

# **Vorlesungsverzeichnis**

Sonderveranstaltungen

Sommer 2023

Stand 07.12.2023

**Sonderveranstaltungen**

**3**

## Sonderveranstaltungen

### Summerschool P3: Use of Polymer-Modified Concretes (PCC) for Innovative Refurbishment Solutions

#### A. Flohr

Integrierte Vorlesung

Di, Einzel, 13:30 - 15:00, Coudraystraße 13 B - Seminarraum 210, Basics of PCC, 22.08.2023 - 22.08.2023

Mi, Einzel, 09:00 - 12:30, Coudraystraße 13 B - Seminarraum 210, PCC for refurbishment solutions, 23.08.2023 - 23.08.2023

Mi, Einzel, 13:30 - 17:00, Coudraystraße 13 B - Seminarraum 210, Load-deformation behaviour of PCC / Multiscale modelling approach for PCC, 23.08.2023 - 23.08.2023

Do, Einzel, 13:30 - 15:00, Coudraystraße 13 B - Seminarraum 210, Particle interaction, 24.08.2023 - 24.08.2023

Mo, Einzel, 09:00 - 12:30, Coudraystraße 13 B - Seminarraum 210, Ex: Nano-CT, 28.08.2023 - 28.08.2023

Mo, Einzel, 13:30 - 17:00, Coudraystraße 13 B - Seminarraum 210, PCC: fresh concrete properties, 28.08.2023 - 28.08.2023

Do, Einzel, 09:00 - 12:30, Coudraystraße 13 B - Seminarraum 210, PCC: hardened concrete properties, 31.08.2023 - 31.08.2023

#### Beschreibung

Concretes are modified by the addition of polymers in order to improve the durability and the adhesive strength and due to that measure they suit optimal for refurbishment applications. The microstructural changes in the binder matrix, which consists of both cementitious and polymer components, will be studied. Afterwards it will be analyzed how they influence the macroscopic properties. The students will perform and analyze laboratory tests on different pure polymer specimens and selected concrete specimens in order to better understand the microscopic origin of the macroscopic behavior. The link between the micromechanical and macroscopic properties is briefly established using a continuum micromechanics approach. Different innovative restoration applications are addressed, in addition some examples will be shown for the use of PCC for constructional purposes.