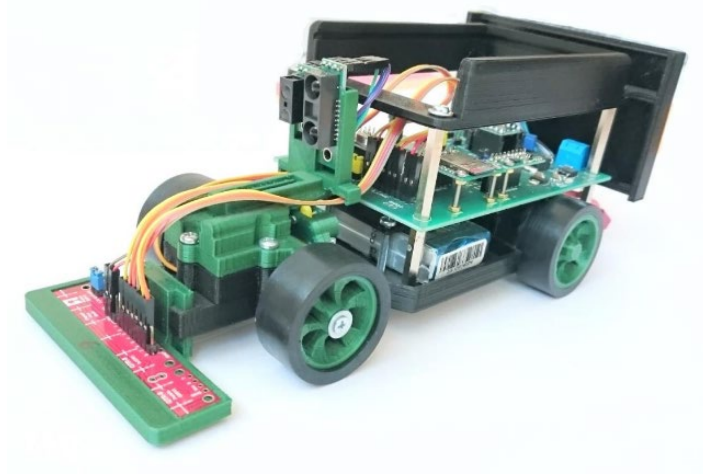|	
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RESEARCH LABORATORY
LoRIS - Laboratory of Robotics and Intelligent Systems

Research profile	Robotics and Intelligent Systems
Competences / Infrastructure	*Mobile robot platform* with: 2 Khepera III mobile robots, Lego Mindstorms EV3 kits, Crazyflie 2.0 quadcopters, computers; *Flexible manufacturing cell* with: ABB IRB 1400 robotic arm, ABB IRB 2400L, Fanuc M6iB/2HS, RIP 0.2, grippers SCHUNK DPG 100/1 and SMC MHZ2-20D, machine tool EMCO CNC PC Mill 55, FlexLink conveyor.

Coordinators:	Prof. dr. eng. Kloetzer Marius, kmarius@ac.tuiasi.ro Assoc. prof. dr. eng. Burlacu Adrian, aburlacu@ac.tuiasi.ro Assist. prof. dr. eng Panescu Doru-Adrian, dorup@ac.tuiasi.ro Assist. prof. dr. eng. Pascal Carlos, cpascal@ac.tuiasi.ro Assist. prof. dr. eng Cristina Budaciu, cbudaciu@ac.tuiasi.ro
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RESEARCH LABORATORY
Automated vehicles

Research profile	Automated vehicles platooning

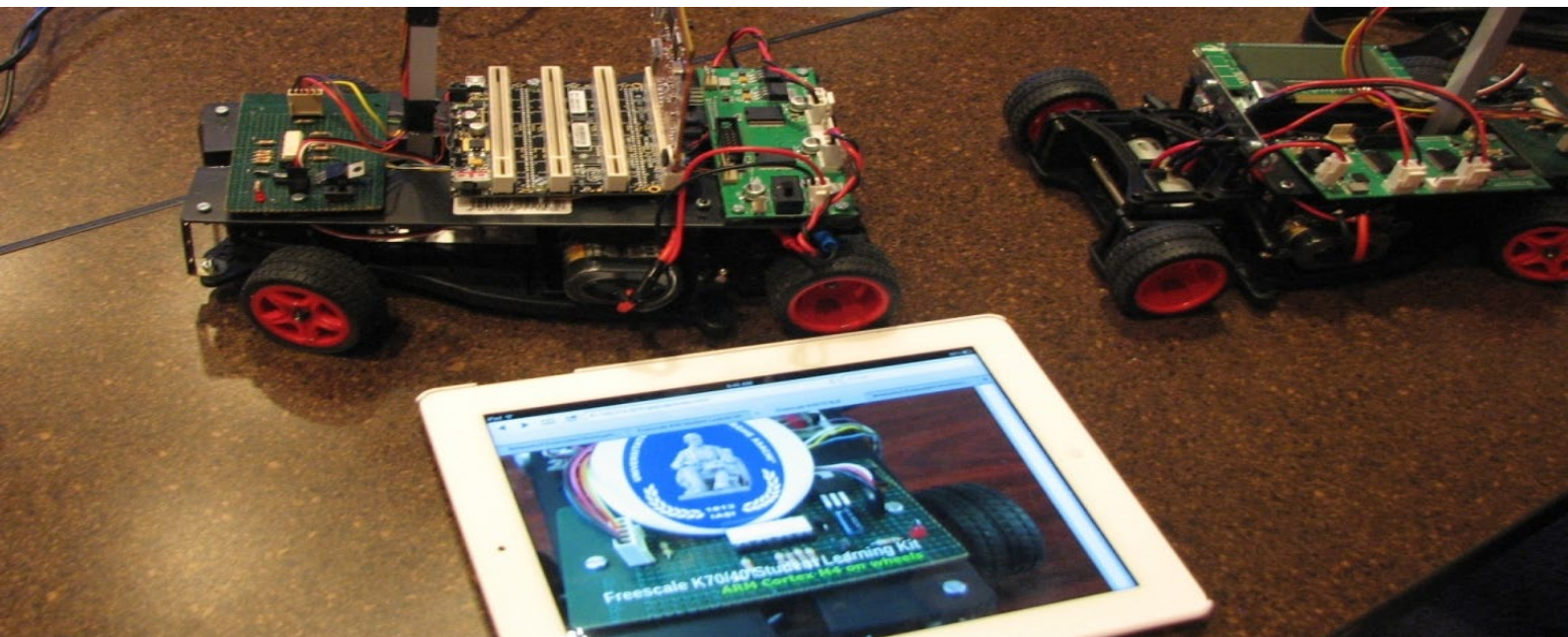| Competences / Infrastructure	*10 Prototype model cars* with: 16bit dsPIC33FJ128MC802 microcontroller, 32bit microcontroller on a STM32F3DISCOVERY board, DC and servo-motors, various sensors, nRF24L01 based RF module; Balance charger (X-Peak 50 Bal) for Li batteries, 4 Balance chargers for LiPo batteries, digital multimeter Keysight Technologies U1232a, 10 PICkit3 In-Circuit Debuggers/Programmers

