



RESEARCH &
DEVELOPMENT



Reaching powering progress.

Research projects

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Achieve more with Austria's leading University of Applied Sciences in R&D

Successful companies know from experience that every euro invested in research and development pays for itself many times over. Innovation is a decisive competitive advantage that strengthens businesses and secures jobs over the long term.

Upper Austria is the land of business, employment and, above all, innovation and research. The University of Applied Sciences Upper Austria has established itself as a reliable partner and driving force. As the most research-intensive university of applied sciences in Austria, the University of Applied Sciences Upper Austria supports innovative companies in their project plans with around 500 academic staff and professors at the four faculties.

There are currently more than 600 ongoing projects being carried out in 10 Centers of Excellence and focal areas. The practice-oriented research covers a broad spectrum: from IT at Campus Hagenberg to medical technology and applied social sciences at Campus Linz, business and management at Campus Steyr, through to technology and applied natural sciences at Campus Wels.

Thanks to the intensive networking between the faculties as well as research and teaching, it is possible to find the best overall solution for every project.

With FH OÖ Forschungs & Entwicklungs GmbH, companies and institutions from business and society will continue to have a strong and flexible partner at their side in order to be optimally equipped for the challenges of the present and future.



A handwritten signature in black ink, appearing to read 'Stelzer'.

Mag. Thomas Stelzer
State Governor of Upper Austria



A handwritten signature in black ink, appearing to read 'Achleitner'.

KommR Markus Achleitner
Minister of Economy and Research
of Upper Austria

Research powering progress

The University of Applied Sciences Upper Austria is the clear leader among Austria's universities of applied science and is also among the strongest in research and development in German-speaking countries. In 2023, more than 450 researchers generated €30.3 million in R&D turnover. In addition, ten members of the research staff completed their dissertations while two were awarded a habilitation degree.

The University of Applied Sciences Upper Austria's R&D portfolio is aimed at businesses and institutions from industry and society. On the one hand, this includes businesses that lack personnel resources or have limited financial resources for their own research and development activities (e.g. small and medium-sized enterprises). On the other hand, solutions are also developed for companies that need support in specialist fields (e.g. in the form of specific equipment). For the University of Applied Science Upper Austria's collaboration partners, joint projects are first and foremost a financially straightforward and efficient undertaking. Geared towards the needs of the client, innovative solutions are developed and can be put directly into practice.

Drawing from and in coordination with the economic and research strategy #upperVISION2030, the University of Applied Sciences Upper Austria has implemented measures in order to make a substantial contribution to the realisation of the program's objectives.

With the European Green Deal, major changes are coming to the areas of mobility, energy, production, circular economy and food. These research areas have long been part of the DNA of the University of Applied Sciences Upper Austria. With the know-how of the researchers and their partners from industry, internationally recognised research successes have already been achieved.

This project brochure provides an overview of the research projects at the University of Applied Sciences Austria's four schools with the aim of encouraging new and interesting research collaborations.

Opportunities for cooperation:

- Applied R&D projects with collaboration partners
- Scientific research projects
- International R&D projects
- Symposia and workshops
- Students' bachelor's and master's theses

The project period may extend from a few months to five years.



A stylized, handwritten signature in black ink.

Dr. Gerald Reisinger
University president, University of Applied Sciences Upper Austria



A stylized, handwritten signature in black ink.

Prok. Prof. Priv.Doiz. DI Dr. Johann Kastner
Executive Vice-President for Research and Development, University of Applied Sciences Upper Austria

Progress through innovation

International recognition and a hands-on academic education are the factors that distinguish a university of applied sciences as an educational institution. As the teaching content is already tailored to business needs during their studies, our graduates can strengthen a company's activities through practical training and outstanding performance.

With **more than 70 degree programs** at the four schools in Hagenberg, Linz, Steyr and Wels, and over 5,500 students enrolled in the academic year 2023/2024, the University of Applied Sciences Upper Austria has become a driving force in education and research. The course content is tailored to business needs right from the start. Our graduates strengthen the company's activities through their practical training and outstanding performance.

The University of Applied Sciences Upper Austria's research and development programs converge in the FH OÖ Forschungs & Entwicklungs GmbH, which was specifically founded to coordinate research projects. In this way, we ensure sustainable results and innovative ideas in the field of research and development that help both the economy and society.

Innovative solutions for industry & society

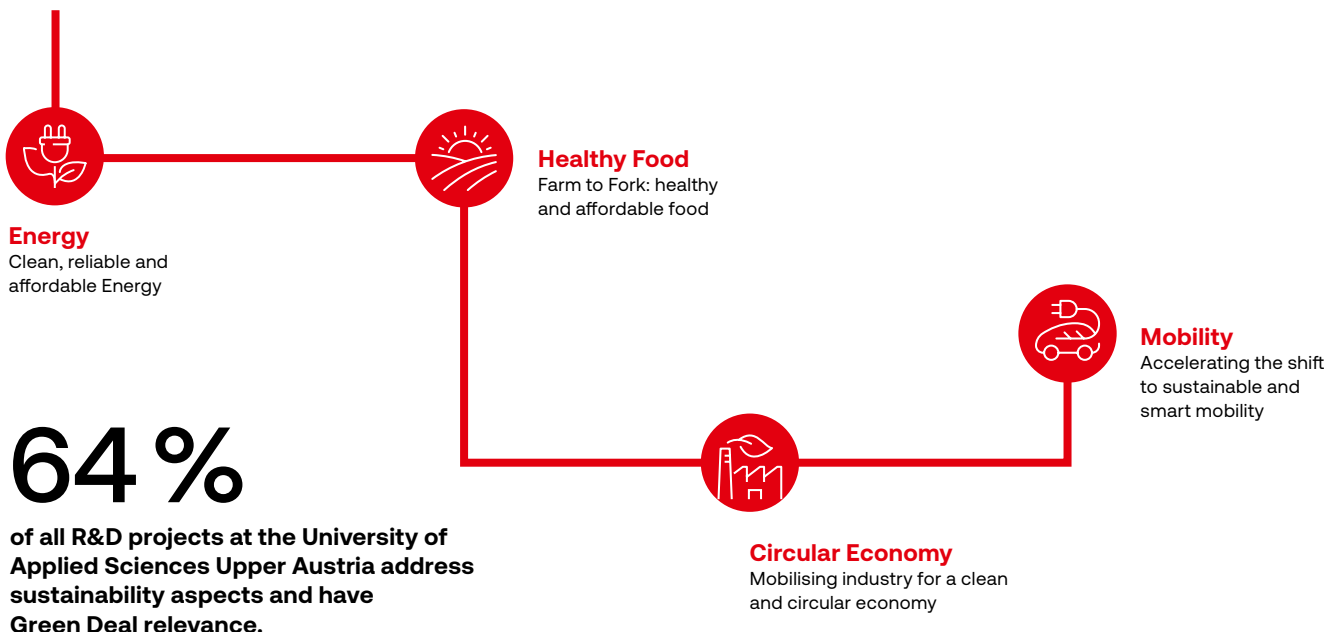
In close coordination with the areas of competence in teaching, a total of ten Center of Excellence and research Focal Areas have been established within the framework of the degree programs offered at the four schools.

Aspects of the European Green Deal and digitalization are addressed in a future-oriented manner in all 10 Center of Excellence and Focal Areas.

10 Centers of Excellence

- Food Technology & Nutrition
- Medical Engineering / TIMed Center
- Smart Production
- Energy
- Automotive & Mobility
- Logistics
- Materials
- ICT - Information & Communications Technology
- Digitale Transformation
- Societal & Social Innovation

We are particularly strong in these European Green Deal areas:





Hagenberg

Informatics
Communications
Medien

Hagenberg Campus

Research and development at the University of Applied Sciences Upper Austria Hagenberg Campus is centred on computer science, communications and media. 13 research groups and three Josef Ressel Centres are working on innovative solutions for the digital future.

Center of Excellence & Focal Areas

- ICT - Information and Communications Technology
- Smart Production
- Medical Engineering/TIMed CENTER
- Automotive & Mobility
- Energy
- Logistics
- Digital Transformation
- Societal Transformation & Social Innovation
- Food Technology & Nutrition

Your points of contact for research & development



Head of Research Center
Mag. Gabriele Traugott
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Vice-Dean for R&D,
Prof. DI Dr. Stefan Wagner
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Automotive & Mobility

AG-Fuzzer

Automotive Simulations of AR Applications for Increased Usability, Traffic Safety and Traffic Flow

Automatic determination of the usability of graphical user interfaces of head-up and windshield display applications in the automotive sector using metrics and their impact on road safety and traffic flow.

- 04/2021 – 03/2024
- €100,000 – 500,000
- FFG COIN Aufbau



Project Manager:
Assistant Prof. Dr. techn.
Andreas Ernst Riegler, BSc MSc

pDrive

Investigate the functioning of a 2-car platoon and its energy and emission saving potential

Within this project, a platooning platform is to be developed and validated on real roads with the help of field tests, consisting of two vehicles.

- 10/2023 – 09/2026
- €100,000 – 500,000
- Future Mobility Call – Upper Austria



Project Manager:
Prof. DI Dr.
Gerald Ostermayer

SAMLA

Potential for private-public collective transport in rural areas for commuters

The SAMLA exploratory project is investigating how a concept for micro public transport shuttles as an on-demand service for the first and last mile of commuters needs to be designed in order to achieve acceptance among the target group. Potential changes in terms of journey time and CO2 savings potential are also simulated and calculated. The peripheral rural region of Kirchdorf/Krems is chosen as case study region.

- 04/2023 – 03/2024,
- €100,000 – 500,000,
- FFG Mobility (ect) regions and technologies



Project Manager:
Prof. DI Dr.
Gerald Ostermayer

Digital Transformation

Empirical Social Research Basics

Development of an online open access course

Drawing on a solid theoretical and didactic foundation, the project developed an open-access German-language online course giving a short introduction to empirical social research.

- 12/2022 – 12/2023
- < €100,000
- FNMA Förderungsprojekt/
Landesförderung E-Learning



Project Manager:
Prof. Mag.
Dr. Carrie Kovacs
[https://imoox.at/
course/sozialforschung](https://imoox.at/course/sozialforschung)

Heating Data Analysis and New Control Algorithms for Zero Emission and Efficient Bioenergy Consumption

In this project, an IT system for biomass heating systems is being developed which, supported by AI algorithms, increases the efficiency of the systems. This saves energy and fuel, which reduces dust emissions.

- 04/2023 – 01/2024
- < €100,000
- FFG General program



Project Manager:
Prof. DI Mag. Dr.
Josef Langer

Hybrid Learning Path

Development of a hybrid learning path including learning analytics

Based on a market and needs analysis, a didactic concept is being developed. This includes the prototypical presentation of a hybrid learning path that promotes learning (connection between analog and digital offerings).

- 04/2023 – 12/2023
- < €100,000,
- Contract research



Project Manager:
Prof. Mag. Dr.
Tanja Jadin

IndustrialEdgeML

This project deals with the distribution of the training of AI models for grasp point calculation in a network of collaborative robots and methods for determining the achievable accuracy.

- 10/2022 – 09/2023
- < €100,000
- FFG General program



Project Manager:
Prof. DI Dr.
Florian Eibensteiner

SPA

Secure Prescriptive Analytics

In the FTI project Secure Prescriptive Analytics (SPA) we are researching together with the partners Risc SW and SCCH on the development and combination of data-based as well as simulation-based modeling for the creation of optimized proposals for action. As a result, a generically applicable SPA framework is to be developed.

- 01/2022 – 12/2025
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. PD DI Dr.
Michael Affenzeller

TFI

This project within the COMET K1 Competence Center for Integrated Software and AI Systems (INTEGRATE) focuses on the integrated use of AI, software and upcoming emerging technologies such as quantum and neuromorphic computing to combat the current global climate and environmental crisis.

- 01/2023 – 12/2026
- < €100,000
- FFG COMET K1 Centres



Project Manager:
Prof. PD DI Dr.
Michael Affenzeller

SparseRF

Modeling nonlinear dynamic systems (DS) and processes in engineering and natural sciences is essential for understanding and predicting system components and their interactions and predicting the system components and their interactions. This application focuses on components and systems in high-frequency technology. One way to synthesize such systems directly from measurements of real components is to use data-based modeling methods. Approaches to this are artificial neural networks (ANN) and continuous models based on parametric differential equation systems. In the course of this work, such continuous modeling methods for DS in RF technology and nanoelectronics will be further developed and tested in an existing simulator.

- 01/2023 – 12/2025
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. Dr.-Ing. habil.
Hans-Georg Brachtendorf

Energy

EDDIE

European Distributed Data Infrastructure for Energy

The “Clean Energy Package” grants customers access to energy data, promotes new services in the energy sector, and addresses issues caused by the lack of unified procedures in the EU. The EU-funded “EDDIE” project establishes a decentralized, open data space for intelligent, cost-effective energy services. EDDIE facilitates interoperability and growth by overcoming national practices. With a unified interface, it simplifies energy data utilization for both businesses and end-consumers.

- 01/2023 – 12/2025
- > €500,000
- EU HORIZON Europe



Project Manager:
Prof. DI Dr.
Marc Kurz



INNOnet

In the INNOnet project, load-dependent grid tariffs are being tested in real operation to determine the flexibility potential that can be activated for household customers, and aspects of practical implementation by grid operators are being investigated.

- 03/2023 – 02/2026
- €100,000 – 500,000
- FFG Energie.Frei.Raum



Project Manager:
Prof. DI Dr.
Christoph Schaffer

InterGrid

Convergent Interoperability Stack for Smart Grid ICT Infrastructures

The project develops a smart grid meta-architecture, which allows for interoperability of several smart grid components on an end-to-end basis by provision of an appropriate protocol stack, thus avoiding central middleware frameworks.

- 10/2020 – 09/2023
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. DI Dr.
Gerald Ostermayer

PowerTeams

Collaborative Engineering of Smart Grid Applications

In PowerTeams, a model-based, service-oriented, and cooperative development platform for smart grid applications is generated, which offers modular services for automation supported engineering to collaborating expert teams.

- 04/2022 – 03/2025
- < €100,000
- Climate and Energy Fund



Project Manager:
Dipl.-Ing. Dr. techn.
Armin Veichtlbauer

Urban Storage Cluster South Burgenland

The development and realisation of a cluster based energy management system in the testing area Stegersbach shall be conducted in combination with new innovative tariff models for the activation, bundling and marketing of small-scaled energy flexibilities. The main focus hereby is put on the optimisation of the storage cluster and not on the realisation of energetically optimal states of single participants.

- 09/2017 – 05/2022
- €100,000 – 500,000
- FFG Future City



Project Manager:
Prof. DI Dr.
Christoph Schaffer

Societal Transformation & Social Innovation

FempowerMINT 2.0

LEA Infotainment Project

The project aims to create an infotainment program using target group-specific explanatory videos that make STEM professions more tangible for schoolgirls and women. In addition, workshops are offered to raise awareness and sensitise girls as well as teachers and caregivers.

- 04/2023 – 03/2024
- > €100,000
- LEA / Österreichischer Fonds zur Stärkung und Förderung von Frauen und Mädchen



Project Manager:
Prof. Mag. Dr.
Martina Gaisch

ICT- Information and Communications Technology

mmWave Radar OTA Test

The main goal of the Project is to develop a mmWave OTA measurement setup that allows to test the radiation and receive capabilities of a mmWave transceiver DUT with a focus on regression testing and beamforming/beamsteering.

- 04/2020 – 11/2023
- €100,000 – 500,000
- Silicon Austria Labs Forschungs-kooperative



Project Manager:
Prof. DI Dr.
Markus Pfaf

SHCTT

Supporting Hybrid Collaboration for the Teams of Tomorrow

The SHCTT project deals with the fine-grained analysis of hybrid collaboration processes. This involves the further development of a conceptual analysis framework as well as the (partial) automation of the previously time-consuming analysis process.

