LIGHTWEIGHT CONSTRUCTION CLUSTER

Landshut University of Applied Sciences | Institute for Technology-based Cooperation

About this organisation

Machine translation

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

The Lightweight Construction Cluster is a network of companies, research institutions and service providers for the support and promotion of cross-industry collaboration in lightweight construction technologies. The aim is to strengthen the innovative power and competitiveness of the associated partners. The network is organised by Landshut University of Applied Sciences.

The fields of work in the network are organised taking into account the trends and developments in lightweight construction. Special attention is paid to the needs of the partners in the cluster. Main topics in the LC: - Lightweight construction materials - lightweight construction - lightweight construction-related manufacturing technologies. The LC supports interdisciplinary cooperation in these core disciplines in order to realise optimal lightweight structures. Fields of action in the LC: - Information and communication - a head start through innovation! - Qualification - a head start through knowledge! - Co-operation - stronger together! - Marketing / PR - presenting lightweight construction expertise In addition to the Landshut Lightweight Construction Colloquium, which takes place every two years, symposia on current lightweight construction topics are organised in cooperation with LC partners and other networks. The LC team assists in the initiation and realisation of R&D projects.

Am Lurzenhof 1
84036 Landshut
Bavaria
Germany
www.leichtbau-cluster.de

Organisation type
Cluster

Sectors

Employees
Up to 9

Turnover
n/a

Funding
n/a

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Main areas covered	Materials, design, production, Hybrid materials and structures, Initiation, supervision of R&D projects, Knowledge and technology transfer, Additive manufacturing
Infrastructure	Laboratories, Lightweight Construction Competence Centre, Conference rooms, exhibition area, Large-scale equipment (SEM, CT, T-RTM), Fatigue strength, climate simulation, Material and component analyses
Certifications	
Keywords	Multi Material Design, Composites, Material characterisation, Lightweight construction, simulation, System lightweight construction, mould lightweight construction, Fabric and lightweight construction
Memberships	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Machines and plants, Systems and end products, Materials, Tools and moulds	✓	✓	
Services & consulting Training, Consulting, Testing and trials, Engineering, Validation, Simulation, Technology transfer	✓	✓	✓

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Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	
Functional integration Sensor technology	✓	✓	
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), System analysis, Environmental simulation, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	
Modelling and simulation Crash behaviour, Loads & stress, Life-cycle analysis, Multiphysics simulation, Optimisation, Processes, Structural mechanics, Materials, Reliability validation	✓	✓	
Plant construction & automation Plant construction, Automation technology, Handling technology, Robotics	✓	✓	
Recycling technologies			

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing	✓	✓	
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining			
Material property alteration			
Primary forming			
Processing and separating			
Textile technology			

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Bioplastics, Biocomposites, Wood	✓	✓	
Cellular materials (foam materials) Closed-pore, Open-pore, Syntactic foams, Others (cellular composites)	✓	✓	
Composites Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Metal matrix composite, Natural fibre reinforced plastics (NFRP)	✓	✓	
Fibres Glass fibres, Carbon fibres, Natural fibres	✓	✓	
Functional materials			
Metals Aluminium, Intermetallic alloys, Magnesium, Steel, Titanium	✓	✓	
Plastics Thermoset plastics, Elastomers, Thermoplastics	✓	✓	
Structural ceramics			
(Technical) textiles			

Contacts

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