

About this organisation

Machine translation

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

The Institute of Lightweight Structures deals with the development and analysis of lightweight structures, in particular for the aerospace industry and other transport technology. The focus is on modern lightweight construction methods using fibre-reinforced materials, with particular emphasis on hybrid construction methods.

The research work focuses on the development of methods that are suitable for the initial design of lightweight structures. These are in particular analytical calculation methods, if necessary with the support of numerical methods. In addition to the development or preparation of special calculation methods for the respective problem, the experimental verification of the theories is a focal point of the work. Special attention is paid to sandwich structures and force transmission (e.g. bolted and bonded joints).

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85579 Neubiberg
Bavaria
Germany
www.unibw.de/leichtbau



Organisation type

University or higher education institution

Sectors

No specific sector

Employees

Up to 9

Turnover

n/a

Funding

Main areas covered

Hybrid structures, force application, Sandwich structures, Friction-based power transmission, Strength of imperfect structures

Infrastructure

Strength laboratory, Servohydraulic testing system, 10 - 1000 kN, Universal testing machine 150 kN, Electrodyn. shaker, max 20 kN, Electrical and optical measuring methods

Certifications

Keywords

Memberships

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Software & databases, Materials	✓	✓	
Services & consulting Training, Consulting, Testing and trials, Engineering, Simulation	✓	✓	
Field of technology			
Design & layout Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	
<i>Functional integration</i>			
Measuring and testing technology Component and part analysis, Destructive analysis	✓	✓	✓
Modelling and simulation Loads & stress, Optimisation, Structural mechanics, Materials	✓	✓	
<i>Plant construction & automation</i>			
<i>Recycling technologies</i>			

Overview of lightweighting expertise

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Research Development Manufacturing & Supply

Manufacturing process

Additive manufacturing

Coating (surface engineering)

Fibre composite technology

Forming

Joining

Material property alteration

Primary forming

Processing and separating

Textile technology

Material

Biogenic materials

Cellular materials (foam materials)

Composites

Fibres

Functional materials

Metals

Plastics

Structural ceramics

(Technical) textiles

Contacts

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