

Prof. Dr. Klemens Rother
Institute of Material- and Building Research
Prof. Dr. Christian Möller
Prof. Dr. Henning Stoll
Prof. Dr. Manuel Pusch
Department of Mechanical, Automotive,
and Aeronautical Engineering
University of Applied Sciences Munich

Prof. Dr. Philipp Höfer
Institute of Lightweight Engineering
Prof. Dr. Tobias Dickhut
Institute for Aeronautical Engineering
Universität der Bundeswehr München

Prof. Dr. Markus Zimmermann
Laboratory for Product Development
and Lightweight Design
Technical University of Munich

Invitation and Agenda

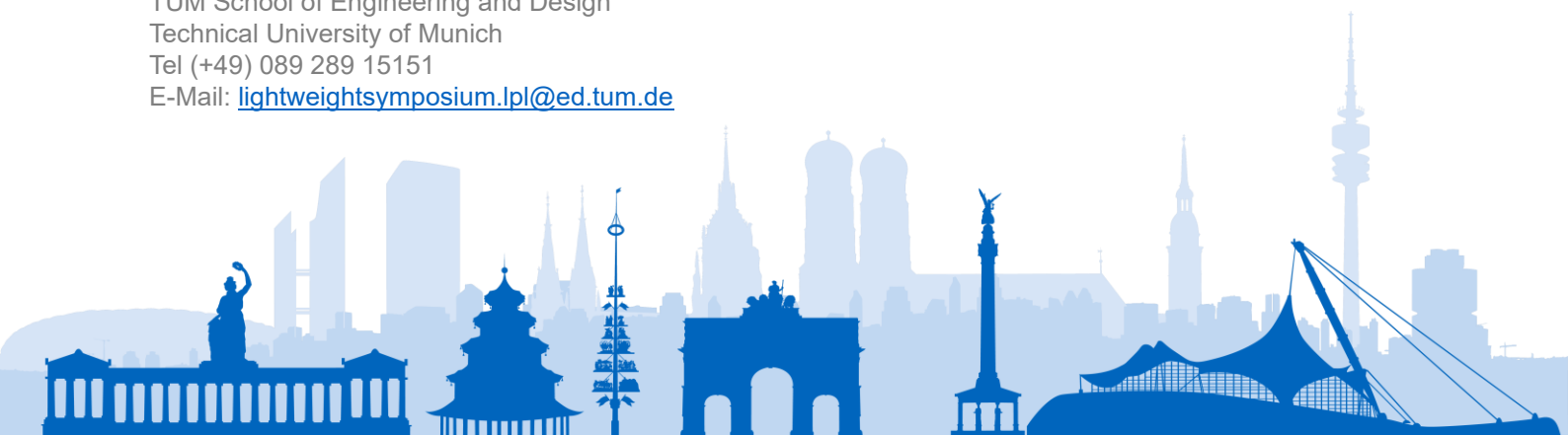
MUNICH SYMPOSIUM ON LIGHTWEIGHT DESIGN 2024 MÜNCHNER LEICHTBAUSEMINAR 2024

23.10.2024 Universität der Bundeswehr München
13.11.2024 University of Applied Sciences Munich
27.11.2024 Technical University of Munich

Please register online here:
<https://forms.office.com/e/1udzq16WVE>

CONTACT

Laboratory for Product Development and Lightweight Design
TUM School of Engineering and Design
Technical University of Munich
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Wednesday, 23 October 2024

Institute of Lightweight Engineering
Department of Aerospace Engineering

Institute for Aeronautical Engineering
Chair for Composites

VENUE

Werner-Heisenberg-Weg 39
85579 Neubiberg
Building 33, Room 0101

<https://www.openstreetmap.org/?mlat=48.081174&mlon=11.640699#map=19/48.081174/11.640699>

ADDITIONAL INFORMATION FOR YOUR PARTICIPATION

Access to Campus through visitor gate (Westtor, Crossing Universitätsstraße, Zwergerstraße).
ID card required.

