

Hochschule Aalen
UNIVERSITY OF APPLIED SCIENCES



Excellence in
Applied Research

University Leadership Welcome	01
Aalen University of Applied Sciences	03
Research Profile: Featured Research Areas	04
Energy Efficiency	06
Resource Conservation	11
Artificial Intelligence & Automation	15
Health & Medical Technology	19
Excellent Infrastructure	20
Support Services for Researchers	22
For Researchers at Every Stage	24
Research Institutes with Contact Persons	26
Facts & Figures	27
Imprint	28

Research: Aalen University's remarkable success story

Research drives technological progress, economic growth, and social prosperity. It plays a vital role in tackling urgent challenges, ranging from climate change and environmental protection to digital transformation and demographic change. Founded in 1962, Aalen University of Applied Sciences has become one of Germany's leading universities of applied sciences (UAS). These universities focus on practice-oriented research and teaching. The university's success can be attributed to a powerful combination of dedicated researchers, state-of-the-art research infrastructure, and a trusted network of partners from academia, industry, and the community.

Research is at the core of Aalen University's identity. It shapes our reputation far beyond our region and fosters innovation in teaching, preparing our graduates for tomorrow's job market. A significant milestone was reached in 2022 when the right to confer doctoral degrees was granted to a joint state consortium, the "Association for Doctoral Studies at the Universities of Applied Sciences in Baden-Württemberg". This privilege was historically unavailable to universities of applied sciences in Germany. As a member, Aalen University of Applied Sciences can now offer doctoral studies independently of universities.

Situated in the economically vibrant region of East Württemberg, home to a strong economy driven by small and medium-sized enterprises and numerous global market leaders, Aalen University plays an active role as both a source of knowledge and a driver of innovation. Together with our regional partners, we tackle tomorrow's challenges with research that balances economic success, environmental stewardship, and social responsibility.

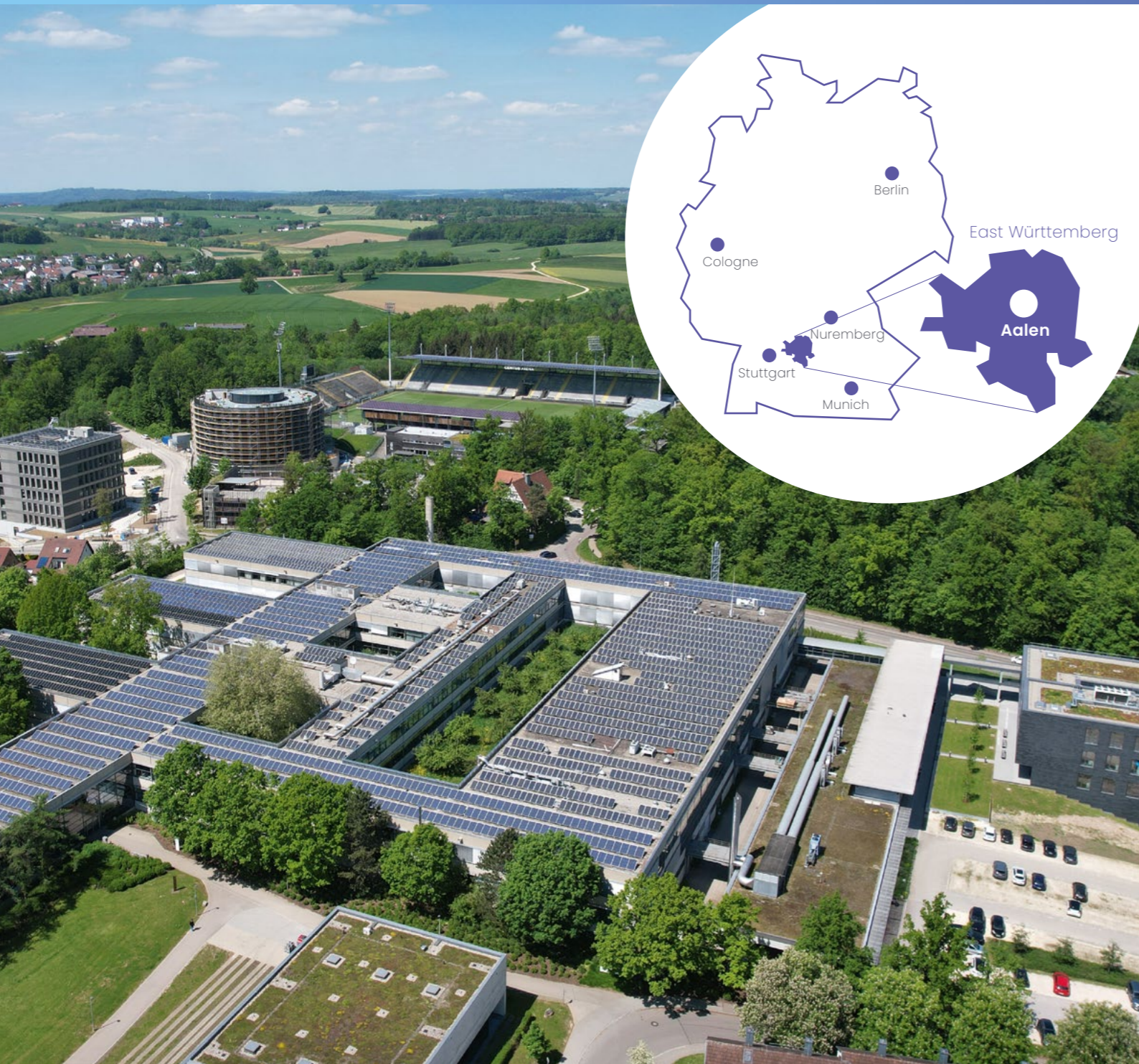
This brochure offers a glimpse into our research activities. We hope you enjoy reading it!

Prof. Dr. Harald Riegel
Rector of Aalen University



Prof. Dr. Volker Knoblauch
Vice Rector for Research and Transfer





Aalen University is home to around 4,500 students and 160 professors and is one of 24 universities of applied sciences in Baden-Württemberg.