- 03/2020 – 02/2022
- €100,000 – 500,000
- Microsoft Productivity Research Grant



Project Manager:
Prof. DI Dr.
Mirjam Augstein

AG-Fuzzer

Mining Attributed Input Grammars and their Applications in Fuzzing

In this project, a novel approach to specification mining is developed, combining techniques of grammar mining and symbolic execution. The mined specifications are utilized to automatically test programs.

- 01/2023 – 06/2025
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
DI Dr.
Josef Pichler

AITentive

AI-supported Attentive User Interfaces

Imagine you are writing a document - suddenly, you are notified by your smartphone about a message from a friend. After answering, you must reorient yourself to determine how the text should be completed. What if the notification had arrived after you completed the sentence instead of while you were in the middle of it? Interruptions are an integral part of our "multitasking" lives although they disturb our work patterns. Research has shown that interruptions negatively affect our productivity and well-being. To counter these adverse effects, computer science has proposed to develop "attentive user interfaces", computer systems that better time interruptions so that no negative side effects occur. However, this is a highly complex goal: Such systems should be aware of the users and their surroundings as well as all involved activities. Since humans and activities are highly complex, a completely domain- and task-independent attentive user interface has not been built so far. The proposed project "AITentive" aims at solving this issue with the help of AI algorithms. Within the scope of the project, a system will be developed that can learn by itself when interruptions are most suitable so that productivity can be increased. A successful implementation can potentially improve interaction with computerized systems. Ultimately, an "Attentive User Interface" will be able to improve productivity while maintaining human well-being in a wide range of scenarios.

- 01/2023 – 12/2025
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
Prof. DI Dr.
Philipp Wintersberger BSc

AMOR_RF

Affordable Macro-Modeling Platform of RF Systems and Devices

The project Amor aims on supporting start-ups and SME, which develop products with a radio frequency (wireless) transmission interface.

- 11/2019 – 10/2022
- €100,000 – 500,000
- Interreg - Austria-Czech Republic 2014-2020



Project Manager:
Prof. Dr.-Ing. habil.
Hans-Georg
Brachtendorf

AstroSymReg

Accelerating the Physical Sciences with Symbolic Regression

Within this project, we develop symbolic regression algorithms to create models for astrophysics, for example for cosmology models.

- 01/2024 – 12/2025
- > €100,000
- Upper Austria core funding



Project Manager:
Kammerer Lukas
BSc MSc

backaldrin.SCCH

Data analytics in the development of bakery products

In cooperation with backaldrin and the Software Competence Center Hagenberg (SCCH), we research and develop methods for the comprehensive analysis of data from the development of bakery goods. We use artificial intelligence to gain new insights and to optimize parameters in production – and thus implement prescriptive analytics in food development.

- 07/2021 – 12/2022
- €100,000 – 500,000
- FFG COMET K1 Centres



Project Manager:
Prof. PD DI Dr.
Stephan Winkler

BAMBI

Biodiversity Airborne Monitoring Based on Intelligent UAV sampling

The project BAMBI uses camera drones and artificial intelligence to monitor animals in the wild. The project aims to analyze the long-term development of wildlife populations to identify impending ecological problems, such as biodiversity loss or overpopulation, on time.

- 04/2022 – 03/2025
- €100,000 – 500,000
- FFG ICT of the future



Project Manager:
Prof. Dr. David Schedl
BSc MSc
bambi.eco

BF AFSS-HMI

Additive manufacturing for individualized medical and sports products

The innovative manufacturing process for textile sensors using 3D printers is modified to minimize ageing effects. The subsequent compensation allows longer, more reliable and therefore more sustainable use.

- 01/2024 – 12/2025
- < €100,000
- Upper Austria core funding



Project Manager:
Phillip Petz MSc

BF-SigSim

Signaling pathway simulation using white-box modeling for the prediction of gene expression in cells

Gene expressions, as well as the associated expression of proteins, are among the most important influencing factors in inter- and intracellular signaling pathways. In this project, using machine learning, the impacts of gene expressions in signaling pathways will be investigated.

- 01/2024 – 12/2025
- > €100,000
- Upper Austria core funding



Project Manager:
Julia Vetter MSc

Career Advisory System

Within the project, the “Career Advisory System” will be developed by the PEEC research group to improve the existing recruiting system of karriere.at with concepts of Machine Learning as well as an ongoing analysis of user interactions.

- 05/2021 – 10/2023
- €100,000 – 500,000
- FFG General program



Project Manager:
Prof. DI Dr.
Johannes Schönböck

CATRINA

Courage Activation Research and Influencing Factors for Taking Action

CATRINA researches gender- and diversity-specific factors for moral courage. We developed three game concepts to promote moral courage in such situations in an individual and gender-sensitive way to strengthen the courage to act.

- 10/2019 – 03/2022
- < €100,000
- FFG Talente FEMtech



Project Manager:
Assistant Prof.,
Wolfgang Hochleitner
BSc MSc
<https://catrina.at>

Clvolunteer

Critical Infrastructures Powered by Volunteers

Volunteers are increasingly looking for flexible ways to pursue their own goals. In ciVolunteer, the pursuit of these goals by volunteers is supported by intelligent recommendation mechanisms that guarantee maximum flexibility with regard to the timing, extent and form of involvement in the area of critical infrastructure. Appropriate reflection and incentive mechanisms also ensure long-term commitment.

- 01/2023 – 12/2025
- €100,000 – 500,000
- FFG KIRAS – Security Research



Project Manager:
Prof. DI Dr.
Johannes Schönböck

Cooperation Primetals

Primetals Technologies GmbH and HEAL collaborate in the field of machine learning and optimization for the steel industry. The aim is to predict quality metrics of steel by analyzing process parameters. Additionally, the control profiles of electric arc furnaces are optimized to enhance efficiency and quality in steel production.

- 11/2017 – 10/2023
- > €500,000
- Contract research



Project Manager:
Prof. PD DI Dr.
Michael Affenzeller

Data mining for product defect detection Pilot phase

The aim of the project is to develop a software system for detecting product defects in products on the market. The aim is to create a method and a tool for the early and automated detection of problems with products on the market. In order to be able to take measures such as the development of standards or product recalls.

- 10/2022 – 12/2022
- < €100,000
- Contract research



Project Manager:
Prof. Mag. DI Dr.
Andreas Stöckl

Dependable Production Environments with Software Security

DEPS Module

The DEPS Module project is researching methods for the efficient and secure protection of software. The aim is to develop a process that reliably and uninfluenced recognizes whether software is running on the right hardware.

- 01/2022 – 12/2025
- €100,000 – 500,000
- FFG COMET MODULE (2nd call)



Project Manager:
Prof. DI Dr.
Florian Eibensteiner

Deterministic Realtimecommunication via WIFI6

This project deals with the evaluation and analysis of WiFi6 (OFDMA/MU-MIMO) with regard to deterministic real-time communication in industrial control networks with simultaneous utilization of the maximum bandwidth.

- 03/2023 – 10/2023
- < €100,000
- Contract research



Project Manager:
Prof. DI Mag. Dr.
Josef Langer

DigitalWerk

DigitalWerk is a cooperation between the Kunstuniversität Linz, the JKU Linz and the FH OÖ as well as numerous top-class partners with the aim of making digitisation tangible for the most diverse groups of actors.

- 01/2020 – 12/2024
- < €100,000
- Austrian Federal Ministry of Education, Science and Research



Project Manager:
Prof. Mag. DI Dr.
Andreas Stöckl

EACI

Explainable (Artificial) Creativity in Innovation

The EACI project is about generating innovation ideas from current trends in industry and science. AIST supports in cooperation with mogree especially in the analysis of source data for ethical content (e.g. filtering of sexism, racism, etc.). Not only explicit content should be detected but also implicit bias.

- 04/2022 – 12/2023
- < €100,000
- FFG General program



Project Manager:
Prof. Mag. DI Dr.
Andreas Stöckl

ECOPOLIS

The ECOPOLIS project is investigating how communication between political representatives and 14- to 16-year-olds can be promoted through an online platform that combines playful learning scenarios with the functionality of expressing opinions.

- 10/2022 – 10/2024
- €100,000 – 500,000
- Climate and Energy Fund



Project Manager:
Jeremiah Diephuis
BA MA

flexCONTACT

The flexCONTACT project researches high-performance contacts between textiles and electronics, which includes aspects of material research, process design and process optimization under sustainable production.

- 03/2023 – 02/2026
- €100,000 – 500,000
- FFG Production of the Future



Project Manager:
Prof. DI Dr.
Florian Eibensteiner

FOOD-RESCUE

There is an enormous supply of food that has been cultivated in agriculture but does not correspond to the usual visual appearance of trade. Nevertheless, there is demand from processors, for example from food service, company kitchens, social institutions and also private customers. This project focuses on the development of a self-service trading platform with a logistics solution for such foodstuffs that brings supply and demand together easily, organises transport sustainably and can predict quantities as a forecasting tool.

- 03/2022 – 05/2022
- < €100,000
- FFG General program



Project Manager:
Prof. DI Rimbart
Rudisch-Sommer

GEMINI_PJ2_FFG

Customer Journeys in Digital Marketing

GEMINI deals with online marketing using process mining. From anonymized records of how websites are used a customer journey is identified. Based on the customer journey, recommendations are made to improve the products and services for online marketing. The research in this project deals primarily with the fields of data science and process mining.

- 03/2023 – 02/2024
- < €100,000
- FFG General program



Project Manager:
Assistant Prof.
Oliver Krauss BSc MSc

HCAI

Human-Centered Artificial Intelligence

This doctoral program is run jointly with JKU and aims to develop methods to make AI more understandable, transparent and fair for humans on the one hand and to support the interaction between humans and AI systems on the other hand.

- 04/2022 – 03/2027
- €100,000 – 500,000
- FWF – doc.funds.connect



Project Manager:
Prof. Univ.-Doz. DI Dr.
Ulrich Bodenhofer



HeuristicLab

Open-Source Project for Heuristic Optimization

HeuristicLab is an open-source software system for the development, evaluation and application of heuristic optimization methods (e.g., evolutionary algorithms, genetic programming, local search). In addition to a large number of implemented algorithms, HeuristicLab also offers many different benchmark problems from areas such as machine learning and production and logistics optimization.

- 10/2019 – 12/2024
- €100,000 – 500,000
- Internal funding



Project Manager:
Prof. DI Dr.
Stefan Wagner
<https://dev.heuristiclab.com>

Loop

Human in the LOOP Risikomanagement

The LOOP research project, in collaboration with CALPANA business consulting GmbH, examines the analysis of risks from unstructured data sources such as news and social media. The successor project of RCPM aims to integrate a feedback loop into the AI methods, allowing risk analysts to influence the AI methods and improve the identification and calculation of risks.

- 01/2023 – 06/2024
- €100,000 – 500,000
- FFG General program



Project Manager:
Prof. Mag. DI Dr.
Andreas Stöckl

HYCOS

Hybrid Collaboration Spaces

HYCOS deals with environments for hybrid collaboration which recently gained a lot of importance due to the pandemic. A prototypical hybrid collaboration space and generalizable design and implementation guidelines are developed.

- 04/2022 – 03/2026
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
Prof. DI Dr.
Mirjam Augstein

Method for assessing wildlife accident risk on roads

The aim of the project is to develop a method for assessing the risk of wildlife accidents on roads using two model communities (in Upper Austria and Lower Austria) with forest areas and roads crossing them as examples. This can then be used to implement targeted protective measures at these locations.

- 09/2022 – 06/2023
- < €100,000
- Contract research



Project Manager:
Prof. Mag. DI Dr.
Andreas Stöckl

INDUCE

Cyber Security Literacy and Dexterity through Cyber Exercises

The INDUCE project has set itself the goal of imparting cyber security skills to a wider circle of people in order to contribute to the ability of diverse target groups to act in an increasingly networked and digital society and to counteract social challenges.

- 04/2021 – 03/2024
- €100,000 – 500,000
- FFG Laura Bassi 4.0



Project Manager:
Prof. Mag. Dr.
Martina Gaisch
fh-ooe.at/ueber-uns/projekte/induce-cyber-security-literacy-and-dexterity-through-cyber-exercises

ML Methods for Identifying Features of Global Optimization Problems

Most optimization and machine learning tasks are modeled in a stationary fashion. This means that the optimization or modeling objective does not change during an algorithm run. This international FWF project is concerned with advancing into the non-stationary domain using various methodological approaches.

- 10/2021 – 09/2024
- > €500,000
- FWF – Joint Projects



Project Manager:
Prof. PD DI Dr.
Michael Affenzeller

JRC Embedded AI

Josef Ressel Center for Artificial Intelligence on Resource Limited Devices

This Josef Ressel Center researches and optimizes training algorithms that are executed directly on resource-limited devices so that they can make self-learning, autonomous decisions.

- 04/2024 – 03/2029
- > €500,000
- Josef Ressel Center



Project Manager:
Prof. DI Dr.
Florian Eibensteiner

MOVE

The MOVE research project aims to digitalise orthopaedics in line with Industry 4.0. A system is being created that uses automated patient-specific orthoses to automate processes with the help of 3D printing.

- 10/2023 – 11/2025
- < €100,000
- FFG General program



Project Manager:
Assistant Prof.
Christoph Praschl
BSc MSc

plf.doc

Precision Livestock Farming

PLFDoc school will contribute to more sustainable production and animal welfare in agriculture in Austria and EU by applying modern data science techniques. Research focus within the PLFDoc will be on application-oriented basic research, specifically on new methods of Explainable Artificial Intelligence (XAI), and CV for monitoring calving and farrowing.

- 11/2023 – 11/2027
- €100,000 – 500,000
- FWF – doc.funds.connect



Project Manager:
Prof. PD DI Dr.
Stephan Winkler

SmartBuoy2.0

ISmartBuoy 2.0 is about processing sensor data at sea. Using data science methods that require energy-saving algorithms, sensor data from buoys is to be analysed in order to determine whether one or more boats have docked at them.

- 12/2022 – 12/2024
- < €100,000
- FFG General program



Project Manager:
Assistant Prof.
Christoph Praschl
BSc MSc

SymRegZeit

Vector-based genetic programming for symbolic regression and classification with time series

An approach to using time series directly as input variables for symbolic regression and classification is vector-based genetic programming, in which the symbol set is expanded to include vectors and operations on vectors. The vectors or vector operations are then used to represent or manipulate time series. The main goal of the dissertation is to develop a holistic method in which time series can be used directly as input variables for symbolic regression and classification, for example in order to be able to map complex industrial production processes.

- 11/2019 – 04/2022
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. PD DI Dr.
Stephan Winkler

TEXEDGE

TEXTile EDGE Sensing: AI Optimization of Edge-based Textile Sensors

A research project aimed at enhancing the usability of textile sensors through machine learning and user data. The goal is efficient and customized development of textile interfaces, such as a textile interface for a music player.

- 01/2024 – 12/2024
- < €100,000
- Upper Austria core funding



Project Manager:
Prof. Dr.
David Schedl BSc MSc

true-live

Streaming Platform for Live Shows, Concerts and Event Organizers

The aim of the project is to develop a recommendation system component for the true-live streaming platform. The recommendation system is intended to provide users with suggestions for the most interesting content possible, depending on their preferences and interests.

- 07/2021 – 31.03/2022
- < €100,000
- Contract research



Project Manager:
Prof. Univ.-Doz. DI
Dr. Ulrich Bodenhofer

Unchained_IA

Creation of a globally unique standard for modeling automation processes in business processes

In the research project Unchained_IA, a novel process modeling standard for information and decision modeling is developed as a basis for the selection of Intelligent Automation methods. The goal of this project is the development of the mentioned standard as an extension

- of the BPMN.
- 06/2023 – 01/2024
- < €100,000
- FFG General program



Project Manager:
Assistant Prof.
Ing. Andreas Pointner
BSc MSc
www.unchained-ia.com

Virtual Advisor

KI-supported matching of investment behaviour and financial products as well as personalized communication and presentation

Together, we are developing and evaluating algorithms for a tool that analyses the investment behavior of users. With the help of intelligent algorithms, users receive highly personalized recommendations for the right banking and insurance products at the right time.

