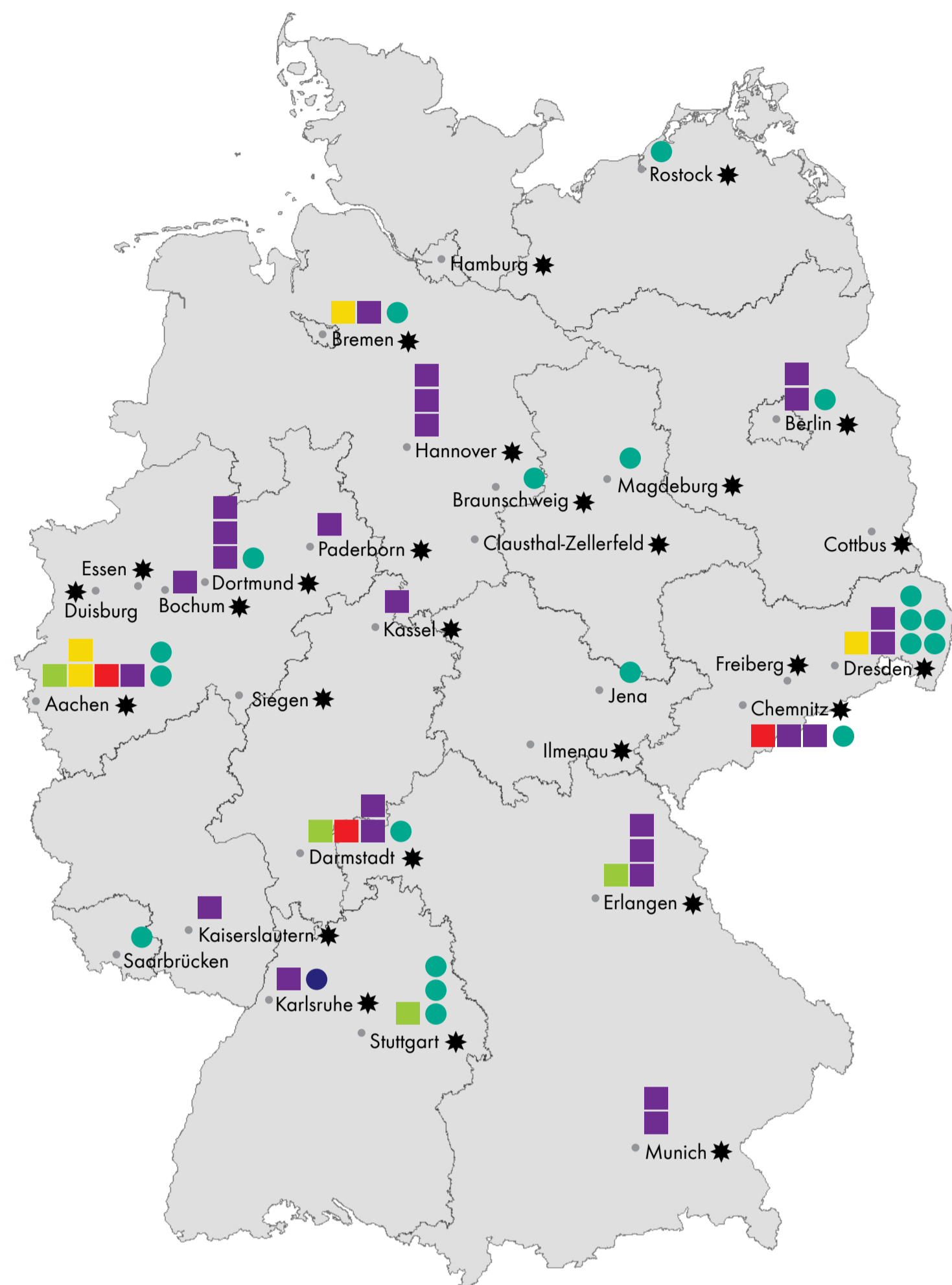




# Research Landscapes in Germany

## Manufacturing Science and Engineering



- ★ University with a strong department in the field of Manufacturing Science and Engineering
- Non-University Research Institution
- Fraunhofer Gesellschaft Institute
- Helmholtz Association Centre
- DFG funded projects
- Graduate School [established in the framework of the German Excellence Initiative]
- Research Training Group
- Cluster of Excellence [established in the framework of the German Excellence Initiative]
- Collaborative Research Centre/Transregio

