







# Metamodel techniques to estimate the compressive strength of UHPFRC using various mix proportions and a high range of curing temperatures

Wael Emad<sup>a</sup> , Ahmed Salih Mohammed<sup>b</sup>  , Ana Bras<sup>c</sup>, Panagiotis G. Asteris<sup>d</sup>, Rawaz Kurda<sup>e f g</sup>  , Zhyan Muhammed<sup>h</sup>, A.M.T. Hassan<sup>i</sup>, Shaker M.A. Qaidi<sup>j</sup> , Parveen Sihag<sup>k</sup>

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## Abstract

In order to predict the compressive strength ( $\sigma_c$ ) of Ultra-high performance fiber reinforced concrete (UHPFRC), developing a reliable and precise technique based on all main concrete components is a cost-effective and time-consuming process. To predict the UHPFRC compressive strength, four different soft computing techniques were developed, including the nonlinear-relationship (NLR), pure quadratic, M5P-tree (M5P), and artificial neural network (ANN) models. Thus, 274 data were collected from previous studies and analyzed to evaluate the effect of 11 variables that impact the compressive