It consistently earns top national rankings in teaching, research, and start-up support. The university's campus is located in the city of Aalen, home to 70,000 residents and about an hour from Stuttgart and Nuremberg or two hours from Munich.

Here, short walking distances connect modern labs and classrooms and facilitate a welcoming, community spirit atmosphere.

Tradition meets Innovation

The East Württemberg region, which comprises the Ostalb and Heidenheim districts in southwestern Germany, has a long tradition in metalworking and is now a major economic hub, specializing in manufacturing and high-tech industries. With one of the highest patent densities in Germany, it's known as the "Land of Talent and Patents".

Here you'll find family-owned manufacturers alongside global market leaders like Carl Zeiss, Paul Hartmann, Hensoldt, MAPAL, Voith, and Varta – with Aalen University of Applied Sciences.

Key sectors include automotive; photonics and optical technologies; surface engineering; machinery, plant, and tool manufacturing; and renewable energy and energy storage.

A University for its Region – and beyond

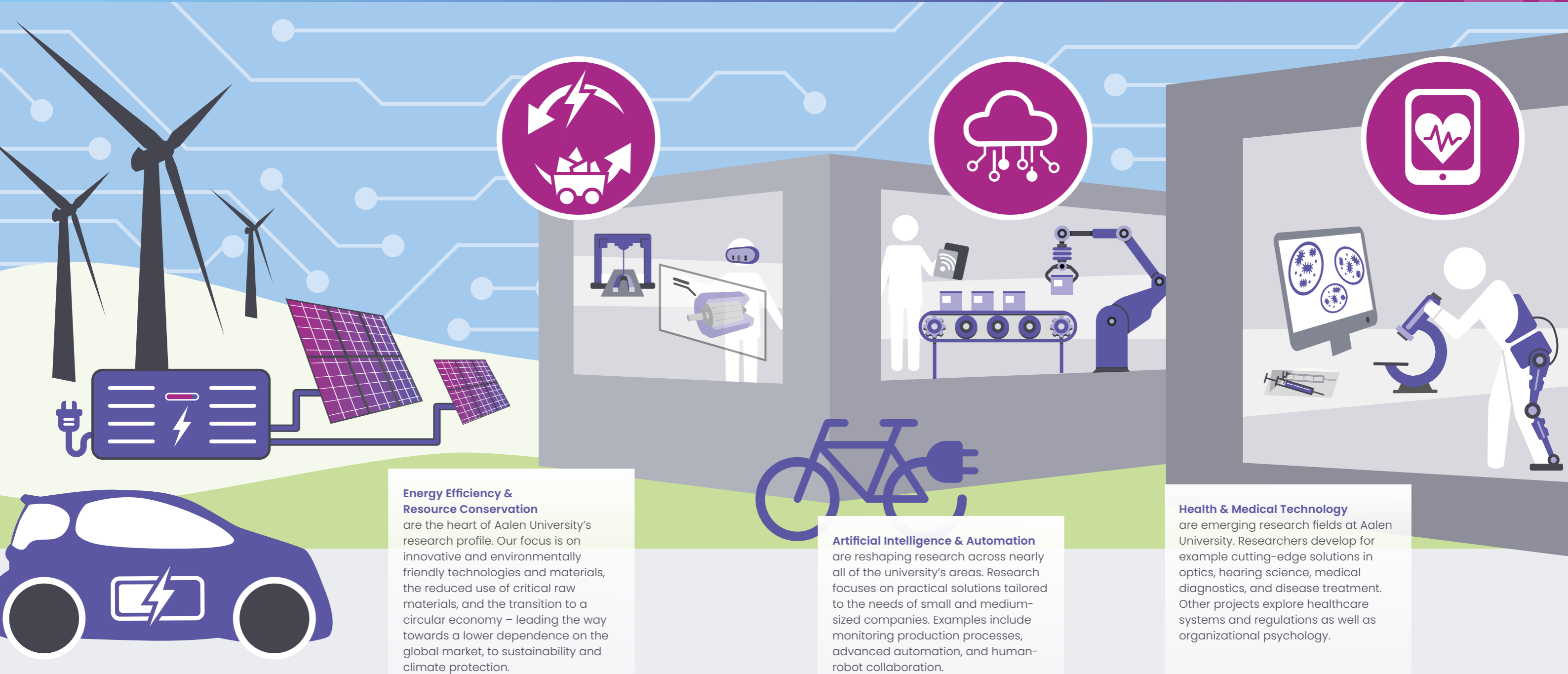
Aalen University works closely and successfully with regional partners in diverse areas such as teaching, part-time continuing education or start-up support. Our degree programs are tailored to meet the region's workforce needs and now include more than 60 bachelor's and master's programs across five faculties: Mechanical Engineering and Materials Science; Optics and Mechatronics; Electronics and Computer Science; Business and Health Management; and Chemistry.

In return, the region invests back in us by supporting initiatives such as the INNO-Z Innovation Center for start-ups and the AI Competence Center. Aalen University places a special emphasis on applied research. In collaboration with regional and national companies and research institutions, its researchers are driving the development of new technologies and providing effective impetus for innovation.

Linking our Region to the World

With more than 140 partner institutions around the world, Aalen University is your gateway to studying, performing research, and conducting internships abroad. We're steadily expanding our English-taught and bilingual degree programs to welcome even more international students.

Together with regional partners, we run the Welcome Center East Württemberg which assists international students and professionals as they settle into the region. Aalen University is also increasingly in demand as a partner in international research projects funded, for example, by Horizon Europe..



Energy Efficiency & Resource Conservation

are the heart of Aalen University's research profile. Our focus is on innovative and environmentally friendly technologies and materials, the reduced use of critical raw materials, and the transition to a circular economy – leading the way towards a lower dependence on the global market, to sustainability and climate protection.

Artificial Intelligence & Automation

are reshaping research across nearly all of the university's areas. Research focuses on practical solutions tailored to the needs of small and medium-sized companies. Examples include monitoring production processes, advanced automation, and human-robot collaboration.

Health & Medical Technology

are emerging research fields at Aalen University. Researchers develop for example cutting-edge solutions in optics, hearing science, medical diagnostics, and disease treatment. Other projects explore healthcare systems and regulations as well as organizational psychology.



