

# Preface

ESAFORM 2015 - The 18th International ESAFORM Conference on Material Forming is jointly organized by Graz University of Technology and VIRTUAL VEHICLE Research Center. Both organizations have collaborated closely for many years in numerous scientific activities.

ESAFORM 2015 is held for the first time in Austria and takes place at Graz University of Technology. The conference brings together specialists from academia and industry from all around the world, to discuss the latest technological innovations and recent achievements in material forming.

At the ESAFORM 2015 we are honored to have peer reviewed scientific contributions covering various disciplines relating to metals, plastics and composites forming, with approaches ranging from experimental processes to numerical modeling and simulation. Exhibitors in the field of materials and forming accompany the conference to offer new insights and dialogue.

We would like to give special thanks to all our sponsors for their support, the ESAFORM Board for their continuous assistance during the conference preparation phase and to all members of the Scientific Committee, who made themselves available for the organization of the mini-symposia. All parties involved have conjointly made it possible for us to stage such an international event. Finally, we also want to express our immense gratitude to Isabella Scheiber and Julia D'Orazio for all their professional work in the conference organization; without their support and kindness the ESAFORM 2015 conference would not be possible.

*Editors of ESAFORM 2015 Proceedings*

*Aldo Ofenheimer, Cecilia Poletti, Daniela Schalk-Kitting, Christof Sommitsch*

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- MS1 Formability of metallic materials**  
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- MS2 Forging and rolling**  
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- MS3 Composites forming processes**  
Coordinator: Prof. P. Boisse  
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- MS4 Friction and wear in material processing**  
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- MS5 Continuum constitutive modelling and scale transition modelling**  
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*Co-Organizer(s): Prof. F. Chinesta, Prof. R.J. Alves de Sousa, Prof. L. Tabourot*
- MS6 Nano-structured materials and micro forming**  
Coordinator: Prof. U. Engel  
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- MS7 Additive manufacturing and non-conventional processes**  
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- MS8 Structures, properties and processing of polymers (and biomass based materials)**  
Coordinator: Prof. F. Schmidt  
*Co-Organizer(s): Dr. L. Silva, Prof. G. Menary, Prof. G. Regnier, Peter Martin*

- MS9 Integrated design, modelling and reliability assessment in forming (I-DMR)**  
Coordinator: Prof. S. Thuillier  
*Co-Organizer(s): Robertt A. F. Valente, Pierpaolo Carlone, Ricardo J. Alves de Sousa*
- MS10 Small scale plasticity, damage and fracture**  
Coordinator: Dr. Tuncay Yalcinkaya  
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- MS11 Intelligent Computation in Forming Processes**  
Coordinator: PD Dr.-Ing. Hinnerk Hagenah  
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- MS12 Incremental and sheet metal forming**  
Coordinator: Prof. T. Meinders  
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- MS13 Machining and cutting**  
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- MS14 New and advanced numerical strategies for material forming**  
Coordinator: Prof. E. Cueto  
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- MS15 Optimization and inverse analysis in forming**  
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- MS16 Innovative joining by forming technologies**  
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- MS17 Heat transfer modelling**  
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- MS18 Semi-solid processes**  
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- MS20 Energy efficient solutions in material forming**  
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