

Research alliance: TRUMPF and Fraunhofer IPA ramping up artificial intelligence for industrial use

**TRUMPF and Fraunhofer IPA confirm research partnership to run until 2025
// Goal is to develop artificial intelligence solutions for connected sheet-metal manufacturing**

Ditzingen/Stuttgart, July 30, 2020 – The high-tech company TRUMPF and the Stuttgart-based Fraunhofer Institute for Manufacturing Engineering and Automation IPA have formed a research alliance that is set to run until 2025. Their goal is to introduce artificial intelligence (AI) solutions for connected manufacturing on an industrial scale. Ten employees from TRUMPF and Fraunhofer IPA are involved in the project, which will receive some 2 million euros of funding spread over the next five years. “TRUMPF’s mission is to further extend its AI leadership in sheet-metal fabrication. To that end, we have already started investing in the kind of future technologies that will drive major efficiency gains within our company and boost our competitiveness,” says Thomas Schneider, managing director of development at TRUMPF Machine Tools. Five years have passed since TRUMPF and Fraunhofer IPA joined forces to work on smart factory topics, and the two partners will be continuing to pursue these existing projects within the framework of their new research alliance. “TRUMPF has been working with us on connected manufacturing for years because they share our view that Industry 4.0 developments represent a major opportunity. Everything depends on what happens over the next few years – so these are exciting times! We expect the coronavirus pandemic to act as a kind of catalyst: those who are well prepared will be perfectly placed to exploit the huge opportunities that lie ahead. Soon we’ll see whether we have laid the right foundations for the future in our joint projects,” says Professor Thomas Bauernhansl, director of Fraunhofer IPA.

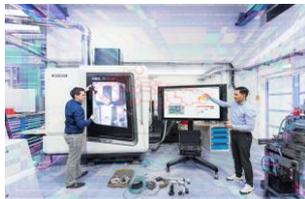
Future projects aim to make AI explainable

One of the goals TRUMPF and Fraunhofer IPA hope to achieve over the next five years is to develop solutions for better data quality in manufacturing. This reflects the crucial importance of high-quality data when it comes to achieving efficiency gains with AI. To address this need, the two partners will be increasing their research activities in the field of explainable artificial intelligence, or EAI. Their

goal is to make the operation of neural networks interpretable. New findings in this area are of great benefit to sheet-metal fabricators. The results of this kind of data analysis can boost the quality of manufacturing, save time and cut costs.

New solutions close to coming to market

TRUMPF and Fraunhofer IPA began working together on digital manufacturing in 2015. The initial results of this collaboration are now close to coming to market. These include TRUMPF's Sorting Guide assistance system, which is designed to help workers remove and sort laser-cut sheet metal parts. The AI solution detects the part removal process and automatically supplies workers with all the information they need for intralogistics. The system highlights parts in different colors to show which ones belong together, either because they are part of the same order, are destined for the same customer or are heading to the same machine for the next step in the manufacturing process. This solution replaces the documentation that would otherwise accompany each part, saving time and helping to prevent errors. The two partners hope to build on these initial successes by continuing their strategic cooperation in the future.



Smart factory

TRUMPF and Fraunhofer IPA have formed a research alliance that is set to run until 2025. Their goal is to create industry-ready AI solutions for sheet-metal manufacturing. (Source: Fraunhofer IPA, Rainer Bez)



Thomas Schneider

Thomas Schneider, managing director of development at TRUMPF Machine Tools. (Source: TRUMPF)



Professor Thomas Bauernhansl

Professor Thomas Bauernhansl is the director of Fraunhofer IPA. (Source: Fraunhofer IPA)



Sorting Guide

TRUMPF's Sorting Guide assistance system, which is a result of the cooperation, helps workers remove and sort laser-cut sheet metal parts. (Source: TRUMPF)

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About TRUMPF

The high-technology company TRUMPF offers production solutions in the machine tool and laser sectors. It is driving digital connectivity in manufacturing industry through consulting, platform and software offers. TRUMPF is the world technological and market leader for machine tools used in flexible sheet metal processing, and also for industrial lasers.

In 2019/20 the company – which has about 14,300 employees – achieved sales of 3.5 billion euros (preliminary figures). With over 70 subsidiaries, the TRUMPF Group is represented in nearly all the countries of Europe, North and South America, and Asia. It has production facilities in Germany, France, Great Britain, Italy, Austria, Switzerland, Poland, the Czech Republic, the USA, Mexico, China and Japan.

For more information about TRUMPF go to www.trumpf.com

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[Further information, e.g. link to website, customer magazines, contact etc.]