Battery Technology

The demand for powerful, long-lasting, and safe batteries that are both resource-efficient and cost-effective continues to rise. For example, they are needed in large quantities to temporarily store renewable energy. In addition, they are one of – if not the – key components for electric mobility and thus make a significant contribution to build a cleaner, low-emission future in the transportation sector.

Several research groups at Aalen University are working on the batteries of the future. Their research includes developing new materials and manufacturing technologies that significantly improve performance as well as developing **analytical methods** for detailed, efficient characterization of their microscopic structure. Other research activities aim to improve **quality assurance processes** in industrial manufacturing and ensure the reliable performance in underwater applications. So far, the battery research at Aalen

University has focused on lithium-ion batteries, the state-of-the-art technology. Recently, research projects have expanded to include promising alternatives, such as **sodium-ion and lithium-sulfur batteries**, which are more affordable and environmentally friendly. While lithium-ion batteries so far contain liquid electrolytes, our researchers are also exploring **solid-state electrolytes** for next-generation batteries, which promise significant improvements in safety and energy storage capacity – known as energy density.

Another area of research focuses on improving the power density to enhance the batteries' fast-charging capability. With this goal in mind, researchers have developed and patented a novel, one-step process for manufacturing electrodes called **composite electroforming**. Another example is the precise, targeted microstructuring of electrodes using lasers.



In the **PRESERVE** project (funded by the State Program PAN HAW BW), recycled materials are evaluated for their re-integration into lithium-ion batteries.

Project lead: Prof. Dr. Dagmar Goll

Looking ahead, our more recent research activities in the field of batteries aim to maximize sustainability throughout the lifecycle. This includes using eco-friendly materials, the development of energy-efficient manufacturing processes and **recycling production waste**, as well as developing recyclable components and systems.

In the **HANA** project (funded by the foundation Carl-Zeiss-Stiftung in the program Transfer), researchers are developing a process to turn wood waste into high-quality anode materials for sustainable sodium-ion batteries.

Project lead: Prof. Dr. Volker Knoblauch



Magnetic Materials

Magnets are key components in electric motors and generators, enabling the conversion between electrical and mechanical energy. As global demand soars, it is ever more important to reduce the rare raw materials used and recycle end-of-life magnets. Magnetic research focuses on advanced **magnetic materials** tailored for applications such as electric motors.



Within **GREENE** (funded by Horizon Europe), researchers aim to develop high-performance neodymium-iron-boron magnets that minimize the use of rare-earth elements.

Project lead Prof. Dr. Dagmar Goll

Cutting-edge high-throughput screening techniques facilitate this process by enabling the rapid screening of promising candidate materials. Our scientists also conduct fundamental research to better understand

how magnets work. For example, researchers study aging processes and develop test environments to evaluate the performance of newly developed magnetic materials. One particularly exciting and emerging field is the use of additive manufacturing to produce customized magnets.

Ongoing projects funded by the German Research Foundation (DFG) and the European Union are investigating strategies to reduce the use of critical rare-earth elements in magnets and to replace them with less toxic alternatives. Current research focuses on **recovering rare-earth materials** from used magnets, assessing the quality of recycled materials, and reusing them in suitable applications.

Sustainable Drive Technology

At Aalen University, researchers are developing sustainable drive technologies that increase the **energy efficiency, performance, and reliability** of electric drive systems. To achieve this, they use the state-of-the-art facilities such as a high-performance full-vehicle testing station to validate

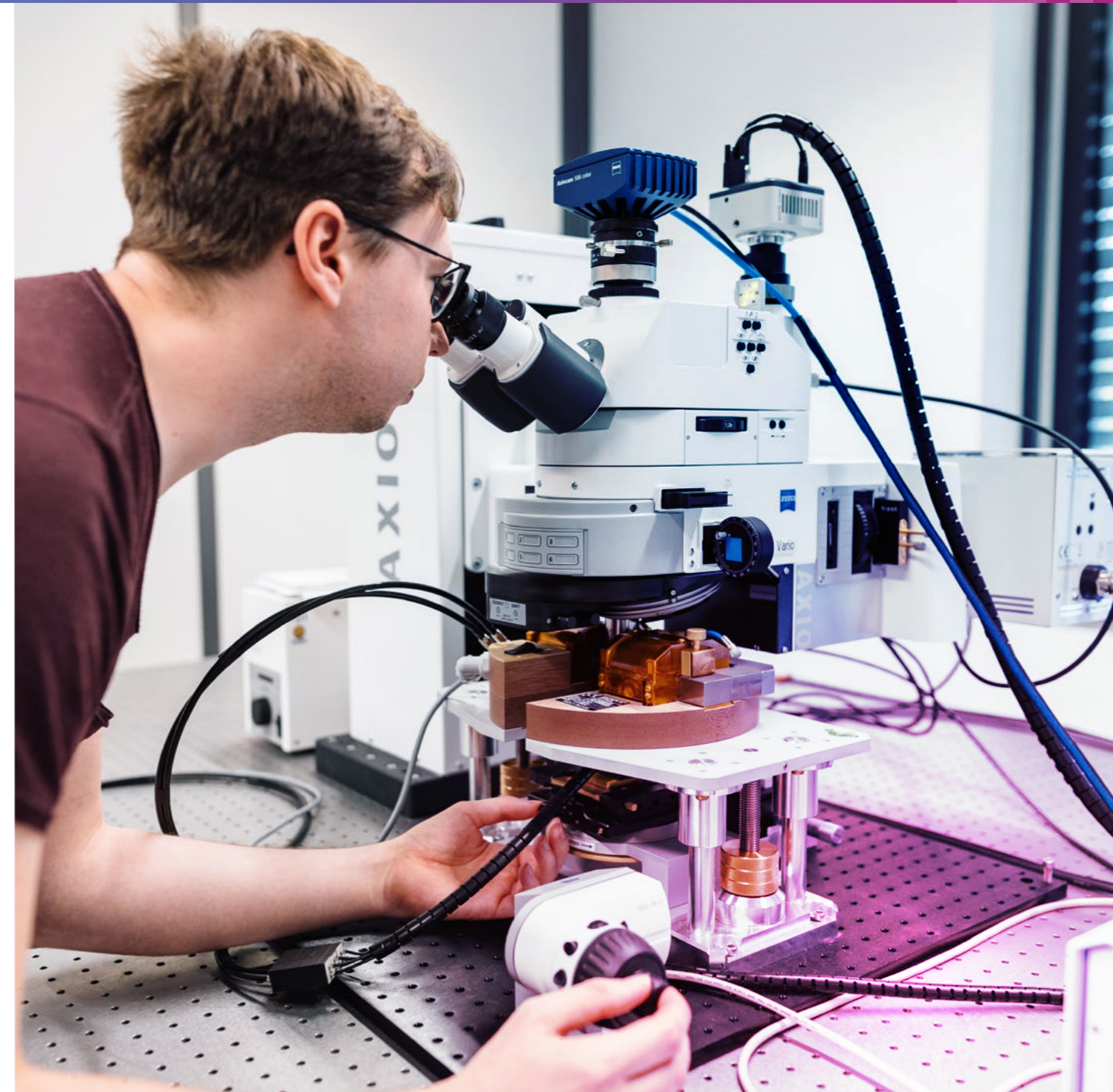
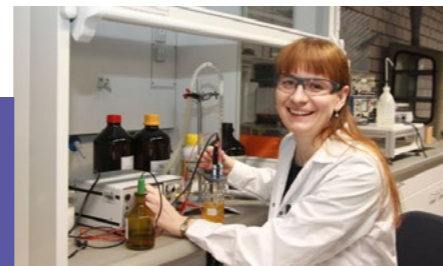
The **EIAOil** project (funded by the BMFTR initiative FH-Kooperativ) focuses on creating and testing sustainable lubricants for electromechanical drive systems.

