

PRESS RELEASE

Aachen, November 20, 2020

Augmented Intelligence supports employees in decision-making situations

Research Project "AIXPERIMENTATIONlab" started at the WZL

How can work stress be reduced through a targeted combination of human and machine skills?

The new research project "AIXPERIMENTATIONlab: Augmented Intelligence Experimentation Laboratory - Augmented Intelligence for employee support in decision-making situations" at the Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University is dedicated to this question. In the three-year project, an institutionalized format for the design, development, use and diffusion of human-centered applications of artificial intelligence (AI) is to be created to answer this question.

The relative advantages of artificial intelligence methods are to be combined with the relative advantages of human judgement in a good decision-making process that reduces the psychological strain and stress on employees in service and customer service. In cooperation with scientists from the University of Applied Sciences Augsburg, the team of Prof. Dr.-Ing. Robert Schmitt is conducting practice-oriented research at the WZL together with employees and managers of user companies (HEIM & HAUS Bauelemente Produktionsgesellschaft mbH, HUH; Aumüller Aumatic GmbH, AUM; aixtema GmbH, AIX) and members of the trade union ver.di to find a joint solution.

Remedy against information overload, increased strain and stress

The laboratory is characterized by three replicated workstations representing the partner companies: Due to the constantly increasing amount of internal product and product accompanying data as well as external field data and customer information, information overload is already occurring today. In addition, employees are confronted with external factors, such as customer expectations of fast response times, which are perceived as stressful. All together, these developments are increasingly leading to strain, which is particularly evident in short-term decision-making situations in the form of stress and defensive attitudes among employees.

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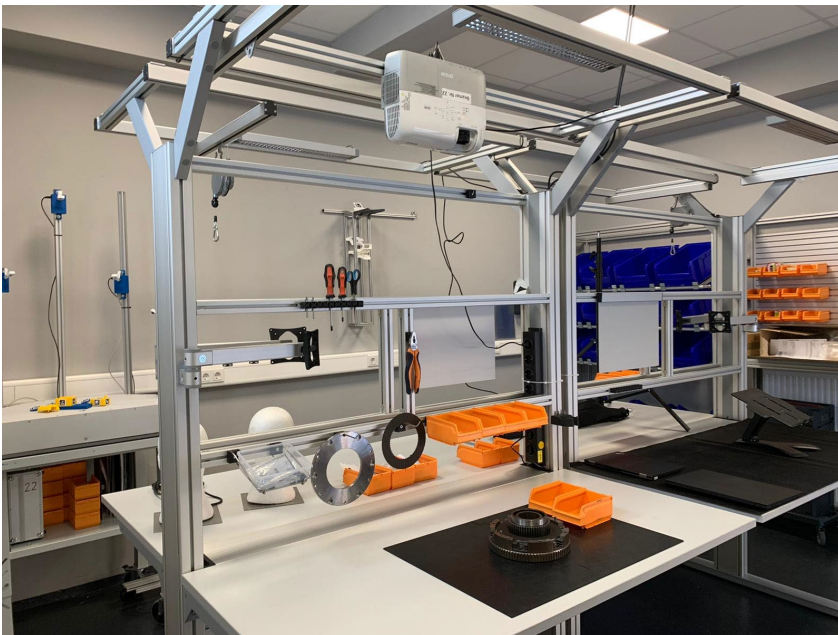
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These problems are addressed by the participatory development of human-centered AI applications for decision support. The focus is on the design of an optimal human AI interface from the employees' point of view.

The practical AI applications are initially developed and tested in the AIXPERIMENTATIONlab. Afterwards they will be used in everyday operations at HUH, AUM and AIX. In this context, empirically verifiable evidence will be collected with regard to the effects of human-centered AI applications on stress and strain. The findings will be transferred into a transformation concept that considers all relevant aspects of AI introduction in operational work systems.



In the AIXPERIMENTATION LAB, AI applications are developed in a participatory and human-centered way in a protected space before they are transferred into the operational practice at the user companies. (© WZL)

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Laboratory for Machine Tools and Production Engineering

The Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University enhances the innovative strength and competitiveness of the industry with trend-setting basic research, applied re-search and the associated consulting and implementation projects in the field of production technology. In the research fields of manufacturing technology, machine tools, production engineering, gear technology as well as production metrology and quality management, practical solutions for rationalizing production are developed with industrial partners from a broad range of branches.