- 05/2023 – 04/2024
- €100,000 – 500,000
- FFG General program



Project Manager:
Assistant Prof.
Ing. Andreas Pointner
BSc MSc
bluesource.at/en/news/virtual-advisor

YC App 3.0

Young Carers App Release 3.0

The project aims to provide young caregivers - the Young Carers - with a platform for exchange and access to information. Based on previous projects, an IT infrastructure has been developed, including iOS and Android apps, a website, a chatbot, and an editorial system. In the current project, these systems are being further developed based on user feedback to increase awareness for Young Carers and to develop targeted and innovative support services.

- 11/2022 – 10/2023
- < €100,000
- Funding Ministry of Social Affairs



Project Manager:
Prof. DI Dr.
Marc Kurz

Medical Engineering

AML-SBG

The NLRP3/EIF2 axis in AML

Acute myeloid leukemia (AML) is a highly heterogeneous and aggressive type of blood cancer and the leading cause of leukemia-related mortality. In this project the analysis of inflammatory pathways and the identification of mechanisms which lead to increased/decreased cytokine or inflammasome expressions is of high interest. A framework providing algorithms including datasets from publicly available databases is implemented to support these analyses.

- 07/2021 – 12/2024
- < €100,000
- FWF Stand-alone projects



Project Manager:
Assistant Prof.
Susanne Schaller
MMSc

Cellector

Framework for the automated analysis of microscopy images using evolutionary algorithms and machine learning

The accurate and automated analysis of microscopy images of cells is of highest importance in numerous biomedical research endeavors. The goal of this project is the development of “explainable” artificial intelligence (“explainable AI”) methods for image analysis.

- 10/2020 – 09/2023
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. PD DI Dr.
Stephan Winkler

Interoperability Smile

Automated analysis of health care data

Development of software components in the field of medical informatics of ongoing projects as part of the strategic team using the HL7 FHIR Standard in close consultation. Further, we gather, analyze and evaluate interoperability requirements, and propose design and technical solutions.

- 03/2022 – 02/2023
- < €100,000
- Contract research



Project Manager:
Prof. PD DI Dr.
Stephan Winkler

LICA Ried

Life Care Assistance in Ried im Innkreis

AI-based documentation of care information including contextual-based hints for better nursing care should allow for better communication between healthcare providers, thus allowing for a longer stay at home and relieving caretaking relatives.

- 04/2022 – 03/2024
- €100,000 – 500,000
- Funding for digitization in Upper Austria



Project Manager:
Traxler Barbara
MSc

Metabolomics-Lunge

The aim of the project is to evaluate molecular biological data, primarily with the help of machine learning methods, to classify lung diseases and their severity as well as to predict the course of the disease.

- 04/2022 – 06/2024
- < €100,000
- Contract research



Project Manager:
Prof. Univ.-Doz. DI Dr.
Ulrich Bodenhofer

PROTrEIN

Training of computational proteomics researchers

PROTrEIN is a European Innovative Training Network that consist of 11 beneficiaries and 8 partner organizations. The mission of this network is to train the next generation of researchers in the field of computational proteomics by providing them with a set of interdisciplinary and intersectional skills.

- 01/2021 – 12/2024
- €100,000 – 500,000
- EU MSCA – Marie Curie Actions



Project Manager:
Prof. DI Dr.techn.
Viktoria Dorfer MSc
<http://protrein.eu>

Smart Care Assist

Smart Care Assist is looking for answers to the question of how care beds need to be equipped (e.g. with smart textiles) in order to support nursing staff and at the same time serve for optimal patient care.

- 09/2023 – 08/2026
- €100,000 – 500,000
- Interreg – Austria – Bavaria 2021-2027



Project Manager:
DI Martina Zeinzinger
www.timed-center.at
forschung.fh-ooe.at/smart-care-assist

TCA-TrainYourBrain

Translate into English: TrainYourBrain Optimizer: Development of a software application for predicting, managing and creating Alzheimer's training plans for the MAS resource trainings

In this interdisciplinary project (Hagenberg and Linz faculties), the main goal is the design and development of a prototype for creating, managing, and predicting training plans for trainers at the MAS dementia service centers in Upper Austria (OÖ).

- 10/2023 – 12/2024
- < €100,000
- RTI structural funding Upper Austria



Project Manager:
Assistant Prof.
Susanne Schaller
MMSc
www.timed-center.at

TIMed 2022++

Technological Innovation in Medicine 2022++

The TIMed CENTER team is further developing 6 research fields in 8 cross-faculty activities:

- (1) Data Science and Systems Engineering,
- (2) Biomedical Sensor Technology,
- (3) Biomimetics and Material Development,
- (4) High-Resolution Imaging,
- (5) Medical Simulators and
- (6) Drug Characterization.

- 01/2022 – 12/2025
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
DI Thomas Kern
www.timed-center.at

TC-Management

TIMed CENTER Management, Project Development & Third Mission

Project development, sustainable further development of the TIMed CENTER research fields, development of third mission activities as well as research communication and knowledge transfer are the objectives of this TIMed 2022++ activity.

- 01/2022 – 12/2025
- €100,000 – 500,000
- RTI structural funding Upper Austria



Project Manager:
DI Thomas Kern
www.timed-center.at

Treetop

The aim of the Treetop Medical project is the digital modelling of medical knowledge in the form of target treatment paths as part of medical guidelines in order to make this available for patient care.

- 04/2023 – 12/2025
- < €100,000
- FFG General program



Project Manager:
Assistant Prof.
Christoph Praschl
BSc MSc

TCA6, TC-PICA

Process Intelligence and Conformance

The PICA project is concerned with the development and establishment of a process analytics connection for medical information systems, which can be used to create a "digital twin" of organizational processes. The development is based on internationally established communication standards in healthcare and in coordination with the Austrian affiliate organization HL7 Austria. Among other things, this will result in a publicly available implementation guideline that will be further developed on an ongoing basis.

- 01/2022 – 12/2025
- €100,000 – 500,000
- RTI structural funding Upper Austria



Project Manager:
Assistant Prof.
Oliver Krauss BSc MSc

XL-MS

Identification of crosslinked proteins using mass spectrometry

In this cooperation with the Research Institute of Molecular Pathology and the University of Vienna we aim to improve and introduce new algorithms to MS Annika, a tool that uses mass spectrometry data to detect crosslinks which can be used to create protein-protein interaction networks or to obtain native protein structures.

- 10/2021 – 09/2025
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
Prof. DI Dr.techn.
Viktoria Dorfer MSc

TC-MEITex

Mobile Electro-Impedance Tomography with Smart Textiles

The aim is to develop a portable mobile electroimpedance tomography system (EIT) with active textile electrodes for imaging tissue types, their spatial distribution and their changes over time.

- 01/2022 – 12/2024
- €100,000 – 500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. DI Dr.
Florian Eibensteiner



Smart Production

AI-Frame

Development of methods for simulating headlights based on artificial intelligence

The goal of this project is to master the various simulations and measurements for comprehensive optimization as part of product development. To do this, it is necessary to develop fast replacement systems (surrogates) for the slow simulations. The central development content is the development of methods for surrogates multi-criteria optimization, the recommender and “on-the-fly” data generation.

- 01/2022 – 12/2023
- < €100,000
- FFG General program



Project Manager:
Prof. PD DI Dr.
Stephan Winkler

JRZ adaptOp

Josef Ressel Center for Adaptive Optimization in Dynamic Environments

Within the Josef Ressel Center adaptOp, adaptive optimization algorithms are developed, which can foresee dynamic changes in production processes by machine learning and are able to adjust proactively. These new optimization methods are evaluated and applied in the areas production planning, storage, and transport.

- 10/2019 – 09/2024
- > €500,000
- Josef-Ressel-Zentrum



Project Manager:
Prof. DI Dr.
Stefan Wagner
<https://www.adaptop.at>

ProMetHeus

Production and processing of light metals for high-performance, energy efficiency, environmental protection and sustainability

This project, lead by LKR Light Metal Competence Center Ranshofen, supports companies in the materials processing industries to produce sustainably and efficiently. We develop algorithms and models for new process routes.

- 01/2024 – 12/2027
- €100,000 – 500,000
- FFG COMET Projects



Project Manager:
Prof. DI Dr.
Gabriel Kronberger

Recycling4Future

Automatic and optimal control of plastics recycling plants.

Together with EREMA Engineering Recycling Maschinen und Anlagen GmbH we develop customized machine learning algorithms that can be used for automatic and stable control of plastics recycling plants.

- 01/2021 – 12/2023
- €100,000 – 500,000
- FFG General program



Project Manager:
Prof. DI Dr.
Gabriel Kronberger

SCHED-ENERGY

Adaptive Scheduling in Multi-stage Production Systems for Reducing Energy Consumption

The SCHED-ENERGY project researches simulation and optimization methods to predict energy consumption in a multi-stage production system using sensor data and to minimize it by optimizing the production schedule.

- 04/2022 – 03/2025
- > €500,000
- FFG Production of the Future



Project Manager:
Prof. DI Dr.
Stefan Wagner

TransMet 1

Transformation in metallurgy to recycled steel

In this project which is part of the COMET Center MCL (Material Center Leoben) we work on algorithms for the adaptation of material models. Focus of our activities are the combination of physics-based models with purely data-driven models.

- 04/2021 – 03/2024
- < €100,000
- FFG COMET K2 Centres



Project Manager:
Prof. DI Dr.
Gabriel Kronberger

X-PRO

The aim of the basic research project X-PRO is the development of fundamental new methods in the field of Informatics and Data Analytics to handle the upcoming challenges of rapidly rising amounts of data in the production environment. Further development of existing methods of visual and immersive analytics will lead to all new interactive and visual analytic tools which will be called ‘Cross-Virtuality Analytics’. These tools should ensure an optimised Human-Computer-Interaction.

- 02/2020 – 01/2025
- > €500,000
- RTI structural funding Upper Austria <https://x-pro.fh-ooe.at/>



Project Manager:
Prof. Dr.
Christoph Anthes MSc



Linz

Medical Engineering
Applied Social Sciences

Linz Campus

In accordance with the principle of 'Designing future working and living environments' the School of Medical Engineering and Applied Social Sciences places the individual at the center of its research activities. Research focuses on applied technologies on the one hand, and on methods and procedures that improve human life and support work for people on the other.

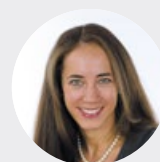
Center of Excellence & Focal Areas

- Medical Engineering/TIMed CENTER
- Societal Transformation & Social Innovation
- Food Technology & Nutrition

Your points of contact for research & development



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Vice-Dean for R&D
**Prof. MMag. Dr.
Johanna Anzengruber**
Garnisonstraße 21, 4020 Linz
+43 5 0804 52450
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Societal & Social Innovation

AiO-Monitoring

Scientific monitoring of a labor market integration measure for NEET youths with multiple problems

The Public Employment Service Upper Austria (AMS Upper Austria) is implementing a pilot labor market integration measure - All in One - for NEET young people up to the age of 25 with multiple problems. AiO aims to gradually stabilize their life situation, strengthen their personality and integrate them into the education and training system and the labour market. The measure is holistic, individual and case-oriented and is scientifically monitored. The aim of the scientific monitoring is to analyze the implementation, the effects and the cost-benefit ratio. The costs of the measure are set in relation to the benefits. The benefits will be determined by comparing the situation before, during, and after the intervention, as well as by statistical comparison with young people in similar multiple problem situations who do not participate in the intervention. A mixed-methods design (qualitative and quantitative methods) will be used to achieve the objectives of the scientific monitoring. The scientific monitoring will be carried out in cooperation with Alice Gröbner, MSc (Institute for Health Promotion and Prevention) and Prof. Dr. Johann Bacher (Johannes Kepler University Linz).

- 12/2023 – 12/2026
- < €100,000
- Contract research



Project Manager:
Prof. Mag. Dr.
Daniela Wetzelhütter

Artificial Eye

I spy with my Artificial Eye – Connecting social blind spots online

With Artificial Eye, a process is to be set up that represents a low-threshold offer of digital, outreach social work. The main goal is to develop a process that uses existing digital structures to reach those who would not or cannot seek support and participation on their own. In this way, the development of sustainable social contacts and positive relationship experiences should be made possible through digital outreach.

- 10/2021 – 09/2023
- €100,000 – 500,000
- FFG Fast Track Digital



Project Manager:
DSA Franz Schiermayr
MSc

ASPIRE

In Education, Employment or Training?! A Longitudinal Study on Immigrant Youths' Success Factors

The main goal of the project is to gain a better understanding about conditions, processes and results of immigrant youths' positive development. A longitudinal study will be conducted in which adolescents, parents and teachers will participate.

- 09/2021 – 08/2025
- €100,000 – 500,000
- OeNB Jubiläumsfonds



Project Manager:
Prof. PD Mag.ⁱⁿ Dr.
Dagmar Strohmaier

BF-ChatGPT in University Settings

Potentials and pitfalls of AI use by students

Artificial Intelligence (AI) offers immense opportunities and potential in the education sector to transform and enrich the way teaching and learning takes place. The research project aims to investigate the usage behavior of students at various universities with regard to KIT technologies, in particular ChatGPT.

- 12/2023 – 11/2025
- < €100,000
- Upper Austria core funding



Project Manager:
Prof. Mag. Dr.
Daniela Wetzelhütter

BF-IPSI+

Initiating projects of social innovation

Sustainable social innovations contribute greatly to tackling societal challenges. Therefore, the goal of this project is to support research activities of the two departments Healthcare-, Social- & Public Management and Social Work.

- 01/2022 – 01/2024
- < €100,000
- Upper Austria core funding



Project Manager:
Prof. Mag. Dr.
Renate Kränzl-Nagl

BF-WASP

Effective Agile Systems for Social Profit Organizations

Using the example of the Evangelical Church A.B. Upper Austria, a coherent, innovative, agile organizational and financing concept will be developed, which should contribute to sustainably securing the needs of the stakeholders of a social profit organization in its value context. The transformation of the existing structure into the innovative model will be accompanied in order to generate a scientific evaluation with regard to the achievement of the impact targets.

The model can be standardized and thus rolled out to other church and non-church social profit organizations.

- 01/2024 – 09/2025
- < €100,000
- Upper Austria core funding



Project Manager:
Prof. Mag. Dr.
Irmtraud Ehrenmüller

DiGreen

Digital Government for green municipalities and Cities

Municipalities and cities apply digital and green concepts. More experienced municipalities and cities with a better background and potential in digital and green solutions can naturally be an example for others. DiGreen aims to support the international exchange of digital and green good practice between municipalities and cities in order to tackle digital and green skill gaps in higher education and municipal practice. DiGreen gives a strong emphasis on the involvement of practitioners working at the municipality and city public bodies who may be a left-out group regarding digital and green skills.

- 11/2021 – 10/2024
- €100,000 – 500,000
- EU Erasmus+ KA2



Project Manager:
Prof. MMag. Dr.
Franziska Cecon
www.upjs.sk/fakulta-verejnej-spravy/en/international-relations/digreen/

Impact Analysis CN SZL

Impact Analysis of the projects community nurse of SZL

Seniorenzentren Linz GmbH

In this project, a socio-economic impact analysis of the three community nurse projects for Seniorenzentren Linz GmbH is created, a corresponding impact model is outlined and an instrument for impact measurement for the community nurse projects is outlined, which can also be transferred to other projects and enables independent impact measurement.

