University of Duisburg-Essen
Chair of Design and Plastics Machinery

About this organisation

Machine translation

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

The Chair of Design and Plastics Machinery at the Institute of Product Engineering accompanies and drives research topics in the plastics industry. The scientific staff work on research projects with the main focus on injection moulding technology, extrusion technology and component testing.

For digitalisation in plastics processing, the approach is to make process and machine data fully available on all machines and peripheral devices and to use this data intelligently through a holistic approach for the further development of technologies and thus with regard to resource- and quality-efficient production. Through the integrative use of modern simulation tools, sound theoretical modelling and experimental testing, it is possible to bridge the gap between science and industry to solve current problems.

Lotharstraße 1
47057 Duisburg
North Rhine-Westphalia
Germany
www.uni-due.de/kkm/

Organisation type
University or higher education institution

Sectors
No specific sector

Employees
500 and more

Turnover
More than €50m

Funding



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About this organisation

Main areas covered	Injection moulding technology, Extrusion technology, Component testing
Infrastructure	Injection moulding production cells, Extrusion lines, Test bay for component testing, Static/dynamic testing machines
Certifications	
Keywords	Digitalisation of injection moulding production, Simulation, Digitisation of extrusion technology, Data analysis, Modelling
Memberships	kunststoffland NRW e.V., Knowledge. Plastics working group

Overview of lightweighting expertise

Machine translation

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Machines and plants, Software & databases, Tools and moulds	✓	✓	
Services & consulting Consulting, Testing and trials, Engineering, Simulation, Technology transfer	✓	✓	

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Overview of lightweighting expertise

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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), System analysis, Destructive analysis, Non-destructive analysis	✓		
Modelling and simulation Loads & stress, Life-cycle analysis, Optimisation, Processes	✓		
Plant construction & automation Plant construction	✓	✓	
Recycling technologies Recycling	✓		
Manufacturing process			
Additive manufacturing			
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining			
Material property alteration			
Primary forming Extrusion, Injection moulding	✓	✓	✓
Processing and separating			
Textile technology			

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials			
Cellular materials (foam materials)			
Composites			
Fibres Glass fibres, Carbon fibres, Natural fibres	✓		
Functional materials			
Metals			
Plastics Elastomers, Thermoplastics	✓		
Structural ceramics			
(Technical) textiles			

Contacts

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Contacts

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