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Mechanical testing of ITZ MAGICON

Kangtai (Dan) Yan
ktyan@tudelft.nl

Erik Schlangen
Erik.Schlangen@tudelft.nl

Branko Savija
B.Savija@tudelft.nl

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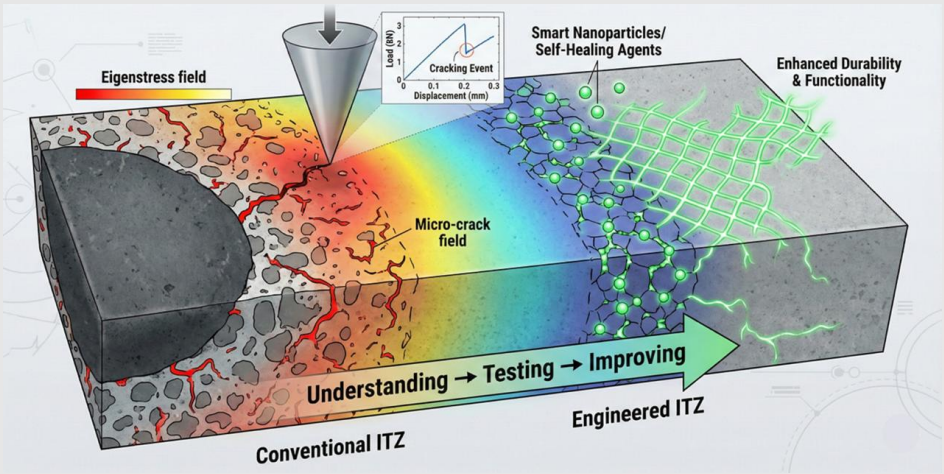

Objective of the research

The objective of this research is to understand the microstructural, mechanical and eigenstress-related behaviour of the interfacial transition zone (ITZ) in cementitious composites. In addition, the study aims to explore smart engineering strategies to improve ITZ performance and enhance the overall durability and functionality of composite materials.

Method of the research

Microstructural information is obtained using X-ray CT scanning, and mechanical properties and eigenstresses at the ITZ are characterised using nano-indentation, X-ray diffraction (XRD) and in-situ mechanical testing. In parallel, smart engineering technologies are incorporated into selected mixes, and their influence on ITZ behaviour is evaluated through comparative testing with reference specimens.