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University and Fraunhofer bundle competencies under joint umbrella brand “Produktion.Besser.Machen.”

The Manufacturing & Remanufacturing research group at the University of Bayreuth and the Fraunhofer Project Group Process Innovation, which is also based there, are pooling their expertise under the umbrella brand “Produktion.Besser.Machen.” (making production better). The aim is to support small or medium-sized enterprises in particular, so-called SMEs, in the region in becoming more future-proof, resilient, and sustainable.

“More and more Germans are getting an e-bike, but hardly anyone thinks about what will happen to their e-bike or its components when they are no longer functional”, explains Prof. Dr.-Ing. Frank Döpfer. The engineer heads the Manufacturing & Remanufacturing research group at the University of Bayreuth and the Fraunhofer Project Group Process Innovation there. “But we Bayreuth researchers from the project group and Fraunhofer are already thinking ahead: we are researching sustainable value retention scenarios for the components of e-bikes and are using innovative remanufacturing and additive manufacturing technologies to do so.”

For example, in the AddRE-Mo project (AddRE-Mo stands for “Value Preservation Networks for Urban Electromobility”), researchers from both institutions are working with SMEs from various industries to develop methods and approaches for sustainable additive remanufacturing. In order to be able to use this model with regional SMEs to make their production better, the research group and Fraunhofer have combined their competencies under the umbrella brand of Produktion.Besser.Machen. “Produktion.Besser.Machen. means: We wish to research efficiently and together with industrial partners, advance the optimization of production, and transfer our knowledge to companies”, says Döpfer.

Heads up, companies!

If you wish to improve your production and work with researchers from the University of Bayreuth and the Fraunhofer Process Innovation Project Group to develop solutions that are individually tailored to your company, the Produktion.Besser.Machen. team is the first port of call (E-mail: ich-will-meine@produktion-besser-machen.de).

“Depending on the question posed by an industrial partner, there may be funding opportunities. Or – as before – we have the option of working out solutions specifically for a customer in a bilateral project”, explains the researcher. Information on new research projects, events, and opportunities for cooperation is available here:

www.produktion-besser-machen.de

www.linkedin.com/company/produktion-besser-machen

Thematically, Produktion.Besser.Machen. focuses on three main areas:

Industrialization of additive manufacturing

3D printing is a forward-looking technology that can be used to viably produce complex components and structures in small batch sizes. However, there are still obstacles to overcome for the broad industrial application of additive manufacturing processes and the associated process chains. The association of researchers under the umbrella brand of Produktion.Besser.Machen. explores solutions in the areas of implementation and design, production and quality, process and material, and occupational safety and sustainability. It also provides companies with individual advice.

Implementation of Artificial Intelligence

Artificial intelligence (AI) comprises a comprehensive portfolio of methods and technologies for the data-driven optimization of value chains. The basis for the successful implementation of AI applications in industrial production is the availability of suitable data. Produktion.Besser.Machen. researches and develops integrated concepts from data acquisition and analysis for application in production.

Implementation of sustainable production

Sustainable production combines ecological and economic goals and ranges from individual processes to efficient value-added systems and a circular economy. The researchers at Produktion.Besser.Machen. focus on closing product cycles through remanufacturing. They research and develop solutions in the areas of production, logistics, and quality.

The Manufacturing & Remanufacturing research group

has been established at the University of Bayreuth since 2001 and offers groundbreaking expertise in the field of future and sustainability technologies: Additive Manufacturing / 3D Printing, Artificial Intelligence, Digitalization of Production, Machining, and Remanufacturing. "For our research and development projects, which are closely interlinked with medium-sized businesses and SMEs in particular, we use state-of-the-art technical equipment, including a production pilot plant with the 3D printing research and application centre, numerous machine tools, and a digital training workshop. The majority of our customers and partners are located in the immediate region, but we also cooperate with national and international partners", explains Döpfer. The Fraunhofer Project Group Process Innovation based at the University of Bayreuth is part of the Fraunhofer-Institut für Produktionstechnik und Automatisierung, or Fraunhofer IPA for short, which is based in Stuttgart.

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