

# Preface



*CEO of the Cluster of Excellence “Integrative Production Technology for High-Wage Countries”*

This edited volume contains the papers presented at the scientific advisory board meeting of the Cluster of Excellence “Integrative Production Technology for High-Wage Countries”, held in November 2014 at RWTH Aachen University. The cluster is part of the German Universities Excellence Initiative funded by the German Research Association (DFG) with the aim to contribute solutions to economically, ecologically and socially sustainable production in high-wage countries. To achieve this goal researchers from 27

different institutes in Aachen work on an integrative, discipline-spanning approach combining production engineering, materials science, natural sciences as well as economics and social sciences.

The international scientific advisory board assembles every 2 years. These meetings enable us to reflect and evaluate our research results from an external point of view. Thus, we benefit from comprehensive feedback and new scientific perspectives.

The aim of this volume is to provide an overview of the status of research within the Cluster of Excellence. For details the reader may refer to the numerous further technical publications. The Aachen perspective on integrative production is complemented by papers from members of the international scientific advisory board, all leading researchers in the fields of production, materials science and bordering disciplines.

The structure of the volume mirrors the different projects within the cluster. It includes individualised production, virtual production systems, integrated technologies and self-optimising production systems. These technical topics are framed by an approach to a holistic theory of production and by the consideration of human factors in production technology.

I would like to thank the scientific advisory board for their valuable feedback, especially those members who contributed to the meeting with papers and presentations. Further, I would like to thank the scientists of the cluster for their results and the German Research Foundation (DFG) for the funding and their support.

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