Project lead: Prof. Dr. Katharina Weber

and further develop new technologies, materials, and components.

Artificial intelligence plays an increasingly important role by enabling realistic simulations and the use of real-time sensor data from drive components. This data is used to optimize operation under varying conditions and prevents failures thanks to predictive maintenance.

The development of bio-based lubricants, which must strike a balance between technological performance and sustainability, also plays an important role in this context.





Circular Economy

To establish a sustainable circular economy, we must use limited resources responsibly, reduce waste, and maximize product lifespan. This requires technological innovation as well as solutions to economic and social issues.

At Aalen University, research addresses various stages of **material and product life cycles**. Early design decisions determine how long a product can be used and whether it can later be refurbished, repaired, or recycled. Selecting the right raw materials is crucial.

Our researchers develop **sustainable materials** and innovative production and recycling methods for use in **batteries, magnets, and lightweight construction**. They also explore novel applications of renewable resources. Examples include using wood to produce battery components and natural fibers in lightweight structures.

Researchers are working on **extending the lifespan of products** through

innovative coatings that protect against corrosion and wear as well as on the use of bio-based lubricants as a sustainable alternative to conventional solutions.

When a product no longer functions properly or has otherwise reached the end of its lifespan, solutions include **recycling, repair, and refurbishment**. At Aalen University, researchers are using **robots, automation, and artificial intelligence** to implement these solutions. For example, collaborative robots are used to disassemble products, new imaging techniques and artificial intelligence are applied to sort waste, and complete recycling plants with fully automated product processing are developed.

Aalen University is currently also developing expertise in the comprehensive **assessment of entire circular systems and value chains**.

In the field of economics, researchers advise companies on **sustainability**

At the collaborative research center **Circular Factory for the Perpetual Product** (funded by the DFG: SFB 1574), researchers are designing integrated planning and control systems for a circular economy in industrial production
Project lead: Prof. Dr.-Ing. Nicole Stricker



strategies, such as business models, supply chain management, carbon footprint reduction, and governance practices.

In **RewitAI** (funded by the State Program PAN HAW BW), researchers are investigating how plastics in turf used on sport fields can be reintegrated into the circular economy.

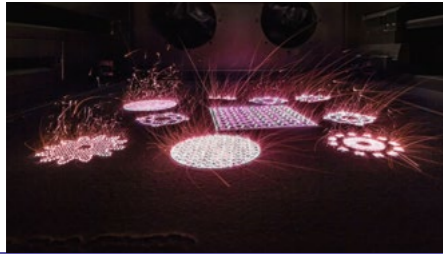
Project lead: Prof. Dr. Iman Taha



Lightweight Design

Lightweight design is essential in modern engineering, whether for cars, aircraft, or industrial machinery. Thanks to optimized designs and lightweight materials, fewer resources are used, environmental impact is reduced, and cost efficiency is improved.

Researchers at Aalen University are driving innovation in lightweight



At the **CZS Center KRAFT** (funded by the foundation Carl-Zeiss-Stiftung) research focuses on making additive manufacturing processes more sustainable.

Project lead: Prof. Dr. Iman Taha

materials and manufacturing technologies. They have developed new die casting processes for light metal alloys, which are used for example in automotive components like electric motor housings.

Multi-material lightweight design combines composites and metals to create strong, efficient materials. Researchers are developing the necessary joining technologies that ensure stability during use and allow the materials to be separated for recycling at the end of the product's life cycle. Researchers are also exploring bio-based fiber-reinforced composites, which are derived from renewable sources and, in some cases, are even biodegradable.

Additive Manufacturing

Additive manufacturing, also known as 3D printing, enables the production of customized products with complex geometries. The process is flexible, fast, and resource-efficient. Researchers at Aalen University use a variety of materials in additive manufacturing,

including metals, plastics, glass, and resins. They are developing new methods such as advanced laser technologies to expand the range of applications for additive manufacturing. These applications include customized hearing aids, functionalized optical lenses, and lightweight hydraulic valves.

Fundamental research, such as studying the interaction between light and matter, is necessary for developing base materials and defining optimal 3D printing process parameters. To take full advantage of this technology's enormous potential, researchers at Aalen University integrate additive manufacturing into industrial production and optimize component design for 3D printing.