- 02/2023 – 03/2024
- < €100,000
- Contract research



Project Manager:
Prof. Mag. Dr.
Thomas Prinz

Impact measurement for ist OÖ

The project aims at creating an impact-oriented steering model for the Department of Integration, Upper Austria (Integrationsstelle des Landes OÖ, ist OÖ) and at developing a tool for measuring the social impact of counselling services, provided by the association migare, Centre for migrants Upper Austria (Verein migrare, Zentrum für MigrantInnen OÖ).

- 09/2021 – 12/2022
- < €100,000
- Contract research



Project Manager:
Prof. Mag. Dr.
Renate Kränzl-Nagl

Living Care Lab

Project Phase 1: LCL Business Plan

To adapt digital devices and social assistive robots for the real, effective use in caregiving environments, it needs innovative research institutions. A “Living Care Lab” represents a methodology that enables the evaluation of innovative technology. This project supports the establishment of a Living Care Lab at the University of Applied Sciences in Linz.

- 02/2022 – 04/2023
- < €100,000
- Upper Vision 2030
Upper Austria



Project Manager:
Prof. Mag. Dr.
Irmtraud Ehrenmüller

Mental Health First Aid

External evaluation of the project “Mental Health First Aid: An Austrian prevention program of pro mente Austria”

This study focuses on evaluating the project “Mental Health First Aid”. The project aims to train both professionals in social and health sector and interested laypersons in the form of seminars to deal better with psychological crises in their environment.

- 09/2020 – 05/2023
- < €100,000
- Contract research



Project Manager:
Prof. PD Mag. Dr.
Petra Wagner

Survey on Industrial Brownfields in Upper Austria 2024

Survey on Industrial Brownfields and commercial building land reserves in Upper Austria

Based on and subsequent to the brownfield surveys from 2018 and 2021, the vacant commercial and industrial sites are to be surveyed again. For the first time, commercial building land reserves are also surveyed.

- 12/2023 – 11/2024
- < €100,000
- Contract research



Project Manager:
Prof. MMag. Dr.
Franziska Cecon



Medical Engineering/ TIMed CENTER

BF-BoC

Composite Bone-on-a-Chip scaffolds

The aim of this project is to develop a Bone-on-a-chip model by combining macrostructures from Lithoz GmbH with microstructures fabricated through multiphoton lithography at FH OÖ Linz Campus. Microcomputed tomography at FH OÖ Wels Campus will analyze the scaffold microstructure and mechanical strength. Microstructure properties like geometry and surface functionalization will enhance cell viability and differentiation.

- 02/2024 – 10/2024
- < €100,000
- Upper Austria core funding



Project Manager:
Dipl.-Ing.
Christoph Naderer
www.timed-center.at

Bioceta

Biophysical Characterization of Extracellular Bioparticles for Therapeutic Application

In the course of this project, a new focus will be established at the University of Applied Sciences Upper Austria that deals with the multi-modal biophysical analysis of smallest biological particles (e.g. extracellular vesicles).

- 07/2018 – 06/2023
- €100,000 – 500,000
- FFG COIN Aufbau



Project Manager:
Prof. PD DI Dr.
Jacak Jaroslaw
www.timed-center.at

Fast3DCast 2.0

Rapid production of plastic support bandages using continuous stereolithography

The aim of Fast3DCast is to research methods and materials for the efficient production of support bandages as a replacement for plaster bandages and hard bandages made of synthetic material by continuous stereolithography.

- 02/2022 – 04/2024
- < €100,000
- FFG Bridge 1



Project Manager:
Dr. rer. nat.
Dmitry Sivun
www.timed-center.at

FcRClu

Elucidation of IgG oligomer mediated Fc receptor clustering

Within the project we will structurally and dynamically investigate the mechanism of Fc-receptor clustering and resulting immune cell activation, as induced by antibody hexamers formed on target cells.

- 11/2020 – 10/2024
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
PD DI Dr.
Johannes Preiner
www.timed-center.at

FHSimApUs

Fetal Heart Simulator for the Development and Optimization of Prenatal Ultrasound Imaging

Prenatal ultrasound is the most important non-invasive method for assessing fetal growth and detecting congenital malformations. New algorithms and components have to be continuously developed for modern ultrasound systems to provide better image quality and thus improved diagnostic capabilities. The main objective is to develop and validate a simulator for the prenatal beating heart to test and validate existing and novel ultrasound imaging algorithms.

- 09/2022 – 08/2025
- €100,000 – 500,000
- Upper Vision 2030
Upper Austria



Project Manager:
Prof. DI Dr.
Andreas Schrempf
www.timed-center.at

HS-AFM to study Fc:Fc interaction

Biophysical Characterization of Therapeutic Antibodies

Monoclonal antibodies are increasingly used in the treatment of various cancers. In this project the mode of action of these novel therapeutics is investigated at the molecular level in cooperation with an internationally leading pharmaceutical company.

- 09/2017 – 06/2024
- > €500,000
- Contract research



Project Manager:
PD DI Dr.
Johannes Preiner
www.timed-center.at

IgGMedCompAct

Determinants of IgG-mediated complement activation

The project seeks answers to such important questions as: How do the different IgG antibody subclasses (IgG1-IgG4) initiate the clearance of a target cell? What is the influence of antibody glycosylation, binding strength to the antigen, or antigen abundance on the target cell?

- 01/2021 – 12/2024
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
PD DI Dr.
Johannes Preiner
www.timed-center.at

ImageHeadstart

Breakthrough computer vision applications in the micro world: Industry Research Consortium 4.0

The aim of the project is to create a consortium from which the region's companies can draw on the knowledge of regional research organisations and thus achieve competitiveness so that they can also lead in global competition in certain areas.

- 01/2020 – 12/2022
- €100,000 – 500,000
- Interreg - Austria-Czech Republic
2014-2020



Project Manager:
Assistant Prof.
Dipl.-Biol.
Sascha Senck PhD
www.timed-center.at



Lipoprotein Particle Interaction with Biomembranes

The exchange of lipids between lipoproteins itself and to cells is a key process for maintaining cellular cholesterol homeostasis. Imbalance of systemic cholesterol uptake and export leads to atherosclerosis, diabetes and cancer. We implement a combined Atomic-Force and Single-Molecule-Fluorescence-Microscope, Fluorescence-Cross-Correlation-Spectroscopy and C-Laurdan polarization measurements to confirm cargo release to various membrane environments. High-Speed Atomic Force Microscopy will facilitate observation of particle interaction and/or diffusion in real time will show for the first time unprecedented details of the particle interaction - even fusion - with distinct membranes at various stages.

- 08/2020 – 07/2024
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
Prof. PD DI Dr.
Birgit Plochberger
www.timed-center.at

LiSSCeD

3D Lithographical Scaffolds for Stem Cell Differentiation

The scientific focus of this project will be the development of 3D cell scaffolds, which are mimicking the ECM. The complex, MPL/STED-lithography written scaffolds (feature sizes ranging from micro- down to nanometers) will be co-cultured with two different cells allowing for the first time the study of cell-cell as well as cell-scaffold interactions in-vitro at the nanoscale level.

- 12/2018 – 11/2022
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
Prof. PD DI Dr.
Jacak Jaroslaw
www.timed-center.at

MEDUSA

Medical Education in Surgical Aneurysm Clipping

The brain is the most sophisticated organ of our body and defines the human nature beyond personality and perception. Consequently, pathological damages of the brain's vulnerable structures have serious consequences for patients. For this reason, the surgical treatment of neurological disorders, such as aneurysms, have a high clinical relevance. Reaching the responsible target areas of the brain, however, is the integration of advanced technology and exceptional cognitive and fine-motoric skills of neurosurgeons. MEDUSA aims to build a revolutionary training and planning platform for neurosurgeons that is designed to set new standards in clinical simulation for reaching the ultimate goal of saving lives.

- 06/2019 – 05/2023
- €100,000 – 500,000
- Upper Vision 2030
Upper Austria



Project Manager:
Prof. DI Dr.
Andreas Schrempf
www.timed-center.at

Nano_Carriers

Characterization and cellular uptake/ biological effect of optimized nano-carriers

Extracellular vesicles (EVs) have proven their importance in modern clinical applications of diagnostics, prognostics, and therapeutics. The uptake routes for the EVs vary dependent on the target cell type, EV origin and the environmental conditions. In this project, the biological effect of EVs/NVs from different cell sources will be analyzed as a function of their biophysical and chemical parameters and EV/NV purification methods. These parameters will be analyzed using unique, single-particle sensitive techniques in addition to standard methods.

- 01/2023 – 12/2025
- €100,000 – 500,000
- FFG Bridge 1



Project Manager:
Prof. PD DI Dr.
Jacak Jaroslaw
www.timed-center.at

pH_HpUrel

pH-dependent structural dynamics/ gating of HpUrel

The aim of the project is to obtain a complete mechanistic picture of how HpUrel works and thus identify potential targets for drugs that block urea transport, which is critical for the survival of the bacterium.

- 06/2022 – 05/2025
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
PD DI Dr.
Johannes Preiner
www.timed-center.at

Smart Care Assist

Investigating the effectiveness of smart assistance systems in nursing care

Smart Care Assist is looking for answers to the question of how care beds need to be equipped (e.g. with smart textiles) in order to support nursing staff and at the same time serve for optimal patient care.

- 09/2023 – 08/2026
- €100,000 – 500,000
- Interreg Austria – Bavaria 2021 bis 2027



Project Manager:
DI(FH)
Martina Zeinzinger
www.timed-center.at
forschung.fh-ooe.at/
smart-care-assist

TCA1 - TC-Management

TIMed CENTER Management, Project Development & Third Mission

Project development, sustainable further development of the TIMed CENTER research fields, development of third mission activities as well as research communication and knowledge transfer are the objectives of this TIMed 2022++ activity.

- 01/2022 – 12/2025
- €100,000 – 500,000
- RTI structural funding Upper Austria



Project Manager:
DI Thomas Kern
www.timed-center.at

TCA8 - TC-SMICSIM

Smart Materials and Instruments for Surgical Simulators

The development and validation of novel technologies for use in hybrid surgical simulators is the focus of this TIMed 2022++ activity: haptically and acoustically validated synthetic tissue for ultrasound-guided interventions, highly elastic sensor layers, novel needle insertion tools

- 01/2022 – 12/2025
- €100,000 – 500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. DI Dr.
Andreas Schrempp
www.timed-center.at

TCA-NanoBacDeath

Analysis of bacterial death during the formation of membrane attack complexes

Collaborating with UMC Utrecht, we're creating software to analyze bacterial death during the formation of membrane attack complexes. Using fluorescence and SMLM images, our tools aim to enhance understanding of bacterial death, aiding in combatting antibiotic resistance bacteria.

- 01/2024 – 12/2024
- < €100,000
- RTI structural funding Upper Austria



Project Manager:
DI Fabian Hauser BSc
www.timed-center.at

TCA-TrainYourBrain

TrainYourBrain Optimizer:

Development of an application for the prediction, administration, and preparation of trainings for Alzheimer patients in cooperation with the "MAS Demenzservicestellen" in Upper Austria

Alzheimer's is a form of dementia in which changes occur in the human brain, causing affected individuals to gradually lose cognitive and physical abilities and thus progressively lose the ability to live independently. With the help of artificial intelligence and machine learning, a model is being built that provides optimal training plans for the various stages of the disease. At the same time, the project will be accompanied and evaluated by social scientists throughout the entire development process.

- 10/2023 – 12/2024
- < €100,000
- RTI structural funding Upper Austria



Project Manager:
Assistant Prof.
Susanne Schaller
MMSc
www.timed-center.at

TC-BIOsens

Biofunctional Surfaces as Sensory Interfaces for Cellular Analyses

The main goal of the TIMed 2022++ activity BIOsens is to further expand the competence and scientific visibility of the University of Applied Sciences Upper Austria in the field of biofunctional surfaces as sensory interfaces for cellular analyses.

- 01/2022 – 12/2025
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Dr. techn.
Peter Lanzerstorfer
BSc MSc
www.timed-center.at

TIMed 2022++

Technological Innovation in Medicine 2022++

The TIMed CENTER team is further developing six research fields in eight cross-faculty activities:

- (1) Data Science and Systems Engineering,
- (2) Biomedical Sensor Technology,
- (3) Biomimetics and Material Development,
- (4) High-Resolution Imaging,
- (5) Medical Simulators and
- (6) Drug Characterization.

- 01/2022 – 12/2025
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
DI Thomas Kern
www.timed-center.at



Steyr

Business
Management

Steyr Campus

At Campus Steyr, research and development activities focus primarily on the areas of management and digitalization. Scientists analyze various facets of digitalization from a business perspective and develop methods to support decision-making in the real business world.

Center of Excellence & Focal Areas

- Digital Transformation
- Logistics
- Smart Production
- Medical Engineering/TIMed CENTER
- ICT – Information and Communications Technology

Your points of contact for research & development



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+43 5 0804 33412
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Vice-Dean for R&D
Prof. Mag. Dr.
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+43 5 0804 33297
wolfgang.schildorfer@fh-steyr.at

Smart Production

CoE-E/SP

Research initiative of the CoE-E/SP

The project aims to drive green transformation in companies and SMEs, focusing on sustainability and resource efficiency. It offers an online platform for knowledge transfer, recommendations, insights into circular business models, and fosters a cross-border network.

- 01/2024 – 12/2026
- €100,000 – 500,000
- Upper Austria core funding



Project Manager:
Manuel Brunner
BSc MSc

EE-Scheduling

Energy-efficient scheduling in a multi-product multi-stage job shop production system

Developing energy-efficient scheduling for multi-product job shops in stochastic environments, using rule-based and online optimization to enhance energy and production metrics, evaluated via simulation.

- 10/2023 – 09/2026
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. PD DI
Klaus Altendorfer PhD

Hybrid Algorithms for Redesigning MRP

The framework of Material Requirements Planning (MRP) is widely applied in production planning but has some weaknesses which are addressed in this project. In this project, a new hybrid solution approach is developed, addressing drawbacks like: capacity constraints, stochastic demand, uncertain/load-dependent production lead times, and rolling horizon planning.

- 10/2020 – 09/2024
- €100,000 – 500,000
- FWF Stand-alone projects



Project Manager:
Prof. PD DI
Klaus Altendorfer PhD

IMPACT-sXR

Industrial Manufacturing Process and Collaboration Tools for Sustainable XR

Within the project Impact-sXR, industry partners and universities are working together to break new ground in knowledge transfer and the optimization of work processes with the help of XR technologies (mixed and virtual reality).

- 09/2021 – 12/2023
- €100,000 – 500,000
- FFG collective research



Project Manager:
Prof. DI Mag. Dr.
Josef Wolfartsberger

JRC DDBMI

Josef Ressel Centre for Data-Driven Business Model Innovation

The proposed Josef Ressel Centre (JRC) addresses data-driven business model innovation (BMI). The term data-driven refers to the aspects of data-driven value creation, value delivery, and value capture and to data-driven innovation processes for business modelling. The centre focuses on incumbent (well-established) manufacturing companies and on business model innovation in terms of reconfiguration and transition from the current business model to a novel data-driven one.

- 01/2023 – 12/2027
- > €500,000
- Josef Ressel Center



Project Manager:
Prof. DI Dr.
Herbert Jodlbauer

Smart Factory Lab

The project aims to establish a cross-site networked technology laboratory for the development and testing of innovative technologies, methods and concepts for intelligent production along the product life cycle. The focus of the project is on the research topics of preemptive maintenance, including the integration of mixed reality technologies into the maintenance process, additive manufacturing and related new business models.

- 01/2016 – 12/2022
- > €500,000
- IWB Investitionen in Wachstum und Beschäftigung 2014 – 2020



Project Manager:
Prof. DI Dr.
Herbert Jodlbauer

X-PRO

Research and Development of User-Centered Methods for Cross-Virtuality Analytics of Production Data

The aim of the basic research project X-PRO is the development of fundamental new methods in the field of informatics and data analytics to handle the upcoming challenges of rapidly rising amounts of data in the production environment. Further development of existing methods of visual and immersive analytics will lead to all new interactive and visual analytic tools, which are going to be called 'Cross-Virtuality Analytics'. These tools should ensure an optimised human-computer interaction.

