

## **Modeling Connections between Steel and Concrete – Proposal for Mini Symposium in WCCM – ECOMMAS 2020**

**Organizers: Prof. Roman Wan-Wendner, Jun. Prof. Akanshu Sharma, Assoc. Prof. Jan Vorel**

Connections between steel and concrete, either through a bonding agent, friction or mechanical interlock are essential for many applications and the safety of a large range of reinforced concrete structures. The rehabilitation and strengthening of existing structures depend on post-installed adhesive or mechanical point connections for structural or non-structural systems, glued on components, as well as post-installed rebar connections, to name a few. In new structures cast-in anchorage elements such as e.g. anchor channels or headed studs are essential for fast modular (precast) construction.

The performance of aforementioned structures depends largely on the performance of the connections themselves. Thus, realistic modeling concepts for connections between steel and concrete are essential for the design and performance assessment of concrete structures to ensure their safety under various situations including short-term mechanical loads, sustained loads, seismic action, fire, impact, fatigue, and exposure to aggressive environments. Various approaches are utilized to realistically model the connection between steel and concrete depending on the computational framework, type of problem, length-, and time-scales. This mini symposium offers a forum for the exchange of knowledge and experience between experts working or interested in this field.