Coordinators:	Assoc. prof. dr. eng. Constantin Caruntu, caruntuc@ac.tuiasi.ro
	Assist. prof. dr. eng Catalin Braescu, cbraescu@ac.tuiasi.ro
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	Bd. Prof. D. Mangeron 27, Iasi, 700050, Romania

RESEARCH LABORATORY
MACHINE LEARNING AND INTERNET OF THINGS

Research profile	Internet of things, machine learning, sensors networks, trusted embedded computers
Competences / Infrastructure	Local Area Network (10), Linux Computers(1-4 core)(10), ARM Cortex M3/4 Development Board (20), ARM cortex M0 Development Board (20), Osciloscope (1), image sensors, BLDC Motors,DC motors, stepper motors, Bluethoots Modules, Quadcopter educational/research prototype, e_car research prototype, applications platforms for Internet of Things, Open Educational Resource site - www.embedac.ro .

Coordinator:	Assoc. prof. dr. eng. Florin Pantilimonescu, florin.pantilimonescu@tuiasi.ro
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RESEARCH LABORATORY
COMPUTER ARCHITECTURE AND EMBEDDED SYSTEMS

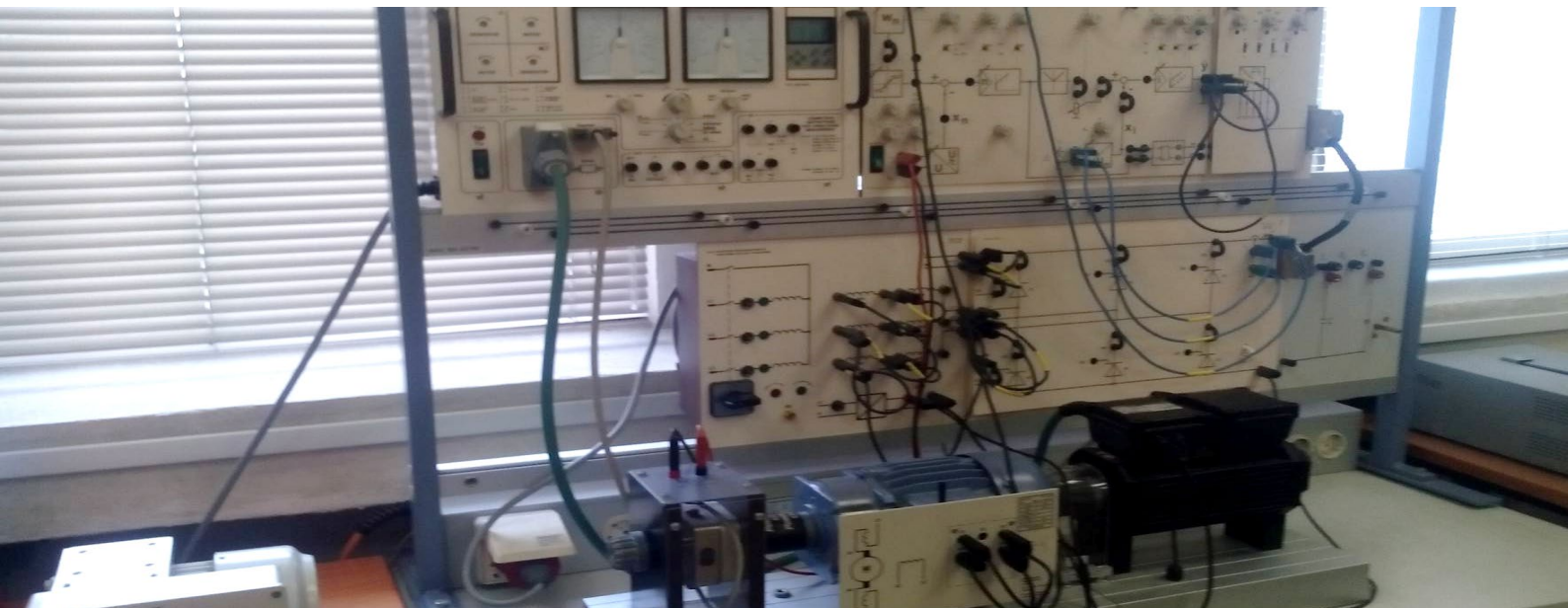|	
Research profile	Computer architecture, embedded systems, intelligent systems, cyber-physical systems, digital signal processing, wireless sensor networks, low power solutions, reconfigurable computing, industrial gas/oil automation system design
Competences / Infrastructure	• Local Area Network with 12 student workstations and 6 research workstations • Development boards/systems: AVR ATMega (20), Microchip DSPIC (15), ARM Cortex M3/M4 (20), Xilinx FPGA ZedBoard (2), Xilinx FPGA Arty (11), Blackfin Processors (2), PowerPC processors(5), Renessas RX Development Platforms (6) • Tools: JBC rework station, DSO Oscilloscopes (2 x Tektronics, 1 x LeCroy), Power sources (15 x Hameg), Signal/function generators (1 x Tektronics, 6 x Hameg), Counters (6 x Hameg), Multimeters (6 x Hameg, 5 x Fluke, 1 x PICOTEST), PCB CNC LPKF Protomat M60

