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# Mechanical Behavior and Durability of Components of FRP-Concrete Bonded Reinforcement Systems

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Deadline for manuscript submissions:
**closed (31 December 2022)**

## Message from the Guest Editors

The carbon fiber-reinforced polymer (CFRP) has a low weight-to-volume ratio, high stiffness-to-weight ratio, and flexibility. The use of externally bonded CFRP sheets has emerged as an economical and efficient solution for the structural strengthening of reinforced concrete structures. Various types of cracks appear during the lifespan of structures, which can be prevented with the use of a CFRP composite. However, cracks in concrete can negatively affect the bonding effect of CFRP sheets, leading to the debonding of and, sometimes, the premature failure of the CFRP concrete interface; thus, hindering the excellent performance of CFRP sheets, being one of the major challenges in the strengthening of existing deteriorated concrete structures. The development of the experimental data collection method and the computational modeling method promotes the theoretical understanding of externally bonded CFRP sheet reinforcement technology. This Special Issue aims to contribute to the fundamental understanding of bond behavior between CFRP sheets and cracked concrete and the reinforcing effect of CFRP sheets in prolonging the service life of reinforced concrete structures.

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