

Institute of Manufacturing Systems, Environmental Technology and Quality Management (ISETM)

Head of ISETM: Assoc. Prof. Peter Križan, PhD.

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Scope of ISETM

ISETM has been working and realizing educational, research, professional and project activities in following four areas:



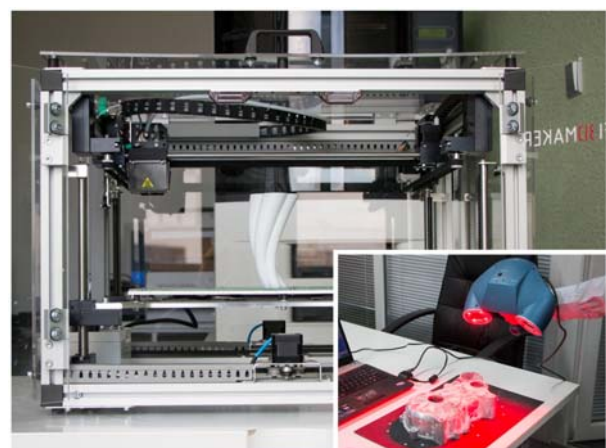
**1.) Automated manufacturing systems
and robotics**



2.) Machining technology and tools



3.) Biomass and solid waste recovery



4.) Rapid prototyping and reverse engineering

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List of Scientific and Professional Activities of ISETM

Offer for cooperation in following areas:

1.) Engineering, design and project activities

- design, engineering and production of tools,
- design, engineering and production of measuring devices and systems,
- engineering design of metal structures, manipulators, single-purpose machines, conveyors,
- designing of technological plants for waste treatment and solid biofuels production,
- drawings and technical documentation development,
- design and creation of technological procedures,
- simulations, calculation analysis, dynamic analysis, strength calculations, FEM,
- simulation and optimization of dynamic systems.

2.) Research & Development

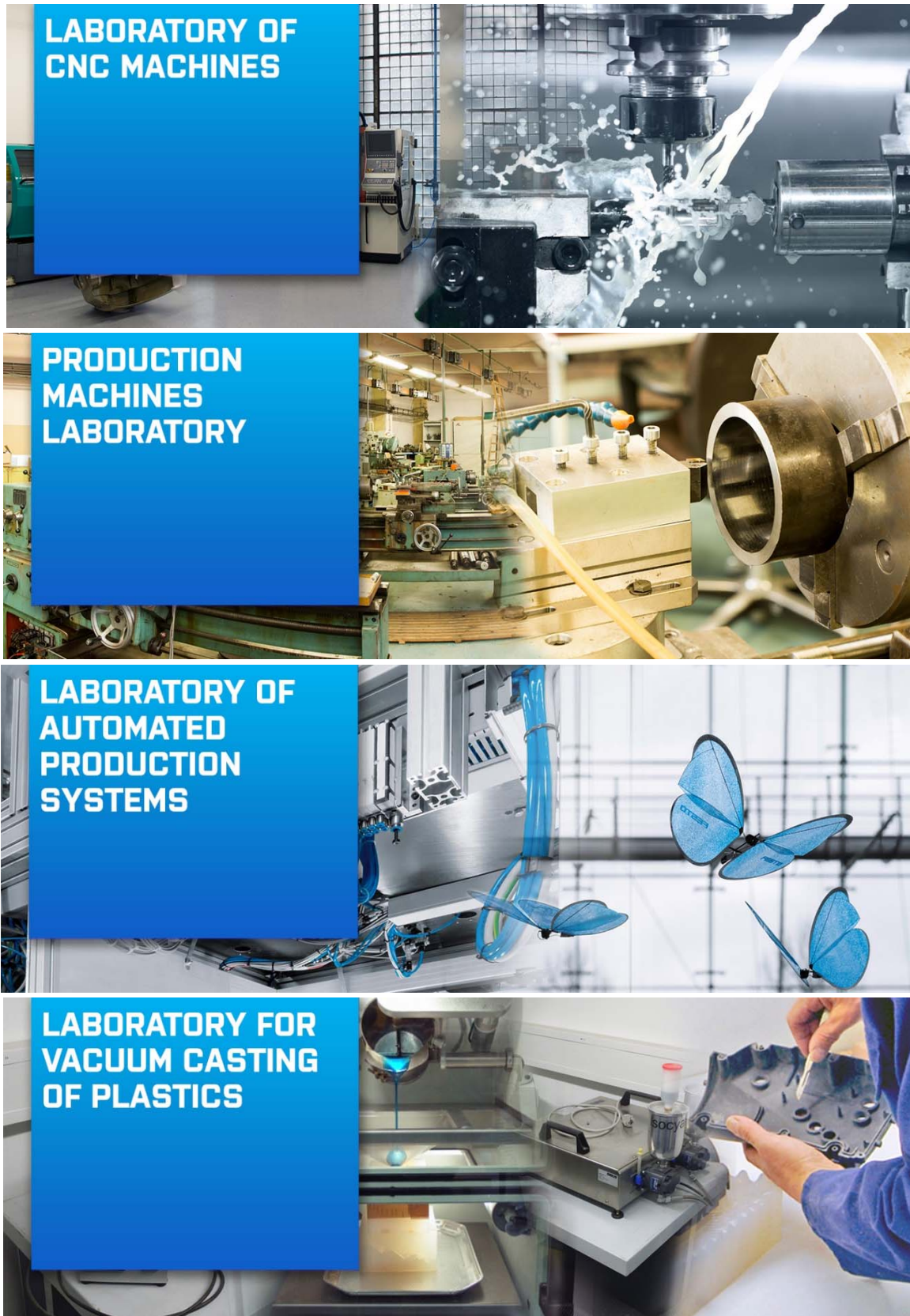
- testing of friction materials (e.g. car brakes, etc.),
- investigation of dynamic instability, measurement of dynamic properties of structures, measurement of tension, temperature and vibration of structures,
- vacuum casting of plastics or low melting temperature materials into a silicone molds,
- electrolytic-plasma technology for the treatment of metal surfaces,
- research into the recovery of different types of waste (material and energy recovery and treatment technologies),
- research into the efficient use of renewable energy sources (biomass, etc.),
- research in the field of Rapid Prototyping technology, Reverse Engineering, 3D scanning,
- research in the field of biomass-plastics composites.

3.) Professional trainings and education

- programming of robots and production systems,
- industrial maintenance (tribodiagnosics, thermodiagnosics, vibro-diagnosics, machine diagnostics, maintenance systems),
- hydraulic and pneumatic systems,
- programming of CNC machines,
- CAD/CAM software trainings (SolidWorks, CATIA, AutoCAD, Inventor, etc.);

- professional training for Witness or PlantSimulation.

List of ISETM's professional laboratories



RAPID PROTOTYPING LABORATORY



LABORATORY FOR BIOMASS TREATMENT



LABORATORY FOR SOLID BIOFUELS



PLM LABORATORY

