Ernst Abbe University of Applied Sciences Jena

SciTec (production engineering and production automation)

About this organisation

Machine translation

This organisation has been machine-translated based on data provided in German.

The Ernst Abbe University of Applied Sciences Jena (EAH Jena) was founded in 1991 as one of the first educational institutions of its kind in the new federal states. The Production Engineering and Automation working group of the SciTec - Precision, Optics, Materials department has many years of experience in the fields of optical technologies, laser material processing and additive technologies.

One focus of the Production Engineering and Automation working group is the development of processing technologies for hard-brittle materials, in particular glass and ceramics. Over the last 10 years, innovative processes for ultrasonic-assisted grinding, ultra-fine grinding with plastic-bonded diamond tools and laser polishing have been successfully developed and brought to industrial maturity in collaboration with business partners. In addition to machining technologies, the working group also focuses on laser material processing methods. Expertise in the laser cutting of plastics and composite materials, the collection and catalytic treatment of removal residues and the cutting and removal of ceramic materials will address lightweight construction issues in the future. The working group also has experience in the areas of extrusion and large-volume 3D printing of plastics.

Carl-Zeiss-Promenade, 2
07745 Jena
Thuringia
Germany
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Organisation type
University or higher education institution

Sectors
No specific sector

Employees
250 up to 499

Turnover
n/a

Funding

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Main areas covered	Additive manufacturing, Process development
Infrastructure	
Certifications	
Keywords	
Memberships	Thuringian Centre for Mechanical Engineering, VDMA Additive Manufacturing Association

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products			
Services & consulting Training, Consulting, Testing and trials, Engineering, Prototyping, Validation, Simulation, Technology transfer	✓	✓	✓

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout			
Functional integration			
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), Materials analysis, Destructive analysis	✓		✓
Modelling and simulation			
Plant construction & automation Robotics	✓	✓	
Recycling technologies			

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Deposition welding, Fused deposition modeling, Selective laser sintering (SLS), Stereolithography	✓	✓	✓
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining			
Material property alteration			
Primary forming Extrusion, Injection moulding	✓	✓	
Processing and separating Drilling, Turning, Milling, Electrical discharge machining, Sawing, Grinding, Cutting, Others (Laser beam cutting, laser beam marking, laser beam polishing)	✓	✓	✓
Textile technology			

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials			
Cellular materials (foam materials)			
Composites			
Fibres			
Functional materials			
Metals Aluminium, Intermetallic alloys, Steel	✓	✓	✓
Plastics Thermoset plastics, Elastomers, Thermoplastics	✓	✓	✓
Structural ceramics Non-oxidic ceramics, Oxidic ceramics	✓	✓	✓
(Technical) textiles			

Contacts

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This organisation has been machine-translated based on data provided in German.

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Contacts

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