Preface

Worldwide there is a high demand for formed parts, for example in automotive, aerospace and electronics industries as well as for telecommunication and medical purposes. Forming offers a great potential concerning resource conservation and environmental friendliness. Further improving these aspects is in actual focus as well as reducing costs and qualifying forming processes for new applications.

Since 2004 the International Conference on New Forming Technology (ICNFT) is an inspiring forum for researchers and professional practitioners to discuss aspects of leading edge novel forming technologies. Former ICNFT conferences were held in China in 2004, in Germany in 2007, again in China in 2012 and in the UK 2015 respectively.

The 5th International Conference on New Forming Technology (ICNFT2018) is held September 18-21, 2018 in Bremen, Germany. Delegates from 15 countries submitted 135 abstracts to the conference and 81 full papers were accepted by the International Scientific Committee and published in the peer reviewed conference proceedings. There are two keynote sessions for 8 plenary lectures and 21 topic sessions for more than 88 oral and poster presentations. These cover fields of forging, extrusion, bulk forming, drawing, sheet forming/hot-stamping, rolling/roll forming, hydro- and tube forming, micro-forming, powder technology, materials and characterization, tooling and heat treatment, design and modelling, and advanced manufacturing processes. The contents deal with new/enhanced forming processes for both conventional and new materials. They well reflect the state of the art of the current forming technology and give a strong indication to the trend of developing new forming technology.

Special sessions are offered for processes and materials including a plenary Keynote session dedicated to Prof. Frank Vollertsen’s 60th birthday, for micro cold forming with the final colloquium of the DFG funded Collaborative Research Center “Micro Cold Forming” (SFB 747) and for dry metal forming with intermediate colloquium of the DFG funded Priority Program “Dry Metal Forming” (SPP 1676).

A guided tour to Bremen’s University of Excellence and its research institutes are part of the conference. The 5th ICNFT gives you the opportunity to exchange thoughts and opinions on technological trends and future challenges as well as international collaboration perspectives in the wonderful surrounding of Bremen. Participation from industry in this conference will particularly enhance the industrial relevance of the research in developing future forming technology.

In this context, we like to thank all members of the International Scientific Committee as well as the Program Committee for their support in attracting contributions and reviewing papers according to CIRP regulations. Furthermore, special thanks shall be extended to the International Academy for Production Engineering (CIRP), the German Research Foundation (DFG), Arbeitsgemeinschaft Umformtechnik (AGU), Wissenschaftliche Gesellschaft Lasertechnik e.V. (WLT) and Bremer Institut für angewandte Strahltechnik (BIAS) for taking over sponsorship for this event. Finally, we would like to thank all those who have contributed to the 5th ICNFT 2018 “behind the curtain”. Of these the Local Organizing Committee, which has assembled all the papers for the proceedings and cared for all registration affairs as well as the many little but important things associated with such a large event should especially be acknowledged.

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DFG Deutsche Forschungsgemeinschaft
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