

High-performance concrete (HPC) refers generally to concrete with higher durability and structural properties compared to normal-strength concrete (NSC). The advantages of HPC for constructing buildings and bridges are many; however, the structural behaviour of HPC can be different from NSC. Thus, designing structural HPC elements is not a trivial matter and requires special knowledge and data that are not always available.

The aim of this Special Issue is to present the state-of-the-art research performed on the structural behaviour of HPC including experimental results, computational modelling, case studies, design aspects, and comprehensive review papers. This Special Issue will provide the engineering community with a collection of high-quality and peer-reviewed papers addressing different aspects of the structural behaviour of HPC.

Keywords:

- High-performance concrete (HPC)
- High-strength concrete (HSC)
- Ultra-high-strength concrete (UHSC)
- Fiber-reinforced concrete (FRC)
- Seismic behavior
- Ductility
- Structural/mechanical properties
- Impact resistance
- Tall buildings
- Long-term behavior