- 02/2020 – 01/2025
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. DI Dr.
Herbert Jodlbauer

Digital Transformation

Interruption

IT-Mediated Interruptions as Stressor

Research on interruptions has generated different perspectives. In modern work environments, interruptions caused by technology are ubiquitous. The sheer volume of emails and instant messages, for example, affects task completion in the workplace, making effective management of interruptions a central issue. The "Interruption" project, funded by the Federal State of Upper Austria through the FFG, explores the impact of digital technologies on interruptions, particularly from a stress perspective.

- 10/2022 – 01/2025
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
a.Univ.Prof. Prof.
Mag. Dr. René Riedl

AI Catalyst for SMEs

Promoting innovation through social design thinking labs and a shared knowledge platform

The AI Catalyst project aims to provide SMEs with AI knowledge for Marketing, Sales and Export, showcasing applications and key success factors. It will offer an AI Readiness Radar, managers training, an online platform, and policy advice.

- 02/2024 – 01/2027
- €100,000 – 500,000
- Interreg Austria – Czech Republic 2021 bis 2027



Project Manager:
Prof. DI Dr.
Margarethe Überwimmer

Logistics

ANGIE

Academic Network for Green and Innovative Europe

ANGIE aims to establish an academic network to raise awareness about climate change, shift perspectives, and provide solutions for the transition to environmentally friendly processes with a low carbon footprint

- 09/2023 – 02/2026
- < €100,000
- EU Erasmus+



Project Manager:
Bianca Duldner-Borca
BA MA
angie-project.eu

AuMi

Autonomous microsite

The retail sector is in crisis. Autonomous stores provide a way out. A consortium of companies is investigating whether the combination of various autonomous retail services offers added value compared to traditional retail.

- 12/2023 – 12/2025
- €100,000 – 500,000
- Within the framework of Logistikum.Retail 2.0



Project Manager:
Dr.rer.soc.oec.
Robert Zimmermann
BA MA
www.logistikum-retail.at

AWARD

All Weather Autonomous Real logistics operations and Demonstrations

Even difficult weather conditions should not have any influence on autonomous vehicles in the future. A 29-partner research consortium in the EU H2020 project AWARD is pursuing this ambitious goal. In 2023, fully automated shuttle services were tested in Gunskirchen, Austria, together with DB Schenker and BRP Rotax. Efficiency, sustainability and safety were core criteria in the project. The project demonstrated the use cases of (1) hub-to-hub shuttle services, (2) automated baggage transport at the airports, (3) automated trailer movements in ports and (4) automated forklift movements outdoors with different types of vehicles.

- 12/2020 – 06/2024
- €100,000 – 500,000
- EU HORIZON 2020



Project Manager:
Prof. Mag. Dr.
Matthias Neubauer
<https://award-h2020.eu/>

C2C Returns

Innovative fashion returns logistics

The goal of the study is to identify innovative possibilities for returns logistics in the textile/fashion sector and to assess the existing acceptance of end customers for them.

- 11/2023 – 06/2024
- < €100,000
- Within the framework of Logistikum.Retail 2.0



Project Manager:
Mag. Dr. rer. pol.
Sarah Pfoser
logistikum-retail.at

CIIA2023

C-ITS Impact Assessment

Co-operative Intelligent Transport Systems (C-ITS) as a term for systems for exchanging information between vehicles and the roads being rolled out in Austria by ASFINAG. The question answered in the project is: What impact do C-ITS services have on our transport system?

- 01/2024 – 12/2024
- < €100,000
- Contract research



Project Manager:
Dr. Thomas Novak
www.logistikum.at/
uploads/images/PDF/
Projektinfoblatt_
CIA2023_ASFINAG_
DE_final.pdf

CySeReS-KMU

Cyber security and resilience in supply chains with a focus on SMEs

The aim of the CySeReS SME research project is to support small and medium-sized enterprises in IT security, cyber security and resilience with a focus on the supply chain. The needs of the participating SMEs are surveyed and analysed, on the basis of which a best practice guide and a maturity model are developed. In future, this will also be used to support SMEs outside of the project.

- 01/2023 – 12/2025
- €100,000 – 500,000
- Interreg Austria – Bavaria 2021 bis 2027



Project Manager:
Mag. Michael
Herburger BA MA

dataSChare

Data Spaces in Supply Chains – Industry Requirements

The aim of the DataSChare project is to identify and concretise industrial supply chain data spaces in order to and to concretise them in order to expand the level of knowledge about data spaces in the supply chain. This is done in a multi-stage methodological approach based on qualitative (workshops, interviews, stakeholder analyses) and quantitative (online surveys) methods

- 10/2022 – 09/2023
- €100,000 – 500,000
- FFG ICT of the Future



Project Manager:
Mag. Michael
Herburger BA MA

DOMINO

The research project DOMINO - Hub for Intermodal Mobility Services and Technologies is a flagship project on the mobility of the future with a focus on integrated personal mobility. The main objective of the project is to develop a universal, publicly accessible mobility service that can be used by users with as few barriers as possible and supports the mobility and climate goals of the public sector. With the DOMINO extensions in the DOMINO Upper Austria app, it is now also very easy to use in companies or municipalities.

- 11/2019 – 04/2023
- €100,000 – 500,000
- FFG Mobility of the Future



Project Manager:
Prof. Mag. Dr.
Wolfgang Schildorfer
Projekt DOMINO – Domino
Maas
<https://www.domino-maas.at/>

EMOTION

Enhanced MObility InnovatiON

EMOTION is the follow-up project to the Digitrans innovation laboratory for automated and connected mobility in the context of freight transport. The focus of the FH OÖ projects is the creation of a data-, information- and knowledge- base for connected and automated mobility as well as C-ITS impact assessment.

- 01/2024 – 12/2028
- €100,000 – 500,000
- Contract research



Project Manager:
Prof. Mag. Dr.
Matthias Neubauer
<https://www.digi-trans.expert/>



ESRIUM

EGNSS-enabled Smart Road Infrastructure Usage and Maintenance for increased energy efficiency and safety on European road networks

ESRIUM leverages C-ITS and EGNSS for precise vehicle localisation to enhance road safety and resource efficiency by creating a digital road wear map, which is used for (predictive) road maintenance, lane change or in lane offset recommendations.

- 12/2020 – 11/2023
- €100,000 – 500,000
- EU HORIZON 2020



Project Manager:
Prof. Mag. Dr.
Wolfgang Schildorfer
<https://esrium.eu/>

ESTRAL

Ecological and Safe TRAffic systems by digitalising Law

Since its inception in 1960, the StVO faces challenges with the evolving social and technological landscape. Increased public space demands, rising road safety requirements, and digitalization complexities necessitate new approaches. Digitalization holds potential to enhance traffic regulations, ensuring comprehensive, dynamic, and situation-dependent communication. The ESTRAL project aims to provide recommendations for creating digital legal provisions in road traffic, enhancing safety, efficiency, and sustainability.

- 09/2023 – 02/2025
- < €100,000
- Climate and Energy Fund



Project Manager:
Andrea Reindl MSc

EVIS-AT

In EVIS.AT, players in the Austrian road transport mobility sector combine their data to create a high-quality national traffic information system.

- 06/2014 – 06/2026
- > €500,000
- Climate and Energy Fund



Project Manager:
Prof. Mag. Dr.
Matthias Neubauer
<http://evis.gv.at/>

GreenPack

Sustainable packaging for e-commerce

The GreenPack project aims to test sustainable and alternative packaging concepts (e.g., reusable shipping bags) in a practical pilot. In a consortium with the Austrian Post and other online retailers, a concept for the use of sustainable packaging concepts will be jointly developed.

- 11/2020 – 06/2023
- €100,000 – 500,000
- Within the framework of Logistikum.Retail 2.0



Project Manager:
Mag. Dr. rer. pol.
Sarah Pfoser
www.logistikum-retail.at

GROW

LOG- Monitoring and ensuring the availability of fresh produce

The aim of the project GROW is to monitor and ensure the availability of fresh produce by supporting proactive and target-oriented actions in procurement by developing a basic approach to digitally capture risk factors, from source to regional hubs within selected fruit and vegetable value chains (on product level).

- 01/2024 – 12/2026
- > €500,000
- Contract research



Project Manager:
Ing. Ladislav Bartuska
Ph.D.

iw-net

Innovation driven Collaborative European Inland Waterways Transport Network

IW-NET will facilitate industry-wide collaboration for a unified Inland Waterway Area integrated in the TEN-T and European Transport System. The project's solutions comprise of highly configurable simulation models to support authorities and business stakeholders to evaluate and manage their strategies, and to optimize their tactical and operational planning capabilities. Furthermore, the project will cover state-of-the-art infrastructure and vessel technologies that support the streamlining and improvement of operational processes in inland waterway transport.

- 05/2020 – 04/2023
- €100,000 – 500,000
- EU HORIZON 2020



Project Manager:
Prof. Dr.
Lisa-Maria Putz-Egger
BSc MA

JRC PREVAIL

Josef Ressel Centre for Predictive Value Network Intelligence

The Josef Ressel Centre PREVAIL aims to establish machine learning, predictive analytics and pattern recognition as an integral part of data-driven, forward-looking decisions in SCM.

- 01/2023 – 12/2027
- > €500,000
- Josef Ressel Center



Project Manager:
Prof. Dr.
Brandtner Patrick
BA MA MSc
<https://pure.fh-ooe.at/de/projects/log-jrc-prevail-predictive-value-network-intelligence>

LoadBuilder

Analysis and optimization of load formation at Hödlmayr

The aim of the "LoadBuilder" project is to analyze and identify patterns of load formation and truck allocation from historical data.

- 11/2023 – 07/2024
- < €100,000
- Within the framework of Logistikum.Retail 2.0



Project Manager:
Dr. rer. soc. oec.
Robert Zimmermann
BA MA
www.logistikum-retail.at



LogIN

Initiative to promote training and knowledge transfer in intermodal transport

LogIN aims to deepen knowledge about intermodal transport in transport logistics, especially among people in everyday operations and training. Through a targeted approach, outdated prejudices against the rail system and intermodal transport options are to be overcome. The main objectives include the definition of the requirement profile, the conception and didactic preparation of teaching content as well as a comprehensive, high-quality transfer of knowledge.

- 11/2023 – 10/2025
- < €100,000
- Logistikförderung des BMK 2019–2023



Project Manager:
Mag. jur.
Alexandra Haller

Logistikum.Retail 2.0

Logistics Network of Excellence – Logistikum.Retail 2.0

In close dialog with key leading companies and stakeholders, we shape and support the (digital) transformation of retail. The areas of expertise: Retail Analytics, Retail Logistics & Last-Mile, Sustainability & Circular Retail, Omnichannel & Point-of-Sale and Scouting the Future of Retail (SCORE).

- 01/2023 – 12/2026
- > €500,000
- Upper Austria research funding



Project Manager:
Prof. Mag. Dr.
Oliver Schauer, MBA
www.logistikum-retail.at

LOGMASTER

Logistics Master Degree to set specialists for Supply Chain Management and Logistics

LOGMASTER – The project LOGMASTER aims to develop of a joint master program study framework in Supply Chain Management and Logistics Level 7 to address the requirements in terms of competencies elaborated by European Logistics Association (ELA) in the European Logistics Association Qualification Standards (ELAQF).

- 10/2022 – 09/2025
- < €100,000
- EU Erasmus+



Project Manager:
Bianca Duldner-Borca
BA MA
<https://logmaster.ac/about>

Mobility Lab Upper Austria (MobiLab2.0)

MobiLab Upper Austria is one of a total of five subsidised mobility laboratories in Austria whose aim is to address key mobility issues as well as local and regional challenges. As a hotspot for future-relevant mobility innovations, the follow-up project Mobilab2.0 continues to support cities, municipalities, regions, companies and start-ups in the development, testing and implementation of new mobility solutions. The subject areas of MobiLab2.0 are orientated towards economically induced transport - in particular freight transport, commuter mobility and service transport.

- 10/2021 – 09/2026
- > €500,000
- FFG Mobility of the Future



Project Manager:
Prof. Mag. Dr.
Wolfgang Schildorfer
www.mobilab-ooe.at

MultiRELOAD

Port solutions for sustainable mobility

The Horizon Europe project MultiRELOAD, focuses on strengthening cooperation between European transport hubs in order to develop innovations and create optimal conditions for multimodal freight transport solutions.

- 09/2022 – 08/2025
- > €500,000
- EU HORIZON 2020



Project Manager:
Prof. Dr.
Lisa-Maria Putz-Egger
BSc MA
www.multireload.eu

MUST

Multimodal traffic control through a combination of innovative communication channels

Whether and how can traffic information contribute to traffic avoidance? In Austria, traffic information on the radio, via roadside displays, apps, etc., with information on current traffic events and, for some years now, with the multimodal route planner from VAO (Verkehrsauskunft Österreich), provides a broad information base. The MUST project lays the foundation for future intermodal and holistic traffic management with coordinated information, which includes the broad expertise of the operators of transport routes and means of transport and the current situations on their networks and in their means of transport, in order to reduce or avoid (commuter) traffic.

- 06/2023 – 09/2026
- €100,000 – 500,000
- FFG Mobility (2022)



Project Manager:
Mag. Melanie Juppe BA

OptiRes

Optimization of resource planning in the warehouse process

The goal of the OptiRes project is to analyze past resource utilization and resource requirements in the warehouse, considering incoming and outgoing flow volumes. Based on historical patterns, the necessary warehouse resources (staff, forklifts, etc.) are to be determined for efficiently handling future flow volumes. This determination is intended to occur on both a medium-term and short-term level.

- 11/2023 – 12/2024
- < €100,000
- Within the framework of Logistikum.Retail 2.0



Project Manager:
Dr.rer.soc.oec.
Robert Zimmermann
BA MA
www.logistikum-retail.at

PREP

Predictive resource planning in the warehouses

The aim of the “PREP” project is to analyze historical data on the utilization of storage stations and the associated use of resources in order to enable predictive forecasts for required resources.

- 11/2023 – 09/2024
- < €100,000
- Within the framework of Logistikum.Retail 2.0



Project Manager
Dr.rer.soc.oec.
Robert Zimmermann
BA MA
www.logistikum-retail.at

Quinwalo+

Imparting inland navigation knowledge

The “Schifferbörse zu Duisburg-Ruhrort e.V.” is committed to the promotion of inland waterway transport and pursues the goal of educating future specialists and managers about the advantages and opportunities of inland waterway transport with the Quinwalo (Qualification Inland Waterway Logistics) course series. So far, the offer has been aimed at freight forwarding and logistics clerks in training from member companies of the shipping exchange. The “Quinwalo Plus” project aims to expand this continuing education concept and make it accessible regardless of location. In this way, young people should gain a better understanding of logistical interrelationships in the waterway system and become enthusiastic about inland waterway transport as well as its history, role and future.

- 02/2022 – 12/2023
- €100,000 – 500,000
- Contract research



Project Manager:
MMag.
Sophie Wiesinger

Quinwalo+ 2.0

Quinwalo Plus: Development of corporate design, website and gamification elements

The primary goals of the project are to make the prepared materials available to a wider audience in a structured and professional manner in order to expand the learning offer to include location-independent use and to achieve a greater leverage effect in the dissemination of inland navigation knowledge. It is therefore essential to rely on a suitable, easily accessible, attractive a.) website with a conclusive b.) corporate design and logo and to present the elaborated c.) teaching materials as low-threshold as possible with playful elements d.) “gamification” enriched. In this way, an interesting media mix is to be offered to different grades at general education and vocational schools.