One particularly ambitious area of focus is 3D printing in zero-gravity environments, which could pave the way for future space applications, such as fabricating spare parts or constructing lunar infrastructure directly from moon dust.



The **HeroFEID** project (funded by the BMW Central Innovation Program for SMEs, ZIM) combines metal casting and additive manufacturing to create a bionically inspired lightweight structure.

Project lead: Prof. Dr. Markus Merkel





Research on image analysis and industrial production generate ever-increasing volumes of data. Artificial intelligence (AI) provides new ways to process the data and to extract insights from data, boosting efficiency and productivity, improving product quality, and reducing costs.

AI for image analysis

Image analysis plays a key role in developing materials and ensuring product quality. At Aalen University, AI methods are applied to microscopic 2D and 3D image data to reveal microstructures, material defects, and signs of aging. These findings are correlated with production data to make evidence-based changes and optimize production processes. The increasing automation of imaging and analysis workflows improves efficiency and delivers robust statistical results.

To further improve predictive accuracy,

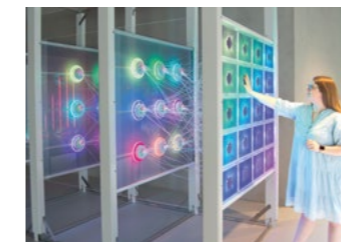
our researchers are exploring novel AI models such as transformer models and other large language models. Research also addresses physics-informed multimodal models, which combine image and production data with physical properties about the material or product such as density or conductivity.

Another area of research is explainable AI (XAI), which aims to make the decision-making of AI systems transparent for users. This enables better error diagnostics and strengthens trust in AI results.

AI for sustainable production and products

Ensuring product longevity and reliability as well as developing intelligent self-optimizing production processes requires robust, AI-supported acquisition and processing of high-quality data. Researchers develop methods for real-time defect detection during production, condition monitoring and forecasting maintenance needs – predictive maintenance. These enable the industry to adapt production planning to changing conditions such as fluctuations in demand or availability of resources.

Data availability and quality are often limiting factors for training AI models and carrying out automated analyses. To address this, our researchers develop new sensors that can be integrated into machines and production lines and collect useful data. To improve data quality, classical machine learning is combined with large language models, and synthetic data are additionally employed in cases where real data sets are scarce.



In the AI Competence Center

(funded by the European Regional Development Fund (ERDF), the State of Baden-Württemberg, the Ostalb district, and the City of Aalen), researchers collaborate with regional companies to develop AI-based methods and business models.

Project lead: Prof. Dr. Heinz-Peter Bürkle



In the AI Booster Doctoral Program

(funded by the foundation Carl-Zeiss-Stiftung), researchers are exploring new AI models that combine experimental data and physical knowledge to improve manufacturing processes

Project lead: Prof. Dr. Martin Heckmann

Automation & Robotics

Automation, robotics, and industry 4.0 are transforming the manufacturing industry. We combine these fields with AI to create more efficient, flexible, and cost-effective production processes.

AI-powered robotic systems developed by our researchers are redefining precision manufacturing. The medical, aerospace, and semiconductor industries benefit from AI-supported, robot-based grinding and polishing processes that produce precision-finished surfaces for lenses and mirrors.

Robots also play a role in innovative additive manufacturing processes. Our researchers have patented a 6D printing method in which the print head moves and rotates in all directions, enabling the production of complex, highly customized components.

Human-robot collaboration is another key focus. Our scientists and engineers are developing smart, collaborative robots that can work alongside people and assist them with assembly and maintenance processes. A major question is how to ensure that this collaboration is safe and beneficial for everyone and that humans remain in control.

By integrating advanced sensor systems and AI, robots can perceive their environment more accurately and safely act autonomously. Technologies developed in Aalen are used for example to automatically sort plastic waste or to recycle used electronics on an industrial scale.

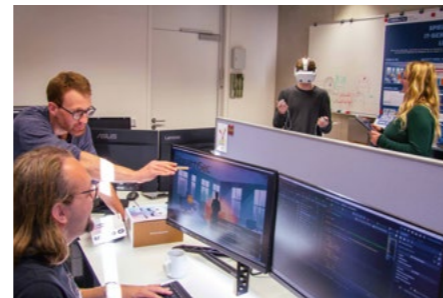


The **SEED** project (funded by the BMFT initiative FH-Kooperativ) targets autonomous underground vehicles using AI to improve the efficiency and reliability of their electric drives.

Project lead: Prof. Dr.-Ing. Steffen Schwarzer

Highly networked production environments present challenges for IT security and cybersecurity. Companies are increasingly exposed to threats ranging from unauthorized data access and data manipulation to sabotage of ongoing operations.

