

# Friedrich-Alexander-University Erlangen-Nuremberg

## Chair of Plastics Technology (LKT)

### About this organisation

#### Machine translation

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

Dietmar Drummer is part of the Department of Mechanical Engineering at Friedrich-Alexander-Universität Erlangen-Nürnberg and is involved in research, development and teaching in the field of plastics technology.

Research at the Chair of Plastics Technology focuses on additive manufacturing, new materials and material properties, processing, joining technology and tribology. The department has around 2800 m<sup>2</sup> of state-of-the-art office and technical centre space as well as several testing laboratories equipped with the latest equipment. The research areas are supported by various laboratories with qualified employees who carry out both development work and expert tests. The core of LKT's scientific work is a holistic approach to manufacturing processes, focussing on the relationships between processes, materials and their internal properties, the design and the resulting component characteristics.

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Bavaria  
Germany  
[www.lkt.tf.fau.de](http://www.lkt.tf.fau.de)



#### Organisation type

University or higher education institution

#### Sectors



#### Employees

10 up to 49

#### Turnover

n/a

#### Funding



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### About this organisation

**Main areas covered** Additive manufacturing, Processing, Sustainability, Material properties, Joining technology and tribology

**Infrastructure** Systems for material preparation, Machines for primary and secondary forming, Systems for additive manufacturing, Connection technology, Material and component analysis

#### Certifications

**Keywords** Material preparation, Additive manufacturing, Plastics processing, Material characterisation, Component testing

**Memberships** Research Association 3-D MID e.V., Welding Research Association, Research v. Drive Technology (FVA)

### Overview of lightweighting expertise

#### Machine translation

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

**Research   Development   Manufacturing  
& Supply**

#### Offer

*Products*

*Services & consulting*

## Overview of lightweighting expertise

### Machine translation

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	Research	Development	Manufacturing & Supply
<b>Field of technology</b>			
<b>Design &amp; layout</b> Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight material construction	✓	✓	
<b>Functional integration</b> Material functionalisation	✓	✓	
<b>Measuring and testing technology</b> Component and part analysis, Visual analysis (e.g. microscopy, metallography), Environmental simulation, Materials analysis, Destructive analysis, Non-destructive analysis	✓	✓	
<b>Modelling and simulation</b> Loads & stress, Processes, Materials	✓		
<i>Plant construction &amp; automation</i>			
<b>Recycling technologies</b> Recycling	✓		

## Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
<b>Manufacturing process</b>			
<b>Additive manufacturing</b> 3D printing, Selective laser sintering (SLS), Stereolithography	✓	✓	
<i>Coating (surface engineering)</i>			
<b>Fibre composite technology</b> Pre-preg processing	✓		
<b>Forming</b> Compression moulding, Thermal converting	✓		
<b>Joining</b> Hybrid joining, Welding	✓	✓	
<i>Material property alteration</i>			
<b>Primary forming</b> Extrusion, Sintering, Injection moulding	✓	✓	
<i>Processing and separating</i>			
<i>Textile technology</i>			

## Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
<b>Material</b>			
<b>Biogenic materials</b> Bioplastics	✓		
<b>Cellular materials (foam materials)</b> Closed-pore, Syntactic foams	✓	✓	
<b>Composites</b> Aramid fibre composites, Basalt fibre-reinforced plastic, Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Nanocomposites, Natural fibre reinforced plastics (NFRP), Laminates	✓		
<b>Fibres</b> Aramid fibres, Glass fibres, Carbon fibres, Natural fibres	✓		
<i>Functional materials</i>			
<i>Metals</i>			
<b>Plastics</b> Thermoset plastics, Elastomers, Thermoplastics	✓	✓	
<b>Structural ceramics</b> Oxidic ceramics	✓		
<i>(Technical) textiles</i>			

## Contacts

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### Contacts

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