- 02/2022 – 12/2024
- €100,000 – 500,000
- Contract research



Project Manager:
MMag.
Sophie Wiesinger

ReaGtSion

Determining the resilience needs of goods and services in Austria's key industries

Early detection of supply disruptions and bottlenecks is essential in order to design economic supply networks in a resilient manner. Covid-19 has shown that, in addition to critical infrastructure, other companies are important for maintaining supplies to the population. The aim of this project is to identify these key companies and their products and supply chains and derive recommendations for action to ensure resilience in future crises

- 09/2021 – 02/2023
- < €100,000
- FFG KIRAS - Security Research



Project Manager:
Mag. Michael
Herburger BA MA



ReKEP

Reusable packaging: Added Value for Parcel Logistics

ReKEP studies the introduction of automated reusable transport containers. The basic technology is a plug-in system of mutually compatible transport boxes. The delivery process is thus improved by the efficient bundling on the one hand and simplified by the pick-by-light technology on the other.

- 11/2022 – 10/2024
- €100,000 – 500,000
- FFG Circular economy (2nd call)



Project Manager:
Mag. Dr. rer. pol.
Sarah Pfoser
ait.ac.at/themen/
transportshyoptimie-
rung-logistik/projects/
rekep-mehrwegtrans-
portgebinde

Responsible Food Packaging

Development of a circular packaging cycle for online food retail.

The project aims to develop a sustainable logistics cycle for online food retail in Austria, using reusable boxes from hey circle equipped with environmentally friendly insulation solutions such as recycled waste paper, straw, hemp, recycled cotton, recycled PET, and sheep's wool.

- 10/2022 – 09/2023
- < €100,000
- Logistikförderung des BMK 2019–2023



Project Manager:
Mag. Dr. rer. pol.
Sarah Pfoser
www.logistikum-retail.
at/respac.html

Resistant

resilient military logistics based on an end-to-end digitalised digitised, distributed and autonomous supply chain

The aim of this project is to increase the resilience of the military supply chain by developing a new, internationally compatible logistics concept in conjunction with innovative technologies.

- 10/2023 – 09/2025
- €100,000 – 500,000
- FFG FORTE Förderung für die österreichische Verteidigungsforschung



Project Manager:
Mag.
Michael Herburger
BA MA

REWWay

Research and Education in Inland Waterway Logistics

The REWWay cooperation between Logistikum Steyr and viadonau aims to ensure that inland waterway logistics is firmly anchored in (inter)national research and educational institutions. The focus is on the training and further education of logisticians in the field of environmentally friendly inland navigation and its networking with other modes of transport.

- 07/2012 – 12/2023
- > €500,000
- Contract research



Project Manager:
Prof. Dr.
Lisa-Maria Putz-Egger
BSc MA
Startpage – REWWay

SCORE

Scouting the Future of Retail

Strategic trend management as a foresight method is an initiative of the logistikum.RETAIL 2.0 network of excellence. 15 corporate partners with a retail context join forces with the aim of identifying and analysing trends and developments of the future and deriving them into strategic innovation fields and projects.

- 01/2023 – 12/2026
- €100,000 – 500,000
- Within the framework of Logistikum.Retail 2.0



Project Manager:
Mag.
Andrea Massimiani
www.logistikum-retail.at

Sophie

resilience of supply chains to cascading effects from the digital space

The SOPHIE project aims to enhance the resilience of supply chain ICT infrastructures by increasing awareness of cybersecurity issues as well as reducing the frequency and severity of successful cyber-attacks. The reliability of these infrastructures increases the reliability of planning for production and supply chains, as well as for custom-ers and demanders.

- 11/2023 – 10/2025
- €100,000 – 500,000
- FFG KIRAS - Security Research



Project Manager:
Mag. Michael
Herburger BA MA

SSCCS

Secure Supply Chains for Critical Systems

The aim of the SSCCS project is to ensure the resilience and security of supply chains against cyber attacks. This is done in a structured, interdisciplinary approach based on real use cases real use cases and takes into account both highly integrated SCs and those with a low level of organisation

- 07/2021 – 06/2025
- €100,000 – 500,000
- FFG COIN Aufbau



Project Manager:
Mag. Michael
Herburger BA MA

SUBSTANTIATE

Simulation based Impact Assessment of Cooperative Intelligent Transportation Systems basend on Large Scale Traffic Systems

The project aims to develop and apply methods for evaluating the impacts of Cooperative Intelligent Transport System (C-ITS) Services or Service Combinations (Bundles) on Large Scale Traffic Networks, considering location-specific variations.

- 10/2022 – 09/2025
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. Mag. Dr.
Matthias Neubauer

SURE

SUstainable and REsilient Interconnected Supply Chains

The research objective of SURE is to deepen the understanding of the management of dynamic, non-linear networks [Interconnected Supply Chains (ISCs)]. SURE extends the current state of knowledge and focuses on a completely new case of application (ISCs) in SCM.

- 01/2023 – 12/2026
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. DI Dr.
Gerschberger Markus

SYRI

Systemic risk management and resilience planning for Austrian food supply security

The aim of SYRI is the first real-time systemic risk assessment in food value networks that are critical for the population. By developing systemic risk indicators and a digital crisis monitor for consumers, future crises can be identified at an early stage, analysed and monitored on the basis of data and countermeasures can be initiated in a coordinated manner

- 04/2022 – 06/2024
- €100,000 – 500,000
- FFG KIRAS - Security Research



Project Manager:
Mag. Michael
Herburger BA MA



Circular Academy

online knowledge platform to support the green transformation

The project aims to drive green transformation in companies and SMEs, focusing on sustainability and resource efficiency. It offers an online platform for knowledge transfer, recommendations, insights into circular business models, and fosters a cross-border network.

- 01/2023 – 12/2025
- €100,000 – 500,000
- Interreg Austria – Bavaria 2021 bis 2027



Project Manager:
Prof. DI Dr.

Margarethe Überwimmer
www.circularacademy.at

NextGen:CropCare

Research on Autonomous Weed Control for Sustainable Agriculture

The “NextGen:CropCare” project is researching autonomous hoeing robots in practical use. The aim is to promote integrated crop protection. The efficiency and cost-effectiveness of the system are being determined in a field trial in order to determine its practicability under different operating conditions.

- 01/2023 – 12/2025
- €100,000 – 500,000
- Upper Austria research funding



Project Manager:

Prof. MMag. Dr. Michael Schmidthaler
<https://mehrwert-landwirtschaft.at/nextgencropcare/>

LUCA

Leveling up Commercial Agents' Competencies: Technologicalisation and Internationalisation of European Commercial Agents

LUCA aims to support commercial agents in improving their digital skills to make them more competitive in the labour market. Furthermore, a certification process will be introduced to validate the acquisition of the competences.

- 11/2023 – 10/2025
- < €100,000
- EU Erasmus+



Project Manager:
Prof. Mag.

Christian Stadlmann
PhD

Value of alpine agriculture

Sustainable income sources for regional alpine agriculture

The project is concerned with making the services of alpine agriculture measurable and profitable. For this purpose, ecosystem services of regional alpine agriculture are collected, quantified and business-model-ideas are created.

- 05/2022 – 04/2024
- < €100,000
- AMA LE 14-20



Project Manager:

Prof. MMag. Dr. Michael Schmidthaler
<https://mehrwert-landwirtschaft.at/berglandwirtschaft/>



Wels

Engineering

Wels Campus

Research and development work at the University of Applied Sciences Upper Austria Wels Campus revolves around engineering and applied science. Six Centers of Excellence and focal areas provide the foundation for its research work and make the school one of the most research-intensive and best-equipped in Europe.

Center of Excellence & Focal Areas

- Smart Production
- Automotive & Mobility
- Energy
- Food Technology & Nutrition
- Materials
- Digital Transformation
- Medical Engineering/TIMed CENTER
- Logistics

Your points of contact for research & development



Head of Research Center
PD Mag. Clemens Röhrli, PhD
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+43 5 0804 44180
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Vice-Dean for R&D
Prof. PD DI Dr. Gernot Zitzenbacher
Stelzhamerstraße 23, 4600 Wels
+43 5 0804 44520
gernot.zitzenbacher@fh-wels.at

Automotive & Mobility

AdiosRivet

Advanced design of welded joints for TP-CFRPC reinforced vehicle structures

Research into TP-CFRP welded joints with the aim of creating design guidelines based on testing and simulation of the welded connection from coupon to sub-component level.

- 10/2023 – 09/2026
- €100,000 – 500,000
- Future Mobility Call – Upper Austria



Project Manager:
Prof. Dipl.-Ing.
Dr. techn.
Roland Hinterhölzl

AutoDrape

Automated Generation of FE-Training Data for Draping Process Surrogate Models

Development of an efficient for method to automatically generate training data for surrogate models, based on the results of JARVIS4Pre. Using machine vision algorithms and correlation analyses, an automated evaluation of the finite element simulations is examined in detail to achieve reliable results.

- 01/2023 – 06/2025
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. Dipl.-Ing.
Dr. techn.
Roland Hinterhölzl

BeyondInspection

Digitalization platform for the predictive evaluation of aerospace components using multimodal multiscale inspection

BeyondInspection develops a digitalization platform for predictive evaluation of aerospace components based on multimodal, multiscale inspection as well as new data analysis and visualization methods for primary and secondary test data.

- 12/2019 – 03/2023, > €500,000
- FFG TAKE OFF – Austrian aeronautics research program



Project Manager:
DI
Bernhard Plank MSc

Formula student

The goal of this student's project is to annually develop, design and build a competitive vehicle in accordance with the guidelines set by the Formula Student competition and to procure the necessary resources therefore.

- 10/2023 – 12/2025
- €100,000 – 500,000
- Internal funding, Sponsoring



Project Manager:
DI
Manuel Frank MSc

IMP4ZERO-E

Innovative monitoring and testing procedures for the zero-emission powertrain

Develop suitable monitoring and testing procedures for the zero-emission powertrain to ensure electrical and structural integrity of essential components during operation and thus enhance safety and longevity.

- 01/2024 – 12/2027
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. DI Dr.
Gernot Grabmair

JARVIS4Pre

Virtual learning and artificially intelligent developed work instructions for preform manufacturing in aeronautics

Development of a virtual learning environment with the aid of FE-based draping simulation, in which the "experience" of humans - regarding manual and (partially) automated preform production - is artificially relearned. The aim is to increase efficiency and is intended to increase efficiency and contribute significantly to a sustainable and resource-saving aviation industry.

- 09/2021 – 02/2024
- €100,000 – 500,000
- FFG TAKE OFF – Austrian aeronautics research program



Project Manager:
Prof. Dipl.-Ing.
Dr. techn.
Roland Hinterhölzl

MMZ

The investigation of methods for the mobility of the future

Analytical, numerical and experimental predictions of residual stresses which are generated during the manufacturing process of CFK (thermoplast) - metal hybrid constructions.

- 01/2019 – 12/2023
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. Dipl.-Ing.
Dr. techn.
Roland Hinterhölzl

PEMOWE

Electronics Inspection Network for Energy and Mobility Transition

To assess the quality and performance of electrical and electronic components, test procedures are being further developed to ensure reliability, safety and performance throughout their entire service life.

- 09/2023 – 08/2026
- €100,000 – 500,000
- Interreg Austria – Bavaria 2021 bis 2027



Project Manager:
Assistant Prof.
Dipl.-Biol. Sascha Senck
PhD



ZDM

Zero Defect Manufacturing for Thermo-dynamical Processes

In this project, sensors and data-driven models are developed to enable an improved process control and reducing scrap material in aerospace, automotive and aluminium production applications. The project aims to reduce process times and scrap material by 10-20%.

- 05/2021 – 04/2024
- €100,000 – 500,000
- FFG Production of the Future



Project Manager:
DI Gernot Mayr BSc
thermo-ndt.com

ProSim

Process simulation for the automation of composite manufacturing

Setup of the draping and consolidation simulation as well as the experimental material characterization and validation of the simulation for impregnated UD semi-finished products with subsequent linking of the simulations and integration into the structure simulation.

- 11/2018 – 10/2022
- > €500,000
- FFG COIN Aufbau



Project Manager:
Prof. Dipl.-Ing.
Dr. techn.
Roland Hinterhölzl

rGFK goes Trailer

Smart lightweight engineering - trailer loading floor made from recycled GRP

Waste made from glass fiber reinforced plastic should be recycled in the form of sandwich panels as floors in truck trailers. The material is fundamentally researched and the CO₂ savings are evaluated through a life cycle analysis

- 06/2023 – 05/2026
- €100,000 – 500,000
- Future Mobility Call – Upper Austria



Project Manager:
Prof. Dipl.-Ing.
Dr. techn.
Roland Hinterhölzl

Thermal Tomography

The project deals with thermal and optical simulations for the optimization of photo-thermal sensors. With the help of these numerical investigations, the sensitivity and reproducibility of active thermography investigations are to be increased.

- 07/2023 – 06/2025
- < €100,000
- FFG General program



Project Manager:
Ing. Michael Zauner
BSc MSc

Digital Transformation

DigiForest

Development of a digital nose for early detection of tree diseases

Forests constitute over 48% of Austria's land area, playing a vital role in the country's economy through forestry. However, in recent years, Austria has experienced a rise in challenges such as droughts, prolonged rain events, storm calamities, and heightened snow pressure, mostly attributed to the impacts of climate change. Additionally, epidemics of the European spruce bark beetle (*Ips typographus* [L.]) led to a devastating decline of spruce trees (*Picea*) in Austrian forests. A critical aspect of bark beetle control involves early detection of the beetles to facilitate the timely removal of infested trees before the beetle offspring emerge from the bark. Implementing long-term sustainable forest management plans is crucial for maintaining the health of our forests. Automation can play a crucial role in addressing the challenges, particularly in inaccessible areas of national forests. The goal of the project is to develop an artificial "nose" capable of using artificial intelligence to detect stress-induced volatile organic compounds (VOC) from trees as well as insect pheromones. VOCs provide functional information about plant growth, defense mechanisms, and the health status of plants, offering the opportunity to monitor plant vitality non-invasively. Pheromones provide information about the activity and mating behavior of the beetle population. The system should serve as an early warning system for tree stress and possible insect infestation.

- 01/2023 – 12/2025
- > €500,000
- Waldfonds (BML)



Project Manager:
Prof.
Dipl.oec.trophⁱⁿ
Claudia Probst PhD



and
Georg Schneider
BSc MSc

EnerMan

ENERgy-efficient manufacturing system MANAGEMENT

The aim of the project is for factories of the future to rethink their approach to energy use and move from a pure energy optimisation model to a sustainability model that takes a holistic view of energy consumption.

- 01/2021 – 12/202
- €100,000 – 500,000
- EU HORIZON 2020



Project Manager:
Prof. PD DI Dr.
Peter Hehenberger

COMPESTO

Comprehensive Energy Storage – COMPESTO

The project addresses the question: What are the benefits of storages with new thermal storage materials, with optimized loading/discharging strategies, combinations of storage with renewable energy technologies and the optimization of energy flows in energy systems?

- 01/2023 – 12/2026
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

Energy

ADC pilot factory

Austrian DC pilot factory

The project aims to innovate industrial energy supply by an experimental assessment of flexible and scalable on-site direct current (DC) grids for the producing industry.

- 03/2023 – 02/2026
- €100,000 – 500,000
- Climate and Energy Fund



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

Cooperation GASOKOL 2021

Yield optimisation TOOL for thermal collectors

Development of an innovative, practical design TOOL for predictive yield optimisation of thermal collectors in the product planning or optimisation phase.

- 02/2021 – 12/2022
- < €100,000
- easy2research Upper Austria



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

BaBaEmissionen

Battery-based energy storage for the mobile provision of EMISSION-free electrical energy

The project provides essential results on the requirements for battery systems for construction sites and fire departments as well as a methodical approach for modeling and optimized operation on a simulation basis.