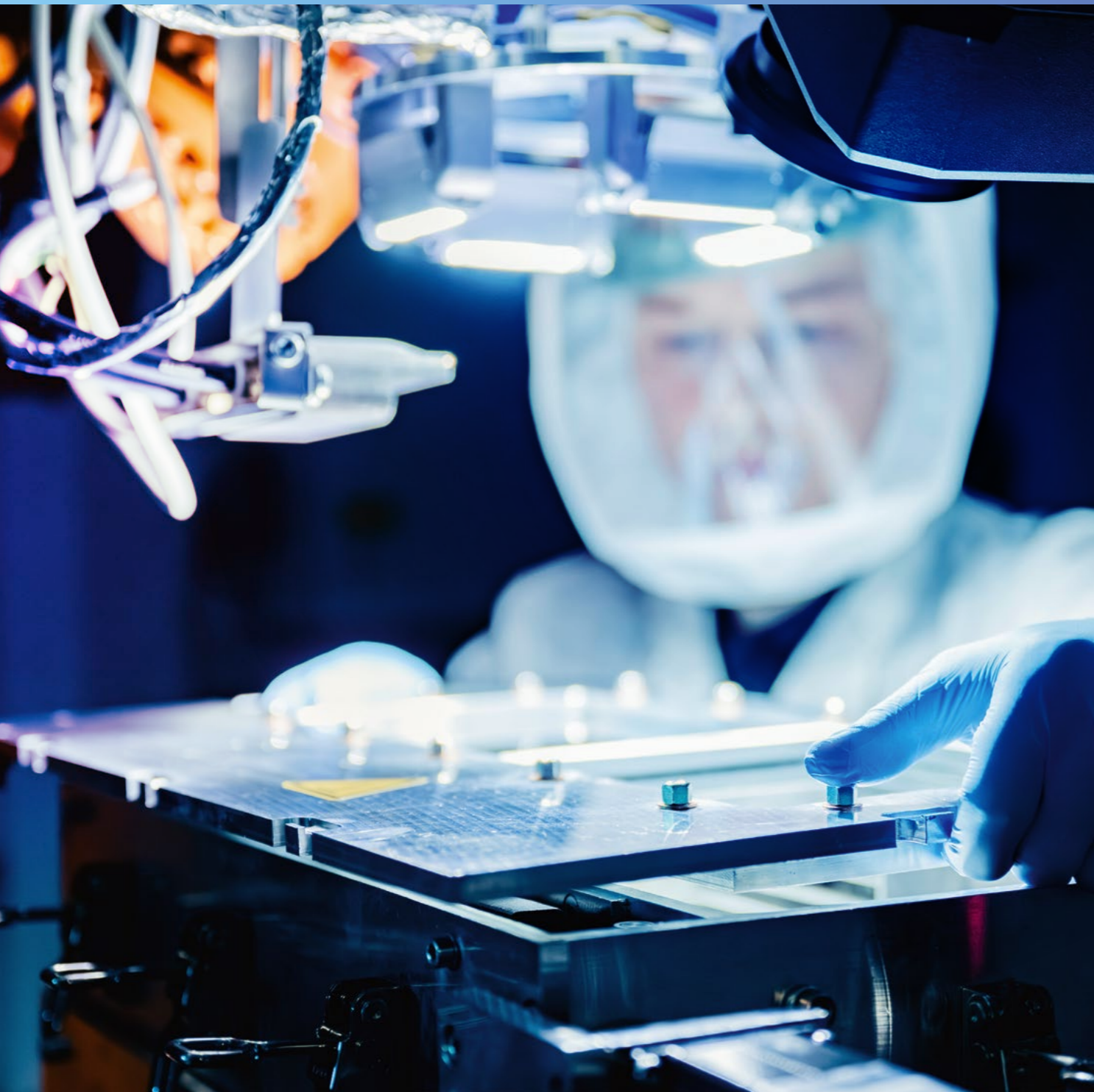
At Aalen University, researchers assist companies in identifying their cybersecurity needs and have devised creative ways to protect against cyberattacks. For instance, they are developing educational games to raise awareness of IT security risks and teach employees practical skills.



In **BAKSecure** (funded by the BMW in the program Mittelstand Digital) gamified training programs are developed to strengthen IT security in companies.

Project lead: Prof. Dr. Marcus Gelderie





Technology for Health & Life Quality

Modern medical research is increasingly driven by digitalization, artificial intelligence, and personalized medicine. Advanced technologies make it possible to create safer and individualized solutions.

Research activities focus on the development of components and systems for a wide range of medical applications. Projects address, for example, **exoskeletons** that assist in rehabilitation as well as lifting and carrying or **customized hearing aids** designed for optimal fit. Researchers are also developing **highly functional eyeglass lenses** tailored to individual vision needs and **sensor-equipped smart bandages** that deliver medication when needed. These technologies improve health outcomes and quality of life.



The **NanoLYRIC** project (funded by the Transfer program of the foundation Carl-Zeiss-Stiftung) investigates how nanoparticle-based cancer therapies work at the molecular level.

Project lead: Prof. Dr. Andreas Walter

Another focus is investigating the causes of diseases and understanding how medications work. Researchers have developed new **microscopy techniques** that allow them to observe previously invisible processes inside cells. These techniques are now being used to study how cancer drugs act.

Chemists are collaborating with laser specialists to develop new analytical techniques based on **capillary electrophoresis - mass spectrometry** to analyze **diagnostic and therapeutically effective proteins**, like antibodies, with unprecedented precision.

In addition to developing technologies for patients, researchers are using **AI and digitalization** to create tools that assist medical staff and streamline healthcare processes. Examples include an **app** that classifies specific cancers and recommends **personalized treatment plans** as well as the use of 5G networks to transfer data in real time between ambulances and hospitals. This allows doctors to begin remote treatment during transport, ensuring rapid and effective emergency care.

Health Management & Prevention

Our researchers also study how to shape tomorrow's healthcare sector. Topics include the financial sustainability of social systems and projections of how demographic changes will affect pharmaceutical and long-term care expenditures.

In organizational psychology, researchers explore the connection between work and health. Their work investigates how remote and hybrid work impact **work-life balance** and the measures companies can implement to boost employee satisfaction.

In **ProCEVen** (funded by the BMFTR initiative FH-Kooperativ), a novel analytical system is developed to study medically relevant proteins.

Project lead: Prof. Dr. Christian Neusüß





The research infrastructure at Aalen University of Applied Sciences is unmatched among institutions focused on applied research. The [research buildings](#) Center for Technology and Sustainability (ZTN) and Center for Innovative Materials and Technologies for Electrical Energy Conversion Machines (ZiMATE) set new standards with their state-of-the-art equipment when they opened in 2020.

With more than [30 laboratories](#) on [3.200 square meters](#), ZTN and ZiMATE offer optimal conditions for groundbreaking research on topics such as magnetic and battery materials, energy-efficient electric drive systems, photonics and resource-saving lightweight design.

Funding for the buildings and equipment came from the State of Baden-Württemberg, the European Regional Development Fund, and the German Federal Government.

To keep pace with evolving research needs, Aalen University continuously renews its research equipment. In recent years, funding for [research devices](#) worth more than 30 million euros and distributed across laboratories throughout the campus has been secured.

These include [3D printing laboratories](#) with commercial and custom-built printers that can process materials such as metal, glass, plastics, and even lunar dust.

For cross-scale material and component analysis, state-of-the-art [optical and electron microscopes](#), as well as high-resolution [X-ray microscopy](#) and [computed tomography](#) are available.