### ★ Universities with strong departments in the field of Manufacturing Science and Engineering

Location	Institution	Title	Location	Institution	Title
Aachen	Rheinisch-Westfälische Technische Hochschule Aachen	www.rwth-aachen.de	Freiberg	Technische Universität Bergakademie Freiberg	www.tu-freiberg.de
Berlin	Technische Universität Berlin	www.tu-berlin.de	Hamburg	Technische Universität Hamburg-Harburg	www.tuhh.de
Braunschweig	Technische Universität Braunschweig	www.tu-braunschweig.de	Hannover	Gottfried Wilhelm Leibniz Universität Hannover	www.uni-hannover.de
Bochum	Ruhr-Universität Bochum	www.ruhr-uni-bochum.de	Ilmenau	Technische Universität Ilmenau	www.tu-ilmenau.de
Bremen	Universität Bremen	www.uni-bremen.de	Kaiserslautern	Technische Universität Kaiserslautern	www.uni-kl.de
Chemnitz	Technische Universität Chemnitz	www.tu-chemnitz.de	Karlsruhe	Karlsruhe Institute of Technology	www.kit.edu
Clausthal-Zellerfeld	Technische Universität Clausthal	www.tu-clausthal.de	Kassel	Universität Kassel	www.uni-kassel.de
Cottbus	Technische Universität Cottbus	www.tu-cottbus.de	Magdeburg	Otto-von-Guericke-Universität Magdeburg	www.uni-magdeburg.de
Darmstadt	Technische Universität Darmstadt	www.tu-darmstadt.de	Munich	Technische Universität München	www.tum.de
Dortmund	Technische Universität Dortmund	www.tu-dortmund.de	Paderborn	Universität Paderborn	www.uni-paderborn.de
Dresden	Technische Universität Dresden	www.tu-dresden.de	Rostock	Universität Rostock	www.uni-rostock.de
Duisburg Essen	Universität Duisburg-Essen	www.uni-due.de	Siegen	Universität Siegen	www.uni-siegen.de
Erlangen	Friedrich-Alexander-Universität Erlangen-Nürnberg	www.uni-erlangen.de	Stuttgart	Universität Stuttgart	www.uni-stuttgart.de

### Centres of Research - funded by DFG

#### ■ Clusters of Excellence [established in the framework of the German Excellence Initiative]

Location	Institution	Title	Contact
Aachen	Rheinisch-Westfälische Technische Hochschule Aachen	Integrative Production Technology for High-Wage Countries	www.production-research.de
Chemnitz	Technische Universität Chemnitz	MERGE Technologies for Multifunctional Lightweight Structures	www.tu-chemnitz.de/MERGE
Darmstadt	Technische Universität Darmstadt	Center of Smart Interfaces (CSI)	www.csi.tu-darmstadt.de

