Manufacturing companies have to deal quickly with increasing competition and more individual customer requests. New intelligent technologies like RFID combined with appropriate organizational structures or decentralized and real-time based production control can handle these challenges. The efficient analysis of a production process, the selection of appropriate technical solutions or developing new approaches to deal with the special requirements of the area of manufacturing problems are essential for a successful participation on the market.

The objective of the mini track is also to explore suitable paradigms to design, implement and deploy intelligent systems or adapt them to given contexts. We want to discuss the transferability of general-speaking concepts to shop floor level in the perspective of both, research and practice. Articles should illustrate the application decision making approaches in manufacturing context.

Robert Weidner and Jens P. Wulfsberg from Institute of Production Engineering of Helmuth-Schmidt-University in Hamburg, Germany, present a new concept for complete planning and multi-criteria evaluating of production systems inclusive a first software based realization and an exemplary planning application. Identified enablers are used to reduce planning time, to diminish planning costs and to increase the planning securing. The concept can be seen as a complementary tool for planning production systems. The concept is characterized by following points: application of a knowledge storage including their assessment, bottom-up planning of variants, planning securing via employing an integrated stochastic simulation model for the consideration of uncertainties, ramp-up and series-specific effects and automating routine tasks.

Jens Lachenmaier, Holger Lasi and Hans-Georg Kemper from Chair of Information Systems I (Information Management) of University of Stuttgart, Germany, present their distribution „A Concept for Extracting and Sharing Technical Data from Digital Product Models for Subsequent Processing“. They propose an approach to extract the information that is relevant to the stakeholders from various CAD-systems, and store this information in a vendor-neutral format, which other application systems or employees are able to process.

The title of the contribution of Laura Bernadette Kassner Bernhard Mitschang of raduate School Advanced Manufacturing Engineering and Institute of Parallel and Distributed Systems in Stuttgart, Germany, is „MaXCept – Decision Support in Exception Handling through Unstructured Data Integration in the Production Context. An Integral Part of the Smart Factory“. The authors present present an architecture for data- and analytics-driven exception escalation in manufacturing and show the advantages of integrating unstructured data.