13:00 Philipp Höfer & Tobias Dickhut (Universität der Bundeswehr München): Opening

Session 1:

13:10 Josef Ganslmaier¹, Dominik Santl², Erik Buchenau³, Matthias Bleckmann⁴, Philipp Höfer¹ (¹Universität der Bundeswehr München, ²Airbus Defence and Space, ³DLR, ⁴WIWeB Erding): Tensile behavior and failure mechanisms of carbonyl iron filled endless glass fiber-reinforced epoxy

13:35 Dominik Santl¹, Josef Ganslmaier², Erik Buchenau³, Matthias Bleckmann⁴, Philipp Höfer² (¹Airbus Defence and Space, ²Universität der Bundeswehr München, ³DLR, ⁴WIWeB Erding): Interlaminar shear strength and failure mechanisms of endless glass fiber-reinforced polymers with incorporated FeSi particles

14:00 Julia Wallner, Linmei Li, Sebastian Kölbl (Technische Hochschule Deggendorf): Faltbare CFK-Struktur für High Power Solar Arrays für Nano- und SmallSats

14:25 Break (40 minutes)

Session 2:

15:05 Ahmed El-Sherbiny, Ahmed Jawad Qureshi, Pierre Mertiny (University of Alberta): New Z-Stitching Technique for Improved Mechanical Performance in FDM Printed Parts

15:30 Maximilian Alexander Kaiser¹, Thomas Meyer², Nina Pfeffer, Werner Feix, Thorsten Marten, Thomas Tröster (¹Universität Paderborn, ²Heggemann AG): Festigkeitssteigerung von Ti-6Al-4V durch Abschreckumformung im TISTRAQ Prozess

15:55 Yves Johannes Barth, Sven Wagner, Martin Hunkel, Thomas Tobie, Karsten Stahl (Technische Universität München): Influence of a Novel Fixture Hardening Procedure on the Tooth Root Load Carrying Capacity

16:20 Get-together



Wednesday, 13 November 2024

Department of Mechanical, Automotive and Aeronautical Engineering
University of Applied Sciences Munich

VENUE Fakultät für Maschinenbau, Fahrzeugtechnik, Flugzeugtechnik
Room R 1.049 (Falk F. Strascheg Hall)
Entrance Lothstr. 64, 80335 München

14:00 Klemens Rother (Munich University of Applied Sciences): Opening

Session 1:

14:10 Keynote: Ralf Cuntze, Comparison of four UD Strength Criteria – including some Review

15:10 Patrick Schuster, Tobias Blichmann, Sebastian Schechner (Munich University of Applied Sciences):
Concept development of a new front end for a 2014 Honda Accord using mega castings

15:40 Break (20 minutes)

Session 2:

16:00 Felix Stalla (DLR Oberpfaffenhofen): Utilizing Flight Control for Lighter Aircraft - Wind Tunnel
Testing Load Alleviation on Flexible Wings

16:30 Manuel Pusch (Munich University of Applied Sciences): Control Co-Design: A Game Changer?

17:00 End

- all Presentations will be given in German -



Wednesday, 27 November 2024

Laboratory for Product Development and Lightweight Design
TUM School of Engineering and Design
Technical University of Munich

VENUE TUM Exzellenzzentrum Garching
Boltzmannstraße 17
85748 Garching

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13:00 Markus Zimmermann (Technische Universität München): Opening

Session 1:

13:10 Rainer Arelt (Airbus Helicopters): The Application of Sandwich Technology to Helicopter Airframe Structures

13:35 Finn H. Christiansen, Dieter Krause (Technische Universität Hamburg): Lightweight Design Optimization: Applications in the Development of Variant Product Families

14:00 Miguel Nuño (Aurora Swiss Aerospace GmbH): Optimization of Cylindrical Sandwich Shells with Variable Core Thickness

14:25 Sebastian Thelemann¹, Markus Schatz², Fabian Duddeck³ (¹Airbus Defence and Space GmbH, ²DHBW Ravensburg, ³Technische Universität München): Composite Strength Analysis under Dynamic Loading

14:50 Break (30 minutes)

Session 2:

15:20 Sven Lenhardt, Albert Albers (Karlsruher Institut für Technologie): Topologieoptimierung spritzgegossener kurzfaserverstärkter Thermoplast-Metall-Hybridverbunden

15:45 Raphael Höfer¹, Pezhman Pourabdollah¹, Felix Gehlhoff¹, Alexander Fay² (¹Helmut-Schmidt-Universität, ²Ruhr-Universität-Bochum): Defect-Free Path Planning of Load-Path-Adapted Variable Angle Tows in Automated Fiber Placement

16:10 Christian Heinrich, Jens Bold, Joaquin Montero, Christos Nastos, Farid Salimi (Boeing Deutschland GmbH): Non-destructive inspection of additively manufactured parts via acoustic emissions

16:35 Jens Bold¹, Christoph Stark², Wolfgang Höhn³, Emre Ertürk⁴, Philipp Höfer⁴ (¹Boeing Deutschland GmbH, ²Gerg GmbH, ³GMA-Werkstoffprüfung GmbH, ⁴Universität der Bundeswehr München): Eingeklebte additiv gefertigte Lasteinleitungen in Sandwichbauteilen im Kontext der simulationsunterstützten Zertifizierung

17:00 Get-together