#### ■ Collaborative Research Centres/Transregios

Location	Institution	Title	Contact
Aachen	Rheinisch-Westfälische Technische Hochschule Aachen	Thermo-Energetic Design of Machine Tools	www.transregio96.de
Chemnitz Dresden	Technische Universität Chemnitz Technische Universität Dresden		
Berlin	Technische Universität Berlin	Sustainable Manufacturing	www.sustainable-manufacturing.net
Berlin Bochum	Technische Universität Berlin Ruhr-Universität Bochum	Industrial Product-Service Systems (IPS2) - Dynamic Interdependencies between Products and Services in the Production Area	www.lps.rub.de/tr29
Bremen	Universität Bremen	Micro Cold Forming - Processes, Characterization, Optimization	www.sfb747.uni-bremen.de
Chemnitz Dresden Erlangen	Technische Universität Chemnitz Technische Universität Dresden Friedrich-Alexander-Universität Erlangen-Nürnberg	Production Technologies for Light Metal and Fiber Reinforced Composite Based Components with Integrated Piezoceramic Sensors and Actuators	www.ptpiesa.tu-chemnitz.de
Darmstadt	Technische Universität Darmstadt	Control of Uncertainties in Load-Carrying Structures in Mechanical Engineering	www.sfb805.tu-darmstadt.de/sfb805
		Integral Sheet Metal Design with Higher Order Bifurcations - Development, Production, Evaluation	www.sfb666.tu-darmstadt.de
Dortmund Erlangen Hannover	Technische Universität Dortmund Friedrich-Alexander-Universität Erlangen-Nürnberg Gottfried Wilhelm Leibniz Universität Hannover	Manufacture of Complex Functional Components with Variants by Using a New Sheet Metal Forming Process - Sheet-Bulk Metal Forming	www.tr-73.de

## Collaborative Research Centres/Transregios (continued)

Dortmund Karlsruhe Munich	Technische Universität Dortmund Karlsruher Institut für Technologie Technische Universität München	Integration of Forming, Cutting and Joining for the Manufacture of lightweight Frame Structures	www.leichtbau.de/tr10
Dortmund Kassel Paderborn	Technische Universität Dortmund Universität Kassel Universität Paderborn	Process-Integrated Manufacturing of Functionally Graded Structures on the Basis of Thermo-Mechanically Coupled Phenomena	www.transregio-30.com
Erlangen	Friedrich-Alexander-Universität Erlangen-Nürnberg	Additive Manufacturing	www.sfb814.de
Hannover	Gottfried Wilhelm Leibniz Universität Hannover	Regeneration of Complex Capital Goods	www.sfb871.de
		Gentelligent Components in their Lifecycle	www.sfb653.uni-hannover.de
Kaiserslautern	Technische Universität Kaiserslautern	Microscale Morphology of Component Surfaces (MICOS)	www.sfb926.de
Munich	Technische Universität München	Managing Cycles in Innovation Processes – Integrated Development of Product Service Systems Based on Technical Products	www.sfb768.de

## Graduate Training - funded by DFG

### Research Training Groups

Location	Institution	Title	Contact
Aachen	Rheinisch-Westfälische Technische Hochschule Aachen	Ramp-Up Management - Development of Decision Models for the Production Ramp-Up	www.anlaufmanagement.rwth-aachen.de
		Integrated Energy Supply Modules for Roadbound E-Mobility	www.mobilem.rwth-aachen.de
Bremen	Universität Bremen	Micro-, meso- and macroporous nonmetallic Materials: Fundamentals and Applications	www.mimenima.uni-bremen.de
Dresden	Technische Universität Dresden	Hydrogel-Based Microsystems	www.tu-dresden.de/forschung/dfg1865

### Graduate Schools [established in the framework of the German Excellence Initiative]

Location	Institution	Title	Contact
Aachen	Rheinisch-Westfälische Technische Hochschule Aachen	Aachen Institute for Advanced Study in Computational Engineering Science (AICES)	www.aices.rwth-aachen.de
Darmstadt	Technische Universität Darmstadt	Graduate School of Excellence Computational Engineering (CE)	www.graduate-school-ce.de
Erlangen	Friedrich-Alexander-Universität Erlangen-Nürnberg	Erlangen Graduate School in Advanced Optical Technologies	www.aot.uni-erlangen.de
Stuttgart	Universität Stuttgart	Graduate School of Excellence Advanced Manufacturing Engineering (GSaME)	www.gsame.uni-stuttgart.de

**Priority Programmes** are characterised by their enhanced quality of research through the use of new methods and forms of collaboration in emerging fields. A particular feature of the Priority Programme is the nationwide cooperation between its participating researchers across the whole of Germany.

