

FZI LIVING LABS: A NEW SERVICE IN RESEARCH TRANSFER

Living Labs present a new research paradigm placing technology transfer and the application environment in the limelight of interdisciplinary research and development. The FZI Living Labs are a new FZI service that transforms ideas from research and development into marketable products. In the FZI Living Labs, project partners from companies and public institutions work together with FZI professors and researchers to design, discuss, evaluate and test concepts, tools, software and systems under real life conditions prior to market launch.

THE IDEA BEHIND OUR FZI LIVING LABS

- Participative research by researchers, experts from industry and users
- Concentrated provision of interdisciplinary, scientific know-how
- Practical trials for engineering and IT applications before market launch
- Thorough try-out of innovative concepts for your products
- Offering feedback of market knowledge into research
- Triggering innovative impulses
- Encouraging exchange between technology and application
- Environment for open innovation



THE FZI HOUSE OF LIVING LABS

The FZI House of Living Labs incorporates all FZI Living Labs in one building and offers a modern infrastructure for development, evaluation and demonstration of trend-setting technologies. Researchers from the FZI and partners from industry and society can exchange across fields of application and interdisciplinarily develop integrated solutions in information and communication technology.

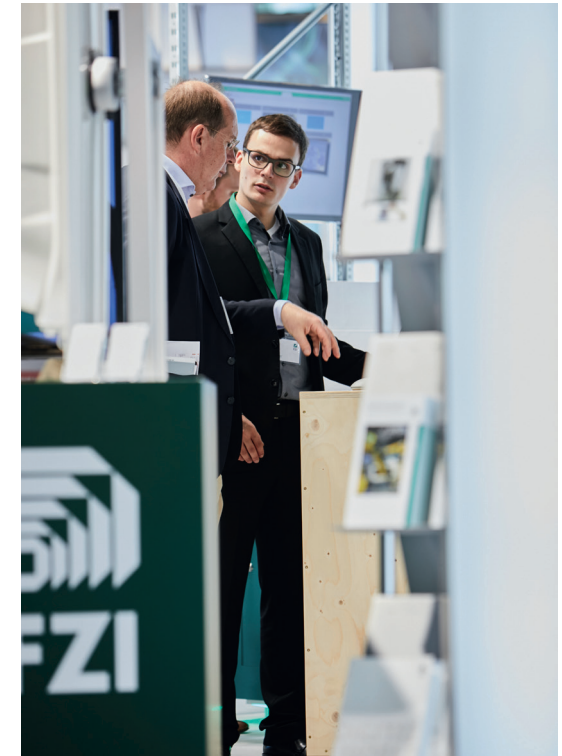
Profit from our FZI Living Labs as a platform for integration and technologies!

CONTACT

Dr.-Ing. Stefan Schwab
Phone: +49 721 9654-757
Email: schwab@fzi.de



FZI Forschungszentrum Informatik
Haid-und-Neu-Str. 10-14
76131 Karlsruhe, Germany
www.fzi.de/en | fzi@fzi.de



FZI LIVING LAB INDUSTRIAL INTELLIGENCE

Innovative technologies for the automation and production of tomorrow

In the FZI Living Lab Industrial Intelligence, we research and develop methods and concepts for intelligent systems in industrial contexts. The laboratory is an ideal platform for the interdisciplinary cooperation with partners from research and industry on innovative technologies in the fields of automation, production, logistics and industrial mobility.

THE INDUSTRY OF TOMORROW

The focus is set on various challenges:

- Cost pressure, shortage of skilled workers & demographic change
- Global supply chains & increasingly complex customer requirements with decreasing batch sizes & increasing deadline pressure
- Autonomous driving in the field of low-risk vehicles

RESEARCH TOPICS

- Model-based control: precise physical models, optimisation methods & shared control approaches
- Secure industrial systems: methods & tools for a security-by-design development process
- Industrial Internet of Things: machine connection & data analysis
- Industrial AI: human-centric & explainable industrial AI
- Edge & Fog Computing: event-driven computing & container management
- Digital Twin: product lifecycle management, visualisation in 3D & VR, process simulation & optimisation
- Computational linguistic assistance systems: requirements engineering & intelligent assistance tools

METHODS, TECHNOLOGIES AND EQUIPMENT

- “Apache StreamPipes (incubating)” is a self-service toolbox for easy data connection, analysis & exploration for Industrial IoT
- 3D screen wall & Virtual Reality (VR) Goggles
- Industrial Edge & Fog Computing scenarios using process & automation systems & mobile cranes
- Security-by-design methods & tools: model-based security analyses of industrial systems under consideration of standards (e.g. IEC 62433), attack trees as well as security levels
- Driving simulator with force feedback joystick for the cooperative solution of a work tasks; evaluation of shared control & force feedback applications