Coordinators:	Assist. prof. dr. eng. Alexandru Barleanu alexb@tuiasi.ro Assoc. prof. dr. eng. Andrei Stan andreis@tuiasi.ro Lect. dr. eng. Nicolae Alexandru Botezatu nky@tuiasi.ro
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RESEARCH LABORATORY
CONTROL SYSTEMS AND FAULT DIAGNOSIS

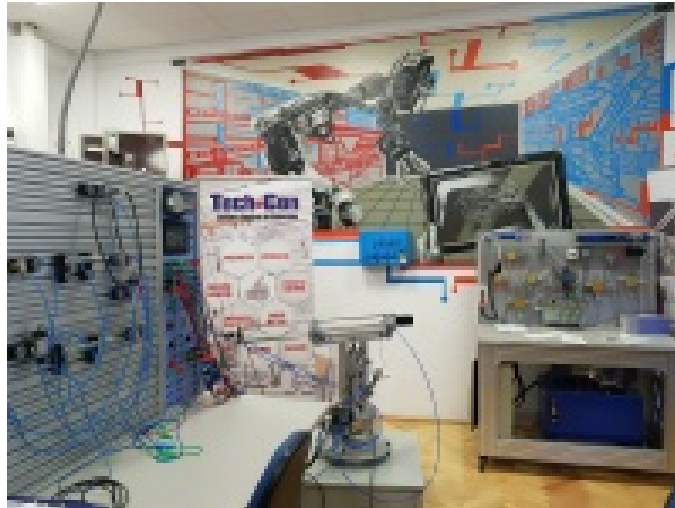| Research profile	• Control structures and algorithms • Embedded systems design and applications • Electrical drives design and control • Industrial control systems design • Identification and fault diagnosis
Competences / Infrastructure	AC drive control systems, DC drives control systems, Test bench for electric drives speed control, dSPACE controller boards with software packages, FPGA platforms Xilinx Spartan 3E, LPKF Protomat C60 – PCB rapid prototyping, Universal Programmer/Tester - Labprog+, Test and measurement equipment, desktop computers

Coordinators:	Assoc. prof. dr. eng. Letitia Mirea, lmirea@ac.tuiasi.ro
	Assoc. prof. dr. eng. Lavinia Ferariu, lferariu@ac.tuiasi.ro
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RESEARCH LABORATORY
Industrial Control Technology (Tech-Con Lab)

Research profile	Electric, hydraulic, pneumatic and vacuum drives, Automatic control, Sensors and Transducers, Mechatronic system & Autonomous mobile robot, Modelling and simulation of processes, Industry 4.0
Competences / Infrastructure	- Omnidirectional mobile robot - DIDAND platform - Pneumatical, Hydraulical and Vacuum drives stand - Conveyor system, Twin rotor for mimo system - Siemens equipment for process control (PLCs, HMIs, Servo drive, AC drive, Simocode, mobile wireless antenna, RFID, Siwarex, Energy meter, Stabilized power supply) - Sensors and transducers (temperature, flow, pressure, distance, proximity, safety) - Test and measurement equipment (NI SC-2345 Signal Conditioning Connector Block with Configurable Connectors, Osciloscop Tektronics TDS3054C, Ditigal Phosphor Oscilloscope, 4 canale, 500Mhz, 5Gs/s, tester for sensors, optical tachometer, digital multimeter Chint) - Miniature machine tools (Denford Micromill 2000 Milling Machine, Denford Microturn CNC Lathe)

Coordinators:	Assist. prof. dr. eng. Constantin Catalin Dosoftei, cdosoftei@ac.tuiasi.ro Assoc. prof. dr. eng. Mihai Postolache, mpostol@ac.tuiasi.ro Assoc. prof. dr. eng Lucian Mastacan, lmastacan@ac.tuiasi.ro
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