

The main aim of this Minisymposium is to focus attention of scientists involved in research regarding the behaviour of ordinary and high performance concrete and concrete structures in high temperature conditions. Hence structural related studies concerning fire exposure of buildings, as well as behaviour of heated concrete in nuclear reactors, offshore structures, hot weather and other applications are part of this proposal. Concrete can be exposed to temperatures from ambient up to melting, in excess of 1,000 °C. Throughout this temperature range, microstructural physical and chemical transformations take place which influence the material's thermal, hydral and mechanical properties. It is essential that plain and reinforced concrete structures are designed to withstand above ambient service and accident temperature excursions without losing their insulating, separating and/or load-bearing functions, and that the influence of heat is properly understood at both the material and the structural levels.

The result of the minisymposium will be to provide a deep up-to-date understanding of the effect of heat on normal and high performance concrete while striking an appropriate balance between theory and practice. In addition to providing data and information on this subject but also be interpretive to allow built-up of fundamental concepts and trends.

Experts from different areas will be invited to present their original contributions relevant for *Computational Mechanics* purposes.