CIVIL-COMP-OPTI 2023 The Sixth International Conference on Soft Computing, Machine Learning and Optimization in Civil, Structural and Environmental Engineering 28-31 August 2023

Pécs, Hungary

Special Session: C-C-OPTI-S2

Modelling Cementitious Composites Behaviour Aided with Machine Learning

Organisers:

Dr Slawomir Czarnecki (slawomir.czarnecki@pwr.edu.pl)

Prof. Lukasz Sadowski (lukasz.sadowski@pwr.edu.pl)

Seweryn Malazdrewicz (seweryn.malazdrewicz@pwr.edu.pl)

Department of Materials Engineering and Construction Processes

Politechnika Wrocławska, Poland

Aims and scope:

The main aim of this special session is to present novel solutions of modelling the behaviour of cementitious composites, in terms of mechanical properties. The effectiveness of these was models can be strengthened by implementing machine learning algorithms. Researchers will present various approaches undertaken and future directions of using machine learning as a tool supporting modelling of mechanical properties of cementitious composites. The scope of this session is also to present a solution of the problem by using hybrid connections between the cementitious composites mixtures and various monitoring tests, including non-destructive techniques. The state of art as well as future perspectives of using machine learning algorithms in modelling cementitious composites behaviour shows research gaps in this area that will be highlighted during the session.