Study on Mechanical Properties of Concrete Structures and RC Beams

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Message from the Guest Editors

Concrete structures and RC beams play pivotal roles in infrastructure development. To ensure the long-term safe operation, it is essential to detect and assess the mechanical properties of existing concrete structures and RC beams. This typically involves structural health detection techniques, such as visual inspection, non-destructive testing, load testing, and monitoring. The integration of artificial intelligence (AI) techniques has also significantly advanced structural condition detection by harnessing sophisticated data analytics, predictive modeling, and real-time monitoring. The recent adoption of the digital twin concept offers a promising solution for structural assessment.

To further the investigation into the long-term mechanical properties of concrete structures and RC beams, this Special Issue delves into various topics, including but not limited to durability experiments, multi-scale modeling, advanced non-destructive testing, integration of AI, and the implementation of the digital twin concept. We welcome experimental, numerical, and theoretical work exploring any aspect within the scope of this research area. Your valuable contributions are eagerly anticipated.

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Special Issue

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Message from the Editor-in-Chief

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