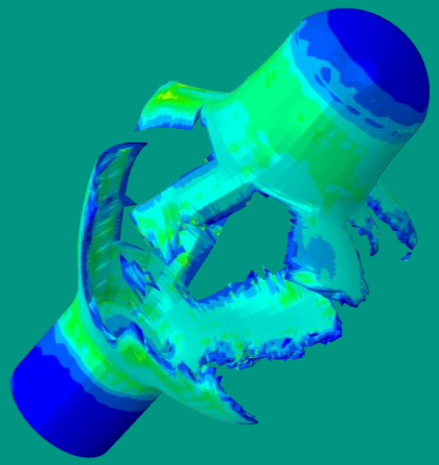
DFG Deutsche Forschungsgemeinschaft

DAMAGE CONTROLLED
**FORMING PROCESSES**

# CRC/Transregio 188
# 5th Industrial Colloquium



## November 5th, 2026
## KIT Senate Chamber
## Karlsruhe

# Information

**Contact and information**
Florian Kneuper
Institute of Forming Technology and Lightweight Components
TU Dortmund University
Baroper Str. 303
44227 Dortmund
Phone: +49 231 755 8441
TRR188@iul.tu-dortmund.de

**Please register before October 26th, 2026!**
Further information about the TRR 188 and the event as well as the registration form can be found at:
www.trr188.de

**Participation fee**
150.00 EUR (plus VAT)
This includes the event documents, drinks and food. In the event of cancellation by October 21st, 2026, we charge a processing fee of 50.00 EUR. In case of later cancellation or non-appearance the full participation fee will be charged. Cancellation must be made in written form. A replacement participant can be nominated at any time.

**Hotel Recommendations**

**Hotel Ambassador**
Hirschstraße 34-36
76133 Karlsruhe
Phone: +49 721 18020
info@ambassador-karlsruhe.de

**Motel One Karlsruhe**
Kriegsstraße 25
76133 Karlsruhe
Phone: +49 721 1812980
karlsruhe@motel-one.com

For more information about hotel bookings, please visit our homepage:
www.trr188.de

# Venue

**Senate chamber**
KIT Presidium (3rd floor)
Adolf Würth Building (11.30)
Engelbert-Arnold-Straße 2
76131 Karlsruhe




**Parking**
There are no dedicated parking spaces on the KIT South Campus. The parking garage Kronenplatz (right next to the bus stop) is the closest one to the South Campus. Other options include the parking garage Waldhornstraße and the parking garage Schlossplatz.

**Public Transport**
Get off at the **Kronenplatz** subway station.
Take the exit marked **"KIT Campus Süd / Englerstraße"**—from there, it's just a few steps to the Adolf Würth Building.

# Scope

Forming processes are vital in the production of highly stressed metallic components, serving not only to achieve the desired component geometry but also to tailor component properties. While certain properties like forming-induced strain hardening and residual stresses can be controlled and optimized to enhance the performance of metallic components, the control of forming-related damage remains a challenge. Failure due to damage can occur prematurely under unfavorable conditions, thus hindering the full exploitation of the material's potential.

Only through comprehensive damage control along the entire process chain, as pursued by the Collaborative Research Center TRR 188 on “Damage Controlled Forming Processes”, the full potential of the materials can be safely exploited.

TRR 188 was established in 2017 by the German Research Foundation (DFG) and brings together an interdisciplinary team of researchers from TU Dortmund University, RWTH Aachen University, the Karlsruhe Institute of Technology, and University of Duisburg-Essen. The TRR 188 focuses on investigating the mechanisms of damage initiation and damage evolution during forming and component use, spanning from the micro to the macro scale, across various sheet metal and solid forming processes.

The 5th Industrial Colloquium in 2026 will highlight advances in research on how process control can improve part performance. Esteemed speakers from both industry and research will present their latest findings, highlighting the potential for industrial applications and exploring the requirements and possibilities within the field. The colloquium offers an ideal opportunity for engaging discussions on the theory and implementation of damage control in forming processes, emphasizing the advantages it brings to the industry and providing a glimpse into future development trends.

We are looking forward to welcoming you in Karlsruhe as we gather to exchange knowledge and insights.



Y. P. Korkolis
Spokesperson of the
CRC TRR 188



S. Münstermann
Vice Spokesperson of the
CRC TRR 188

# Program

**November 5th, 2026**

09:30 – 10:00 **Coffee and Reception**

10:00 – 10:10 **Opening**
Prof. Dr. Thomas Hirth
Vice President Transfer and International Affairs, Karlsruhe Institute of Technology

10:10 – 10:30 **Welcome and Introduction**
Prof. Dr. Yannis P. Korkolis
IUL, TU Dortmund University

10:30 – 11:00 **Presentation from A-Area: “Process Technology”**
Dr. Niklas Fehlemann
IBF, RWTH Aachen University

11:00 – 11:30 **An integrated approach linking materials science and metal forming with digitalization and artificial intelligence**
Dr. Dirk Helm
Fraunhofer Institute for Mechanics of Materials IWM

11:30 – 12:30 **Lunch Break**

12:30 – 13:00 **Presentation from B-Area: “Characterization”**
Prof. Dr. Christoph Kirchlechner
IAM-MMI, Karlsruhe Institute of Technology

13:00 – 13:30 **Damage effects on formability & New opportunities for scrap processing**
Prof. Dr. C. Cem Tasan
Massachusetts Institute of Technology
Department of Materials Science and Engineering

13:30 – 14:00 **Formability of automotive sheet steel with increased recycled content**
Jonny Bernhardt
Mercedes-Benz

14:00 – 14:30 **Coffee Break**

14:30 – 15:00 **Presentation from C-Area: “Modeling”**
Klas Feike and Lennart Sobisch
IM, TU Dortmund University

15:00 – 15:30 **Recent results on the modeling of ductile fracture at the mesoscale, illustrating the role of particles in damage nucleation, with applications to recycled aluminum alloys**
Prof. Dr. Pierre-Olivier Bouchard
CEMEF, MINES Paris

15:30 – 16:00 **Insights into Crash Simulation at Porsche: Crash Models and Material Modeling Methods**
Sebastian Bencker
Porsche AG

16:00 – 16:30 **Coffee Break**

16:30 – 17:00 **Plenary Discussion on future challenges for forming processes and damage-controlled forming facing recycled materials**

19:00 – 23:00 **Conference Dinner @Badisch Brauhaus**
(Stephanienstraße 38-40, 76133 Karlsruhe)