**The Priority Programmes are not included in the map. The individual projects are located at several locations throughout Germany.**

Title	Contact
Optically Generated sub-100 nm Structures for Biomedical and Technical Applications	www.spp1327.de
The Processes of Joining by Plastic Deformation	www.spp1640.de
Modeling, Simulation and Compensation of Thermal Effects for Complex Machining Processes	www.cutsim.de
Small Machine Tools for Small Work Pieces	www.spp1476.de
Machine Elements for Resource Efficiency	www.fzg.mw.tum.de
Nachhaltige Produktion durch Trockenbearbeitung in der Umformtechnik	www.trockenumformen.de/index.php/en
Dynamische Simulation vernetzter Feststoffprozesse	www.dynsim-fp.de/spp-1679
Field controlled particle matrix interactions: synthesis multiscale modelling and application of magnetic hybrid materials	www.mfd.mw.tu-dresden.de/spp1681
Intrinsic Hybrid Structures for Light Weight Constructions	www.spp-1712-hybrider-leichtbau.de

You can find more information on further DFG-funded projects in your field of research in the online database **GEPRIS**.



<http://gepris.dfg.de>

You can also browse the **Research Explorer**. The Research Explorer contains over 19,000 institutes at German universities and non-university research institutions, searchable by geographic location, subject and other structural criteria.



<http://research-explorer.de>

## Non-University Research Institutions

### Fraunhofer-Gesellschaft Institutes

Location	Institution	Contact
Aachen	Fraunhofer Institute for Production Technology	www.ipt.fraunhofer.de
Aachen	Fraunhofer Institute for Laser Technology	www.ilt.fraunhofer.de
Berlin	Fraunhofer Institute for Production Systems and Design Technology	www.ipk.fraunhofer.de
Braunschweig	Fraunhofer Institute for Surface Engineering and Thin Films	www.ist.fraunhofer.de
Bremen Dresden	Fraunhofer Institute for Manufacturing Technology and Advanced Materials	www.ifam.fraunhofer.de
Chemnitz Dresden	Fraunhofer Institute for Machine Tools and Forming Technology	www.iwu.fraunhofer.de
Darmstadt	Fraunhofer Institute for Structural Durability and Systems Reliability	www.lbf.fraunhofer.de
Dortmund	Fraunhofer Institute for Material Flow and Logistics	www.iml.fraunhofer.de
Dresden	Fraunhofer Institute for Laser and Surface Technology	www.iws.fraunhofer.de
Dresden	Fraunhofer Institute for Ceramic Technologies and Systems	www.ikts.fraunhofer.de
Dresden	Fraunhofer Institute for Electron Beam and Plasma Technology	www.fep.fraunhofer.de
Jena	Fraunhofer Institute for Applied Optics and Precision Engineering	www.iof.fraunhofer.de
Magdeburg	Fraunhofer Institute for Factory Operation and Automation	www.iff.fraunhofer.de
Rostock	Application Center Large Structures in Production Engineering	www.hro.ipa.fraunhofer.de
Saarbrücken	Fraunhofer Institute for Nondestructive Testing	www.izfp.fraunhofer.de
Stuttgart	Fraunhofer Institute for Industrial Engineering	www.iao.fraunhofer.de
Stuttgart	Fraunhofer Institute for Manufacturing Engineering and Automation	www.ipa.fraunhofer.de
Stuttgart	Fraunhofer Institute for Interfacial Engineering and Biotechnology	www.igb.fraunhofer.de

### Helmholtz Association Centre

Karlsruhe	Karlsruhe Institute of Technology	www.kit.edu
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**This list is not all inclusive.** Listed are DFG-funded projects, non-university research institutes and universities with a major focus on Manufacturing Science and Engineering.  
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