

PITCHES & POSTERS



| | |
|---|--|
| P1 Nanobainitic Steels: From research to industrial application | R. Rechenberg, M. Zapf, G. Korpala, U. Prah IMF, TUBAF |
| P2 No More Secrets! Open-Source software developments in basic research @ IMF | R. Pfeiffer, M. Schmidchen, C. Renzing, M. Weiner, M. Stirl, A. Guk, J. Mantel, U. Prah IMF, TUBAF |
| P3 CONFORM™ process of magnesium alloys | C. Kaden, M. Ullmann, U. Prah IMF, TUBAF |
| P4 Classification of surface defects by AI | T. Reimers LAP GmbH Laser Application |
| P5 Optimizing the CONFORM™ process: Minimizing oxide inclusions in copper extrusion | R. Kleemann*, H. Busch*, O. Schwedler*, U. Prah** *KME Mannsfeld GmbH, **IMF, TUBAF |
| P6 Using AI for parametrizing grain size evolution models | H.-W. Raedt prosimalys GmbH |
| P7 Modified nitriding / nitrocarburizing processes for optimum thermochemical treatment of cold extruded parts | D. Ambacher Härterei TechnoTherm GmbH & Co.KG |



20.–21.03.2025

MEFORM

SFU

30.

JOIN US AT MEFORM 2025 AND SFU 2025!

Dear Colleagues, Partners, Friends,

the Institute of Metal Forming at the TU Bergakademie Freiberg warmly invites you to MEFORM 2025, held on March 20–21, 2025, in Freiberg, Germany. This conference brings together experts from industry and academia to explore the latest advancements in material science and production technology for metallic semi-finished products. It serves as a premier platform to discuss emerging challenges and innovative solutions in metal forming, covering diverse areas such as forging, rolling (flat and caliber), and wire drawing.

Key Topics

- Data-based process modeling and optimization
- Material simulation for technology development
- Sustainable production and CO₂ reduction
- Circular economy and resource management

This year, MEFORM 2025 proudly integrates the Sächsische Fachtagung Umformtechnik (SFU), featuring hands-on workshops under the theme "Artificial Intelligence in Forming Technologies." These interactive sessions are perfect for those eager to explore AI's transformative potential in forming technologies.

Don't miss the opportunity to engage with leading experts, network with peers, and celebrate the exciting advancements shaping the future of metal forming and metallic materials technologies.

We look forward to welcome you in Freiberg for this inspiring event!

Best regards,

Ulrich Prah and Madlen Ullmann in the name of the complete team of **Institute of Metal Forming (IMF), TU Bergakademie Freiberg**

AWARD CEREMONY

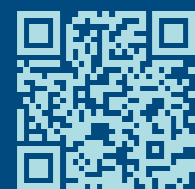
Dr. Rolf Umbach Award Ceremony

The award, initiated by the Dr. Rolf Umbach Foundation and the Association "Verein für Umformtechnik Sachsen e. V.", honors young scientists for innovative achievements in the field of forming technology. All applicants will showcase their work on posters, which can be viewed and discussed during the breaks.

Conference Venue:

„Alte Mensa“

Petersstraße 5, 09599 Freiberg

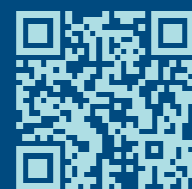


google maps

Evening Event Venue:

IMF „Haus Formgebung“

Bernhard-von-Cotta-Straße 4, 09599 Freiberg



google maps

Contact

office@imf.tu-freiberg.de
+49 3731 - 39 3698

Registration



www.acatrain.net/meform



TUBAF

Die Ressourcenuniversität.
Seit 1765.

Thursday | 20/03/25



11:00 12:00 Reception

| | | | |
|-------|-------|---|---|
| 12:00 | 12:10 | Greeting from the rector | K.-D. Barbknecht Rector, TUBAF |
| 12:10 | 12:30 | Welcome | U. Prahel IMF, TUBAF |
| 12:30 | 12:35 | Introduction session 1: Material simulation for technology development | Chairman: N. B. Khalifa IPTS, Leuphana Universität Lüneburg |
| 12:35 | 12:55 | Computer simulation for materials research and development at TU Wien | E. Kozeschnik IWW, TU Wien |
| 12:55 | 13:15 | Simulation based development of bainitic steels and relevant influencing parameters for technology design | M. Zapf, G. Korpala, U. Prahel IMF, TUBAF |
| 13:15 | 13:35 | Application of damage models on long product rolling simulations in QForm UK | C.-E. Muller Saarstahl AG |

13:35 14:10 Coffee break and industrial exhibition

| | | | |
|-------|-------|--|--|
| 14:10 | 14:15 | Introduction session 2: Circular economy and resource management | Chairman: A. Brosius IF, TU Dresden |
| 14:15 | 14:35 | Sustainability driven innovations in material and process design | N. B. Khalifa, L. Hendriok, P. Zeise, B. Klusmann, H. Dieringa IPTS, Leuphana Universität Lüneburg |
| 14:35 | 14:55 | Effect of Cu content in high-strength steels | S. Kwiecien, S. Guk, F. Hoffmann, F. Qayyum, U. Prahel IMF, TUBAF |

14:55 15:30 Pitches & Posters

15:30 16:00 Snacks and poster session and industrial exhibition

| | | | |
|-------|-------|---|--|
| 16:00 | 16:05 | Introduction Session 3: Sustainable production and CO ₂ reduction | Chairman: M. Schmidtchen IMF, TUBAF |
| 16:05 | 16:25 | CO ₂ -free thermal process technology as a contribution to the decarbonization of the industry | G. Wolf, A. Kessler, L. Mastaler GI, TUBAF |
| 16:25 | 16:45 | Development of a hybrid heating technology in roll forming | A. Guk, M. Schmidtchen, C. Renzing, U. Prahel IMF, TUBAF |

16:45 17:15 Dr. Rolf Umbach Award Ceremony for Young Achievements in Forming Technology

19:00 open end Institute evening at our technical centre with farewell ceremony for graduates and guided tour

Friday | 21/03/25



08:30 09:00 Reception

09:00 11:00 Workshops: AI in forming technology

| | |
|---|-------------------------|
| W1: AI-Powered automation for daily office tasks | M. Stirl IMF, TUBAF |
| W2: Workflow and tools for AI-driven comprehensive, fast and effective literature review | F. Qayyum IMF, TUBAF |
| W3: Talking with my archive – Chatbot with own reports | G. Korpala IMF, TUBAF |
| W4: AI-Assisted programming in Python for applications in materials mechanics and physics | B. Eidel IMFD, TUBAF |

11:00 11:30 Coffee break and industrial exhibition

| | | | |
|-------|-------|---|--|
| 11:30 | 11:35 | Introduction session 4: Data-based process modelling and optimisation | Chairman: E. Kozeschnik IWW, TU Wien |
| 11:35 | 11:55 | AI for forming technology | A. Brosius IF, TU Dresden |
| 11:55 | 12:15 | Leveraging data for process modeling and analysis in hot plate rolling | K. Tokmakov SMS Group GmbH |
| 12:15 | 12:35 | Digital twin and machine learning for prediction of product properties in forming process chains | T. Clausmeyer IWP, TU Chemnitz |
| 12:35 | 12:55 | Panoramic Images in focus: AI-Assisted analysis of grain size distribution in the uniaxial compression test | G. Korpala MiViA GmbH |

12:55 13:30 Closing remarks and snacks

PROGRAM

