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Fraunhofer IGP

Fraunhofer Institute for Large Structures in Production Engineering IGP

Overview of services

Production planning and control

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Production planning and control

The demands on companies and their products as well as production systems are constantly growing: high adherence to schedules, shortest possible throughput times for manufacturing processes and at the same time work economically are the challenges of today.

The production planning and control team of Fraunhofer IGP develops individual solutions for the optimization of production processes in close cooperation with industry and research partners. These current demands on production can only be achieved with qualified methods. In addition to dynamic algorithms for process planning and control, the focus is on IT support. Only intelligent system networking enables the necessary transparency across all process levels. The integration of special hardware solutions complements existing system and software landscapes. These include various IoT sensors, location and identification systems, and the use of suitable end devices as an interface between man and machine. The research focus of the Fraunhofer Institute for Large Structures in Production Engineering IGP is primarily on production processes with larger volumes and primarily small quantities – a challenge for man and technology. The scientists meet this challenge with application-oriented expertise.

Services

Production planning and control in the context of Industry 4.0

- Design and implementation of intelligent algorithms for production planning and control
- Innovative software and hardware solutions for flexible production management (production control center, fault management and more)
- Digital tracking and tracing based on auto-ID and real-time location systems for complete traceability of orders
- Data and process mining for extracting complex correlations within data structures
- Digital twins for operational use