In addition, a [high-performance full-vehicle testing station](#), which was funded by the German Research Foundation (DFG) and the state Baden-Württemberg, is worth highlighting. The test bench enables the investigation and further development of a wide range of vehicles and powertrain components under realistic conditions.

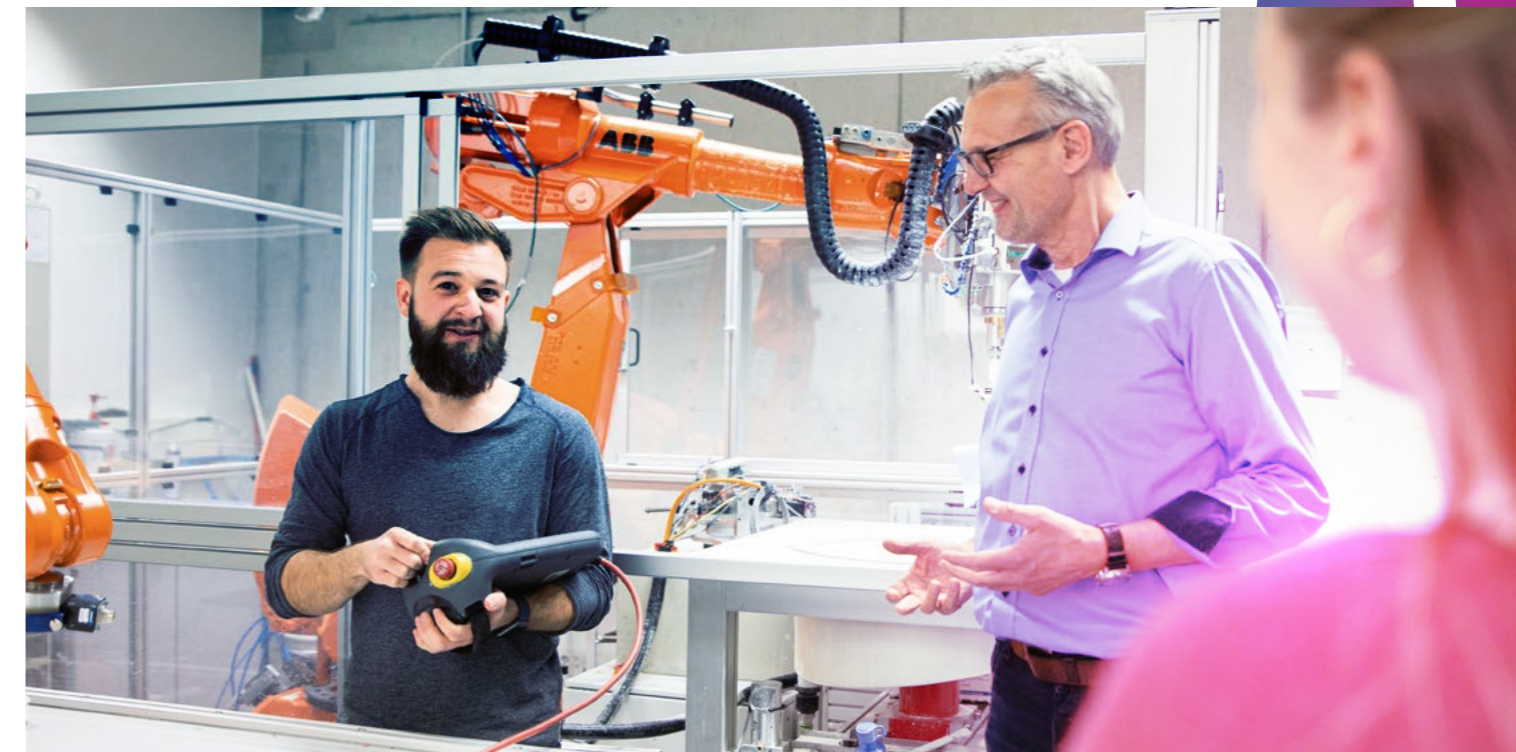
The chemistry laboratories are well-equipped with [high-precision mass spectrometers](#) for biopharmaceutical, medical, and environmental research.

The [robotics labs](#) focus on polishing optical components, six-dimensional multimaterial printing, intelligent waste sorting, and human-robot collaboration.

A [powerful IT infrastructure](#) enables cutting-edge research in machine learning and artificial intelligence.



Here you can learn more about our research equipment.



Research and Transfer Office

The Research and Transfer Office provides advice and assistance to researchers at Aalen University when applying for research funding. This includes helping to identify suitable funding programs and reviewing proposals before they are submitted to funding organizations. The office also organizes information and networking opportunities for researchers and serves as the central contact point for academic institutions and industry partners seeking to collaborate with the university. Other responsibilities include assisting with patent applications and communicating research results.

Contact: forschung@hs-aalen.de



International Center

The International Center coordinates international activities at Aalen University and maintains over 140 partnerships with institutions abroad. The center promotes international mobility for students and staff, including those coming to Aalen from abroad and those exploring opportunities overseas, for example through the ERASMUS program. To help international members to integrate into the local community, language and intercultural training, mentoring, and cultural activities are offered. Furthermore, the Welcome Center East Württemberg serves as a regional hub providing tailored assistance to international students, skilled workers, and their families. This includes advice on having your qualifications recognized, how to find employment and housing, and how to arrange childcare.

Contact: international@hs-aalen.de

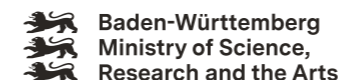
Research Academy

The Research Academy is the main point of contact for providing support to early-career researchers at Aalen University. It comprises an interdisciplinary doctoral college and a support service for academic writing. Individual counseling as well as interdisciplinary training and continuing education programs on the topics of doctoral studies and career development are offered by the doctoral college. The writing support service specifically trains doctoral candidates in academic writing and publishing. Through a variety of networking formats, the Research Academy fosters personal and professional exchange among early-career researchers, thereby actively contributing to mutual acquaintance and interdisciplinary collaboration. It has been funded since 2021 by the German Government and Federal States Program "FH-Personal" (grant no. 03FHPI39A).