- 01/2024 – 06/2026
- €100,000 – 500,000
- Future Energy Technologies
Upper Austria



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

FELICE

Flexible Assembly Manufacturing with Human-Robot Collaboration and Digital Twin Models

FELICE unites multidisciplinary research in collaborative robotics, AI, computer vision, IoT, machine learning, data analytics, cyberphysical systems, process optimization and ergonomics to deliver a modular platform that integrates and harmonizes an array of autonomous and cognitive technologies in order to increase the agility and productivity of a manual assembly production system, ensure the safety and improve the physical and mental well-being of factory workers.

- 01/2021 – 12/2024
- €100,000 – 500,000
- EU HORIZON 2020



Project Manager:
Prof. DI Dr.techn.
Roman Froschauer

BasFin GreenGas

Development of methods for analyzing the conversion processes in “green gases”

The project focuses on modeling the relevant conversion reactions and processes of H₂-methanisation in order to reliably determine the reaction equilibria, enthalpies and the associated temperature levels

- 12/2023 – 05/2025
- < €100,000
- Upper Austria core funding



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

Flexpower PVT

FlexPower PVT - size-flexible hybrid solar collector

The aim of this project is to develop a high-performance large-area hybrid collector that can be easily and flexibly adapted to a wide range of PV laminate sizes and to a wide range of customer requirements.

- 09/2023 – 08/2024
- < €100,000
- FFG core funding



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

FTI OÖ

Methods for Energy Flow Optimization

The main goal of the research activities of the project, which was successfully completed in 2022, was to create the methodological framework (mathematical algorithms) for the optimal coordination of future networked energy systems in several sectors (electricity, heat, cooling). Renewable energy technologies, innovative storage systems and applications in industry and home were given particular consideration.

- 01/2018 – 12/2022
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Dipl.-Ing. Dr.techn.
Harald Kirchsteiger
www.asic.at

Heat Highway

Interregional heat transmission networks to enable industrial waste heat usage and fossil-free industry

Heat Highway investigates supra-regional heat transmission networks (HTN), focusing on the use of multiple waste heat sources. Heat Highway will go far beyond the state of the art in terms of number of actors involved, interregionality and interaction.

- 03/2021 – 02/2024
- < €100,000
- Climate and Energy Fund



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

Hybrid – Hydrogen Based Research Infrastructure Development

Conception and development of a hydrogen-based research infrastructure

Within the HyBRID project, a comprehensive hydrogen research and testing infrastructure is being designed and built. Based on the needs in Upper Austria, the existing competencies of the FH OÖ Campus Wels and strategic framework conditions, 4 thematic focuses have been defined for the H₂ research center:

1. Thermal use of H₂ in high-temperature processes
2. Interaction of H₂ with materials and components
3. H₂ use in the electrical network
4. Process engineering use of H₂

HyBRID lays the foundation for pioneering basic hydrogen research and later also application-oriented research in Upper Austria in order to ensure the use of climate-neutral H₂ efficiently and effectively. This supports and advances the sustainable structural change of industry and society towards climate neutrality.

- 08/2023 – 12/2025
- > €500,000
- EU JTF – Just Transition Fund



Project Manager:
Dipl.-Ing.ⁱⁿ Dr.
Christina Toigo

Hybrid – Hydrogen Based Research Infrastructure Development – Infrastruktur

Within the HyBRID project, a comprehensive hydrogen research and testing infrastructure is being designed and built. Based on the needs in Upper Austria, the existing competencies of the FH OÖ Campus Wels and strategic framework conditions, 4 thematic focuses have been defined for the H₂ research center:

1. Thermal use of H₂ in high-temperature processes
2. Interaction of H₂ with materials and components
3. H₂ use in the electrical network
4. Process engineering use of H₂

HyBRID lays the foundation for pioneering basic hydrogen research and later application-oriented research in Upper Austria in order to ensure the use of climate-neutral H₂ efficiently and effectively. This supports and advances the sustainable structural change of industry and society towards climate neutrality. The infrastructure project part essentially includes the consulting and investment costs for the infrastructure.

- 09/2023 – 11/2023
- > €500,000
- EU JTF – Just Transition Fund



Project Manager:
Dipl.-Ing.ⁱⁿ Dr.
Christina Toigo

HykoSoko

Hybrid concentrating solar collector

FH OÖ is working on the development of a concentrating hybrid collector, capable of providing heat up to 200°C and electricity simultaneously. During this project, the electrical output was improved by adapting the PV-cells to the given application.

- 01/2023 – 12/2023
- < €100,000
- aws Prototypenförderung



Project Manager:
Assistant Prof. Ing.
Alois Resch BSc MSc

ICE4H&C

ICE-Heating and Cooling for SFH and MFH

In the project, an ice storage is to be measured and characterized. Furthermore, the proposed project is intended to further develop and optimize the ice storage.

- 01/2024 – 12/2025
- €100,000 – 500,000
- Future Energy Technologies Upper Austria



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

InduGrid

Industrial Microgrids

In this project, technical, economic and legal framework conditions will be depicted in an energy exchange platform, which will be implemented and validated in 3 test sites with different focus areas. It will enable the assessment of new energy communities.

- 09/2018 – 08/2022
- €100,000 – 500,000
- Climate and Energy Fund



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

Klimaaktiv Gebäude 2023+

Climate-active building and renovation

The program supports the federal government's climate and energy strategy #mission 2030 when it comes to energy-efficient new builds or high-quality renovations in Austria.

- 01/2023 – 12/2027
- €100,000 – 500,000
- Klimaaktiv Gebäude (BMK)



Project Manager:
Prof. Arch. DI Dr.
Herbert Leindecke

Monitoring research on large-scale solar plants

Advice to funding applicants for large-scale solar thermal plants Monitoring and knowledge building: support in the detailed planning and implementation phase; definition and implementation of the monitoring concept; measurement data analysis, optimisation, interpretation and feedback as well as documentation; plant evaluation and comparisons, building up knowledge base and transfer of results 4. plant evaluation and comparison, development of knowledge base and transfer of results.

- 11/2021 – 05/2031
- 100,000 – 500,000
- Climate and Energy Fund



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

OpenGrid4PV

Smart solutions to increase PV feed-in capacity in distribution networks

This project aims to develop practical, cost-effective, timely implementable, and socially viable solutions to increase PV hosting capacity or more efficiently utilize existing capacities in low and medium-voltage grids.

- 03/2024 – 08/2026
- €100,000 – 500,000
- Future Energy Technologies Upper Austria



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

RESINET

Increasing Resilience in Energy Networks

The RESINET project, which was successfully completed in 2022, addressed the focus of the resilience of energy networks, taking into account the transformation of the framework conditions from central, unidirectional systems to networks with a significantly higher proportion of renewable, fluctuating energy feeders ("prosumers"), increasing storage capacities in the network network and controllable loads.

- 01/2021 – 06/2022
- > €500,000
- IWB Investitionen in Wachstum und Beschäftigung 2014 – 2020



Project Manager:
Dipl.-Ing. Dr.techn.
Harald Kirchsteiger
www.asic.at

RESTORE

Effects from different energy storage technologies on sector-coupled energy systems

A model needs to be developed which enables the possibility to efficiently simulate different network levels (spatial resolution) and different dynamics (temporal resolution) of the various energy sectors.

- 10/2023 – 09/2026
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

RING

Realisation of a knowledge platform for "Direct current system technology and high-voltage storage technology for sustainable and renewable electrical energy supply"

The implementation of DC technology requires the development of new technologies, the establishment of product development expertise and the transfer of knowledge to the domestic economy. The name "RING" stands for "realisation, integration and use of direct current technology".

- 04/2023 – 03/2026
- > €500,000
- Interreg Austria – Bavaria 2021 bis 2027



Project Manager:
DI Bernhard Plank MSc





Sustainable Consumer Engagement and Demand Response

Creating a sustainable energy system by involving household customers

The H2020 project SENDER deals with the active involvement of household customers in the electricity market and enables them to make an active contribution to achieving a sustainable energy system.

- 10/2020 – 09/2024
- €100,000 – 500,000
- EU HORIZON 2020



Project Manager:
Prof. DI Dr.
Wilhelm Süßenbacher
www.sender-h2020.eu/de/partner

TCMix

Investigation of salt-mixture systems as composite materials for thermochemical storage applications

The project focuses on the development of salty composites as efficient and stable thermochemical storage materials.

- 03/2021 – 06/2024
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
DI Dr. nat. tech.
Bernhard Zettl

Urban Storage Cluster

Urban Storage Cluster Suedburgenland

Development and realization of a Living Lab test environment of a cross-building, cross-user, cross-quarter storage and cross-charging station energy management system in combination with innovative tariff models.

- 09/2017 – 05/2022
- €100,000 – 500,000
- FFG Future City



Project Manager:
DI Dr. techn.
Gerald Steinmaurer

Logistics

autoSHUNTING

Development for highly automated Shunting within Rail Freight Traffic

The autoSHUNTING project is researching the technical and organisational basis for highly automated shunting in rail freight transport. An important aspect of this is the automatic detection of obstacles and signals when travelling without a driver.

- 04/2019 – 12/2022
- €100,000 – 500,000
- FFG Mobility of the Future



Project Manager:
Prof. DI Dr.
Burkhard Stadlmann

DACIO

Digital Automated Coupling in Infrastructure Operations

DACIO supports the European introduction of digital automatic coupling (DAK) in rail freight transport from an Austrian perspective. It is analysing processes, infrastructure measures and improvements in freight wagons.

- 07/2019 – 08/2024
- > €500,000
- FFG Mobility of the Future



Project Manager:
Prof. DI Dr.
Burkhard Stadlmann

TARO

Towards Automated Rail Operation

TARO deals with various technologies and processes for the digitalisation and automatization of rail transport in the areas of infrastructure, vehicle maintenance, freight transport and regional railways.

- 06/2020 – 12/2023
- €100,000 – 500,000
- FFG Mobility of the Future



Project Manager:
Prof. DI Dr.
Burkhard Stadlmann

TRANS4M-R

Transforming Rail Freight in Europe

TRANS4M-R is the flagship project in the freight transport sector of the European Rail Joint Undertaking for the Europe-wide introduction of digital automatic coupling (DAC) in rail freight transport. All aspects of DAC are considered (process flows, specifications and development of demonstrators).

- 07/2022 – 06/2026
- > €500,000
- EU HORIZON Europe



Project Manager:
Prof. DI Dr.
Burkhard Stadlmann

ULTIMOB

Ultimate Integrated Solutions for Mobility

ULTIMOB develops realisable concepts for climate-friendly mobility in four different pilot regions (Tullnerfeld, Graz South, Leogang, Ötztal) in Austria and in the form of general procedures and evaluations, such as MaaS.

- 09/2019 – 03/2024
- < €100,000
- FFG Mobility of the Future



Project Manager:
Prof. DI Dr.
Burkhard Stadlmann

Food Technology & Nutrition

BIOCYTOPLAC

The aim of the project is to investigate the bioavailability and bioactivity of the secondary plant metabolites tormentic acid (TA) and its esterified form tormentic acid-coumaroyl ester (TACE) in various *in-vitro* and *in-vivo* models. The aim is to clarify whether TACE can be taken up in cells and organisms in a similar way to TA and has similar or modified anti-inflammatory effects. The bioavailability will be analyzed to show possible differences between TA and TACE. Furthermore, the potential anti-inflammatory and antioxidant effects will be investigated in *in-vitro* and *in-vivo* test models.

- 10/2023 – 09/2026
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. PD Dr.
Julian Weghuber

BioTransPhlor

The aim is to optimize the bioactivity of selected ingredients from brown algae to improve animal health through biotransformation. For this purpose, the bioactive substances contained in brown algae, so-called phlorotannins, are depolymerized by fermentation and/or chemical hydrolysis and subsequently characterized analytically. With the help of various *in-vitro* and *in-vivo* test models, it will be to investigate whether the bioactivity of brown algae extracts can be increased by splitting the polymers or by metabolic products of fermentation, and whether they can subsequently be used in animal nutrition.

- 10/2023 – 09/2026
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. PD Dr.
Julian Weghuber

FFoQSI

Austrian competence center for feed and food quality, safety and innovation

The main focus of the research is the program that has been developed by players of science and economy. Here we investigate critical issues along the value chains of plant derived feed and food (green value chain) and animal derived food (red value chain).

- 01/2017 – 12/2024
- > €500,000
- FFG COMET K1 Centres



Project Manager:
Prof. PD Dr.
Julian Weghuber

Yeast Biosensors

Yeast as living biosensors for the detection of pathogens or toxic substances

An innovative method to detect pathogens or toxic substances is developed that can be used in medicine, veterinary medicine or for food safety testing.

- 01/2023 – 06/2024
- €100,000 – 500,000
- FFG Spin-off Fellowships



Project Manager:
Mag.
Alexander Zwirzitz PhD

JRC – PDR

Josef Ressel Centre for Phytogetic Drug Research

The JR Centre investigates plant-derived bioactive substances for the prevention and therapeutic support of human diseases and for the improvement of animal health and performance.

- 01/2019 – 12/2024
- > €500,000
- Josef Ressel Centr



Project Manager:
Prof. PD Dr.
Julian Weghuber

MikroAKTIV

Strengthening the safety, sustainability and functionality of food and animal feed

In this project, together with the Austrian Competence Center for Feed and Food Quality, Safety and Innovation (FFoQSI), the interactions between microorganisms with food and feed are being investigated. New natural active ingredients with antimicrobial properties – as a natural alternative to antibiotics – are to be identified on the basis of different extract libraries, particularly from regional raw materials.

- 01/2024 – 12/2028
- > €500,000
- IBW/EFRE 2021-2027 & Just Transition Fund



Project Manager:
Prof. PD Dr.
Julian Weghuber

PlastoCyan

Production of bioplastic from dairy waste water by microalgae

Microalgae are genetically optimized in order to produce a bioplastic precursor molecule from dairy waste and CO₂.

- 06/2021 – 12/2022
- €100,000 – 500,000
- Interreg - Austria-Czech
- Republic 2014-2020



Project Manager:
Mag.
Alexander Zwirzitz
PhD

Process, innovation and sustainability solutions in food technology

Refresh your PIN

The project strengthens R&D activities of the participating companies from the food technology sector, focusing on product-process interactions, innovation, and sustainability in cooperation with a renowned research institution.

- 10/2023 – 03/2025
- < €100,000
- FFG Innovationscamps 2022



Project Manager:
Katrin Mathmann
and Bettina Zieher



Regio-Plants

Establishment of a research network for the use of health-promoting plant-based raw materials from the Bavaria-Tyrol-Upper Austria region: from identification to efficient use.

An interdisciplinary and transnational research network consisting of Austrian and Bavarian research partners is being established. The focus is on identifying natural plant substances and their effects on cardiovascular diseases and diabetes. In addition, the allergenic potential of selected fruit varieties is being investigated.

- 03/2023 – 02/2027
- €100,000 – 500,000
- Interreg Austria – Bavaria 2021 bis 2027



Project Manager:
PD Mag.
Clemens Röhrli PhD

W2NP - BSF

Analysis of suitable biogenic waste streams for the culture of the black soldier fly

Together with the company Reploid, the utilization of residues from the food industry as a substrate for larvae breeding is being analyzed. The aim is to significantly influence the development phases of the BSF (black soldier fly) and thus also optimize the formation of the desired valuable substances through targeted control of individual and combined process parameters.

- 08/2023 – 04/2024
- < €100,000
- FFG General program



Project Manager:
Prof. PD Dr.
Julian Weghuber

Medical Engineering

3DPharmInStruc

Development of advanced structures via 3D-printing for pharmaceutical inserts and implants

This project aims to create customizable implants using 3D printing. It involves developing a 3D printer and tailor-made polymers for drug delivery. Printed features (e.g.: porosity) influence drug release and implant degradation, crucial for safe therapy.

- 03/2022 – 02/2025
- €100,000 – 500,000
- FFG Production of the Future



Project Manager:
DI Sarah Heupl

Cell surface clusters of MHC class I molecules

The two-hybrid antibody micropattern technique, which distinguishes the conformational forms of class I MHC, is used to study the formation of these clusters, their structure, and their physiological role. This work is complemented by single molecule microscopy, biochemistry and in silico studies.

