



## CU Workshop „Fiber-Matrix-Interphases“

of the CU Working Group **Fiber-Matrix-Adhesion**, organized by **CU Ost**  
on **09th November 2023**

**online** at Leibniz-Institut für Polymerforschung Dresden e. V. (IPF)

Moderation: Dr. Christina Scheffler, IPF, Head of CU Working Group Fiber-Matrix-Adhesion

### English

Fiber production and surface treatment are crucial for the formation of interfacial layers between reinforcing fibers and polymer matrix materials. At this year's Workshop, predominantly participants from international research institutions will present their facilities and exchange current approaches for the design and characterization of interphases in fiber-reinforced polymer composites. Methods for the simulation-based determination of fiber-matrix interaction will also be presented at the event. They serve to build a deeper understanding of the processes in the interphase under mechanical loads and thus help to drive future material developments.

### Deutsch

*Faserherstellung und Oberflächenbehandlung sind entscheidend für die Ausbildung von Grenzschichten zwischen Verstärkungsfasern und polymeren Matrixmaterialien. Auf dem diesjährigen Workshop stellen überwiegend Teilnehmer aus internationalen Forschungseinrichtungen ihre Einrichtungen vor und tauschen sich über aktuelle Ansätze zur Gestaltung und Charakterisierung von Grenzschichten in faserverstärkten Polymerverbundwerkstoffen aus. Auch Methoden zur simulationsbasierten Bestimmung der Faser-Matrix-Wechselwirkung werden auf der Veranstaltung vorgestellt. Sie dienen dazu, ein tieferes Verständnis für die Vorgänge in der Interphase unter mechanischer Belastung aufzubauen und damit zukünftige Materialentwicklungen voranzutreiben.*

The event will be held online and in English language.



## Agenda

**09:00 Warm up + Networking**

**09:25 Welcome**

Thomas Heber, CU Ost  
Dr. Christina Scheffler, IPF

**09:30 Detection and characterization of micro-damage in polymer composites**

Prof. Roberts Joffe, Luleå University of Technology, Sweden

**09:50 Polyamide6/Basalt Fiber Composites via In Situ Anionic Ring-Opening Polymerization**

Dr. Giulia Fredi, Alessandro Pegoretti, Polymers and Composites Laboratory (Department of Industrial Engineering) University of Trento, Italy

**10:10 Testing the fibre-matrix interface of short glass fibre reinforced PMCs with using the push-out technique**

Dr. Gerhard Kalinka, Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin, Germany

**10:30 Virtual Coffee Break and Networking**

**11:00 Simulation-based determination of the interfacial shear properties of fiber-reinforced thermoplastics by single-fiber push-out tests**

Lucas Schraa, Leibniz-Institut für Polymerforschung Dresden e.V. (IPF), Dresden, Germany

**11:20 Single fiber pull-out on differently sized glass fibers from epoxy resins**

Dr. Andrea Bercini Martins, Leibniz-Institut für Polymerforschung Dresden e.V. (IPF), Dresden, Germany

**11:40 Simulation-based determination of the interfacial shear properties of fiber-reinforced thermosets by single-fiber pull-out tests"**

Karl Roetsch, Leibniz-Institut für Polymerforschung Dresden e.V. (IPF), Dresden, Germany

**12:00 Virtual Lunch Break and Networking**

**13:00 Self-Healing Materials using controlled Interfaces**

Prof. Russel Varley, Deakin University, Australia

**13:20 Wetting on fibers with resins at different speeds**

Rudi Reichenbächer, Günter Auernhammer, Leibniz-Institut für Polymerforschung Dresden e.V. (IPF), Dresden, Germany

**13:40 Polymer/metal interface for composite patch repairs**

Dr. Felipe Vannucchi & Dr. Leonel Echer, SENAI Institute of Innovation in Polymer Engineering, Brazil

**14:00 Closing note and Networking**

## Exhibition options in CU MixUp.world

How does the CU MixUp.world work? Participants can freely move around in a browser-based 3D world, visit your individual booth online and interact directly with you as well as with other guests via ad-hoc video conference.



### Small booth

Banner on top of the booth (4x1) / Landscape format image (16x9) with link to your website / Colours of wall and floor in your company colours / Choose table or counter



### Large booth

3 Banners on top of the booth and counters (4x1) / Landscape format video (16x9) / 4 pictures (1x1, can be different) / Colours of wall and floor in your company colours / Welcome pop-up with company name, logo (1x1), description (140 characters), 3 links (website etc.)



For the detailed conditions, please refer to the registration tool on the event website. For each registered booth at least one participant is necessary for the booth support. Booth bookings without participants are not permitted.