Contact: researchacademy@hs-aalen.de



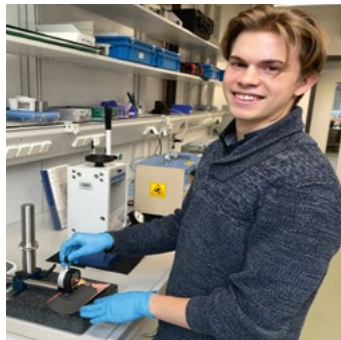
With funding from the:



From kindergarten to PhD and beyond –
Aalen University supports research talent
at every stage!

Children & Teenagers

The **explorhino** on Aalen University's campus welcomes more than 70,000 visitors each year to experience science, math, and technology hands-on. It combines a science museum with more than 130 interactive exhibits – the **explorhino Science Center** – and a laboratory that offers workshops, camps, and training for children and teachers – the **explorhino student lab**. explorhino is made possible by funding from regional partners.

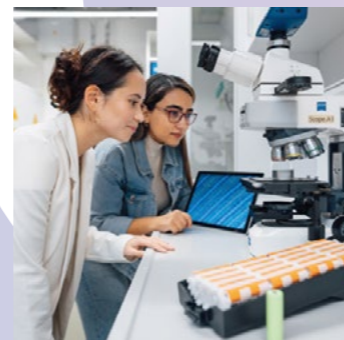


Before Studying

The **Voluntary Social Year in Science, Technology, and Sustainability** is a state-regulated voluntary work program for young adults. Each year, Aalen University welcomes young people who choose to complete their social year in our research labs, gaining valuable hands-on research experience under expert guidance.

Bachelor's

Teaching and research are closely connected at Aalen University, even during bachelor's studies. For example, as part of the **in-depth research experience** in several bachelor's programs, students can complete **research internships in our labs**.



Master's

Aalen University offers **research-oriented master's programs** such as the research master's Advanced Materials and Manufacturing or Advanced Systems Design, or the master's Applied Photonics. From the start of the program of the research master's, students work on applied research topics and are directly involved in research and development projects.



PhD

Doctoral studies enable early-career researchers to pursue scientific questions in depth and to explore future-oriented research areas while developing in-depth analytical thinking and scientific methodology. Currently, over 100 researchers are pursuing a doctorate at Aalen University. Since 2022, professors have been able to directly supervise doctoral candidates through the "Association for Doctoral Studies at the Universities of Applied Sciences in Baden-Württemberg". Doctoral degrees can also be earned in cooperation with German or international partner universities.



Postdoc

A successful doctoral degree opens up opportunities to gain further qualifications as a **research associate**, for example as **postdoctoral researcher**, to gain further qualifications in academic research. Postdocs develop leadership skills by supervising students and doctoral candidates, and gain teaching experience. To foster career advancement, Aalen University has recently established a **junior research group leader position** and **qualifying professorships** that enable postdoctoral researchers to fulfill the requirements for a full professorship.



More information.

Battery Technology Magnets Sustainable Drive Technology Circular Economy Lightweight Design Additive Manufacturing Artificial Intelligence Automation & Robotics Health & Medical Technology

Institute	Battery Technology	Magnets	Sustainable Drive Technology	Circular Economy	Lightweight Design	Additive Manufacturing	Artificial Intelligence	Automation & Robotics	Health & Medical Technology
Aalen Institute of Management (AAUF) Prof. Dr. Patrick Ulrich www.hs-aalen.de/en/aauf				✓					
Research Institute for Innovative Surfaces (FINO) Prof. Dr. Joachim Albrecht, Prof. Dr.-Ing. habil. Stefanie Hoja, Prof. Dr. Katharina Weber www.hs-aalen.de/en/fino	✓		✓	✓					
Institute for Analytical and Bioorganic Chemistry (BOCEMS) Prof. Dr. Christian Neusüß									✓
Institute of Driveline Technology (IAA) Prof. Dr. Markus Kley, Prof. Dr.-Ing. Steffen Schwarzer, Prof. Dr. Heinrich Steinhart www.hs-aalen.de/en/iaa			✓				✓	✓	
Materials Research Institute Aalen (IMFAA) Dr. Timo Bernthaler, Prof. Dr. Dagmar Goll, Prof. Dr. Volker Knoblauch, Prof. Dr. Gerhard Schneider www.hs-aalen.de/en/imfaa	✓	✓		✓	✓	✓	✓		
Institute for Sustainable Polymers and Composites (ISPC) Prof. Dr. Iman Taha www.hs-aalen.de/en/ispc				✓	✓	✓			
Center for Optical Technologies (ZOT) Prof. Dr. Rainer Börret, Prof. Dr. Anne Harth, Prof. Dr. Andreas Heinrich, Prof. Dr. Christina Schwarz, Prof. Dr. Andrea Toulouse, Prof. Dr. Andreas Walter www.hs-aalen.de/en/zot						✓	✓	✓	✓
LaserApplicationCenter (LAZ) Prof. Dr. Harald Riegel, Prof. Dr. Thomas Schwarzbäck www.hs-aalen.de/en/laz	✓				✓	✓	✓		✓
Center for Elektrochemical Surface Technology (ZEO) Prof. Dr. Timo Sörgel www.hs-aalen.de/en/zeo	✓			✓					
Institute for Virtual Product Development (ZVP) Prof. Dr. Markus Merkel www.hs-aalen.de/en/zvp				✓	✓	✓			✓
Institute for High Integrity Mechatronic Systems (ZMS) Prof. Dr. Markus Glaser www.hs-aalen.de/en/zms			✓						✓
Center for Industry 4.0 Prof. Dr. Steffen Schwarzer www.hs-aalen.de/en/zi				✓			✓	✓	

Research funding grows continuously:
over **€20 million** in third-party research funding in 2025, placing
Aalen University among the leading universities of applied sciences in Germany.

200 ongoing third-party funded
research projects per year

Research infrastructure – equipment and buildings – of
over **€60 millionen** since 2013

150 research staff members,
thereof more than **100 PhD students**.

We educate and train international talent for the region:
3 bachelor`s & 7 master`s programs in English.

We collaborate with more than **300 industry partners**
on innovative research projects.

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