- 01/2021 – 12/2023,
- €100,000 – 500,000
- FWF – Joint Projects



Project Manager:
Dr. techn.
Peter Lanzerstorfer
BSc MSc

High-resolution imaging and simulation of diabetic foot complications

This project is developing an approach to improve the differential diagnosis of diabetic foot syndrome on the basis of X-ray and computed tomography (CT) data.

- 01/2022 – 12/2025
- €100,000 – 500,000
- RTI structural funding Upper Austria



Project Manager:
Assistant Prof.
Dipl.-Biol. Sascha Senck
PhD

ImageHeadstart

Ground-breaking computer-vision-applications in the micro-world – consortium of research organisations for industry 4.0

The project focuses on digital image processing in microscopy and tomography using machine learning in order to develop practical applications in the cross-border region of Austria and the Czech Republic.

- 01/2020 – 12/2022
- €100,000 – 500,000
- Interreg – Austria-Czech
- Republic 2014-2020



Project Manager:
Assistant Prof.
Dipl.-Biol. Sascha
Senck PhD

TCA3, TC-BIOsens

The main goal of the TC activity BIOsens is to further expand the competence and scientific visibility of the University of Applied Sciences Upper Austria in the field of biofunctional surfaces as sensory interfaces for cellular analyses.

- 01/2022 – 12/2025
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Dr. techn.
Peter Lanzerstorfer
BSc MSc

Smart Production

AM4Tools

Additive manufacturing of tool steels

Laser-based additive manufacturing of tool steels shows highpotential for realizing complex tool geometries with functional integration. The research focus is on the processability of tool steels using additive manufacturing processes.

- 01/2020 – 12/2022
- > €500,000
- Contract research



Project Manager:
Prof. Dr.-Ing.
Aziz Huskic

AMForging

Additive Manufacturing of forging dies with conformal cooling

The aim of the project “Use of additively manufactured forging dies with contour-adapted internal cooling” is to increase the economic efficiency of hot forging processes in order to increase the competitiveness of the forging industry.

- 07/2020 – 06/2023
- < €100,000
- Stiftung Stahlanwendungsforschung



Project Manager:
Prof. Dr.-Ing.
Aziz Huskic

AugmeNDT

Immersive Analytics of Spatial Multi-dimensional Data in Augmented Reality

The aim of the AugmeNDT project is to explore new immersive visualization and interaction techniques with a focus on Augmented Reality for the effective analysis of various nondestructive testing data along with derived data.

- 12/2020 – 01/2024
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Dipl.-Ing.
Bernhard Fröhler

BF- Core funding DfD

Circular economy of mechatronic systems - Design for Disassembly (DfD)

This project aims to develop a methodology for the transparent assessment of the disassembly capability of mechatronic systems. The methodology should include development and design guidelines as well as indicator values for the quantitative assessment of the disassembly capability of mechatronic systems.

- 01/2024 – 12/2025
- < €100,000
- Upper Austria core funding



Project Manager:
Simon Merschak
BSc MSc

Comparative Visualization of time-varying multidimensional Data

To better understand variations over time in complex materials such as fibre-reinforced polymers, the goal of the project is to develop comparative visualization techniques for material features and their characteristics derived from non-destructive testing datasets.

- 12/2020 – 01/2024
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Dipl.-Ing.
Bernhard Fröhler

Explainable AI to evaluate XCT Data from advanced composite components

The aim of the project is to understand neural networks for use in non-destructive material testing. The knowledge gained will provide the basis for the certification of neural networks in the field of non-destructive testing.

- 12/2022 – 11/2025
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Assistant Prof.
Dipl.-Biol.
Sascha Senck PhD

FatAM

Fatigue properties in additively manufactured metals and composites.

The main goal of FatAM is to formulate guidelines for optimizing AM production parameters for companies that additively manufacture metal or composite components.

- 01/2021 – 12/2024
- €100,000 – 500,000
- FFG COIN Aufbau



Project Manager:
Assistant Prof.
Dipl.-Biol. Sascha Senck
PhD

Multibody model in AC2T tribology applications

Multibody system modeling of a pin-on-disc tribometer

The tribometer at AC2T is used to investigate the friction and wear properties of model systems. A dynamic multibody model of the tribometer and actuator system is being developed to provide a better insight into the dynamic behavior of the real system, but also to enable more precise control of the pin actuator.

- 10/2022 – 04/2023
- < €100,000
- FFG COMET K2 Centres



Project Manager:
Prof. Dipl.-Ing.ⁱⁿ
Dr. techn.
Karin Nachbagauer
Bakk. Tech.
<https://www.ac2t.at/>

ReBi

Resource-efficient component innovations by additive manufacturing processes in the Bavarian and Austrian border region

Additive manufacturing processes enable the design of highly complex and efficient lightweight structures. This leads to resource-efficient component innovations, for example in lightweight construction and thus to the sustainable use of resources.

- 04/2023 – 03/2026
- > €500,000
- Interreg Austria – Bavaria 2021 bis 2027



Project Manager:
Prof. Dr.-Ing.
Aziz Huskic
<http://rebi-am.com>.
dedi145.your-server.de

ReMaP

Research on magnesium alloys for additive manufacturing of structural and biodegradable components.

In the ReMaP project, novel magnesium alloys are being developed for additive manufacturing. The components produced by means of additive manufacturing technologies are examined by means of micro-computed tomography.

- 01/2020 – 12/2022,
- €100,000 – 500,000
- Interreg – Austria– Czech Republic 2014–2020



Project Manager:
Assistant Prof.
Dipl.-Biol.
Sascha Senck PhD

RoboClub

The aim of the RoboCLUB is to get students interested in (autonomous, mobile) robotics and to provide an introduction to these topics. The members take part in the TGW/FHOÖ RobotChallenge, the RoboCup Rescue League and the Eurobot.

- 10/2018 – 09/2023
- €100,000 – 500,000
- Contract research



Project Manager:
Ing. Michael Zauner
BSc MSc

SAFELOG

Supporting robotics in automated wagon loading and unloading

The aim of the project is to develop a feasibility study for the design of a mobile robotics application to support the loading and unloading of wagons.

- 01/2023 – 10/2023
- €100,000 – 500,000
- Logistikförderung des BMK 2019–2023



Project Manager:
DI
Raimund Edlinger MSc

SHIMS

Disk detection Setting

As part of this project, software is to be developed for the automatic measurement of the client's shims.

- 03/2021 – 12/2022
- < €100,000
- Contract research



Project Manager:
DI
Raimund Edlinger MS

Smart Panel Bender (Phase 2)

K2 Center for Symbiotic Mechatronics

Development of new model-based virtual prototypes for automatic production of sheet metal components with lot size 1, integration into the digital factory, new strategies for adaptive production and processing of new materials.

- 01/2022 – 12/2026
- > €500,000
- FFG COMET K2 Centres



Project Manager:
Prof. DI Dr. techn.
Christian Zehetner

SMARTER

Slope Maintenance Automation using Real-time Telecommunication and advanced Environment Recognition

Project SMARTER addresses complex problems arising from the use of automated commercial vehicles and machines in public spaces away from the road. Basic regulations and requirements in connection with mowing on slopes along roads are to be identified for the development of suitable safety and operating concepts.

- 01/2021 – 03/2023
- €100,000 – 500,000
- FFG Mobility of the Future



Project Manager:
DI
Raimund Edlinger MSc

ToMoDSM

Towards Model-based Demand-Side Management in Manufacturing

The project aims to exploit DSM potential in manufacturing and create a basis for DSM systems in electricity-intensive production. Expected results include consumer behavior models, energy flow decomposition, and constraint mapping.

- 10/2023 – 03/2026
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
Prof. PD DI Dr.
Peter Hehenberger



Requirements-driven digital Transformation
 Competences in Mechanical and Plant Engineering

The focus of this project is on the development of a framework and its technological foundations as well as methods derived from it to overcome the challenges of digital transformation, taking into account the special requirements of mechanical and plant engineering. Especially in modern mechanical and plant engineering, individualized solutions adapted to specific customer requirements are required, and highly flexible production is required that is tailored to batch size 1 - requirements engineering and requirements management are of central importance. The corporate partners bring in appropriate use cases in the project, which can be used to test and optimize the methods and models developed. The TraceMe project also examines the legal aspects of digital transformation and also places a strong focus on the development of further education and training concepts for employees. Ultimately, these results should benefit not only the participating project partners, but the entire industry.

- 09/2022 – 08/2025
- €100,000 – 500,000
- Funding for digitization in Upper Austria



Project Manager:
 Prof. DI Dr.
 Mario Jungwirth

TS-GEOTEXOUS

Deep-drawing & punching tool development with geometry-optimized, textured surface & ultrasonic support

Deep drawing and punching operations are subject to a high load spectrum. The high forces and stresses that occur lead to premature tool failure. In order to increase the service life of the tools, the forces are determined on a test bench and the tools are optimized in terms of geometry, structure and choice of material.

- 07/2021 – 06/2024
- > €500,000
- Contract research



Project Manager:
 Prof. Dr.-Ing.
 Aziz Huskic

xCTing

Enabling X-ray CT based Industry 4.0 processchains by training Next Generation researchexperts

The overall aim of the xCTing project is to train 15 young and promising researchers (ESRs) that will take the lead in conceiving the next generation of European Industry 4.0-ready CT technology.

- 03/2021 – 02/2025
- > €500,000
- EU MSCA – Marie Curie Actions



Project Manager:
 Prof. PD DI Dr.
 Johann Kastner

X-Pro (Wels)

Research and development of user-centric methods for cross-virtuality analytics of production data

The research project "Research and development of user-centered methods for cross-virtuality analytics of production data", in short X-PRO, aims to achieve a completely new quality of human-computer interaction in the interactive visual analysis of large amounts of data from the production environment.

- 01/2020 – 12/2024
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. PD DI Dr.
Johann Kastner

Materials

HyperMAT

Hyperspectral characterization and visualization of complex material systems

The main objective of the project HyperMAT is to develop advanced technologies for the differentiation and characterization of materials with the aim of solving current challenges in the recycling of resources.

- 07/2023 – 06/2028
- > €500,000
- IBW/EFRE 2021-2027



Project Manager:
Jonathan Glinz MSc

Interface

Photothermal localization and characterization of internal interfaces using the virtual wave concept

In the INTERFACE project, the applicability of the virtual wave concept to the detection and characterization of manufacturing-related defects for real structures is being significantly expanded.

- 10/2023 – 05/2026
- €100,000 – 500,000
- Upper Austria Dissertation funding FH Upper Austria



Project Manager:
DI Dr. techn.
Günther Mayr

K1MET-4

Inclusion removal and steel cleanliness during electro slag remelting

Within the framework of the Metallurgical Competence Center K1MET, the laboratory stainless steel plant at Campus Wels develops together with Böhler Edelstahl and Wacker Chemie new process slags for the production of high-purity steels with reduced energy consumption in the ESR process.

- 07/2023 – 06/2027,
- €100,000 – 500,000
- FFG COMET K1 Centres



Project Manager:
Prof. DI Dr.
Reinhold Schneider

KombiPhoton

Combination of photonic methods for quality assurance of high-integrity lightweight components made of CFRP

The aim of this research project is to explore a fast and inline capable non-destructive testing system. The combined system, consisting of active thermography and laser ultrasound, is intended to enable 100% testing of high integrity, complex-shaped lightweight.

- 05/2021 – 04/2024
- €100,000 – 500,000
- FFG Production of the Future



Project Manager:
DI Dr. techn.
Günther Mayr
thermo-ndt.com

LCP-Plast

Extrusion process for manufacturing selfreinforced liquid crystal polymer films

The focus of research in this project is the extrusion of high performance films and the rheology of liquid crystal polymers.

- 01/2019 – 12/2022
- €100,000 – 500,000
- FFG Bridge 1



Project Manager:
Prof. PD DI Dr. mont.
Gernot Zitzenbacher

NaKuRe

Sustainable use of plastics through improved recycling methods and recycling-friendly design

The contents of this project are the modeling of extrusion-based processes for the recycling of mixed plastics, the holistic LCA-based consideration of plastic cycles and coating-based barrier solutions.

- 01/2022 – 12/2025
- > €500,000
- RTI structural funding Upper Austria



Project Manager:
Prof. PD DI Dr. mont.
Gernot Zitzenbacher

Schrott-DP

Effect of impurities from scrap on DP-steels

The effect of typical impurities from scrap on the phase transformation behaviour and subsequently on the mechanical properties of Dual-Phase-(DP)-steels is in the focus of this project which is conducted in cooperation with voestalpine in Linz.

- 12/2020 – 08/2024
- €100,000 – 500,000
- Contract research



Project Manager:
Prof. DI Dr.
Reinhold Schneider

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Digital learning

Educational technology

EDUdig – Enhancing the development of educators' digital competencies

The Erasmus+ project have established training opportunities for educators in higher education to enhance their digital (technical and pedagogical) skills. The project has produced a compilation of content of educational technology, approaches and methods, the creation of a structured online course, and an e-teaching manual designed for self-directed learning.

- 6/2021 – 5/2023
- < €100,000
- EU Erasmus+



Project Manager:
Adrijana Krebs MA





Student participation

Student engagement

ENTRANTS – Enhancing the transition of non-traditional students

A lack of a sense of belonging, adjustment difficulties and a lack of social contacts are the main reasons for leaving university early. For non-traditional students in particular (e.g. older students, migrants, working people, alternative university access), the transition phase to university poses a particular challenge, both in terms of academic requirements and social integration.

The project developed measures to make it easier for students to start their studies and to promote their integration into the university. Instead of creating offers for selected groups that are often perceived as stigmatising and therefore poorly accepted, the project provides low-threshold, anonymously available support services that can be used by all students (see e.g. <https://kompass.fh-ooe.at/>)

- 10/2020 – 09/2023
- €100,000 – 500,000
- EU Erasmus+/ KA2



Project Manager:
Mag. Dr.
Silke Preymann
<https://entrants.eu/>

UNICOMM – University Community Active Participation Project

The main aim of the project is to identify patterns and factors that support active student participation in an inclusive higher education environment, to improve students' relevant competences and finally to develop recommendations that help to implement favourable organisational structures for student participation and engagement at European higher education institutions in the context of uncertain times and rapid change. The project results are aimed at students, especially international students and working students, as well as university staff.

- 10/2019 – 5/2022
- < €100,000
- EU Erasmus+/ KA2



Project Manager:
Mag. Dr.
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<https://wolontariat.uw.edu.pl/unicomm>

Our research Focal Areas and expertise

Center of Excellence and Focal Areas

Research topics

Food Technology & Nutrition

Food Safety & Innovation

Effects of Food & Feed

Food Technology

Medical Engineering

Biomimetics & Drug Research

Microscopy & Data Analysis

Simulators & Sensors

Smart Production

Smart Factory & Assistance Systems

Planning & Optimisation

Additive Manufacturing

Energy

Sustainable/Renewable Energy

Intelligent 'Smart' Grids

Energy Storage

Automotive & Mobility

Connected Mobility

Smart Drive & Vehicle Technology

Lightweight Construction

Logistics

Retail Innovation

Transport Logistics

Supply-Chain- & Logistics Management

Materials

Surface Engineering

Composites, Plastics & Steel

Non-Destructive Testing

Information- & Communications Technology

Prescriptive Analytics

IT-Security

Human Computer Interaction

Digitale Transformation

Digital Transformation of Work

Data-Driven Corporate Management

Innovation Management

Societal & Social Innovation

Diversity

Societal Transformation

University Research

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FWF Österreichischer
Wissenschaftsfonds



ENB



Research & development at our 4 schools

Hagenberg Campus

School of Informatics,
Communications and Media

Linz Campus

School of Medical Engineering and
Applied Social Sciences

Steyr Campus

School of Business and
Management

Wels Campus

School of Engineering

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