عنوان مقاله:

PREDICTION OF COMPRESSIVE STRENGTH OF COMPOSITE FIBER REINFORCED CONCRETE (FRC) USING ARTIFICIAL NEURAL NETWORK

محل انتشار:

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خلاصه مقاله:

Within the framework of studies on FRC, a series of tests were undertaken in the laboratory in order to better understand the behavior of FRC and composite fibers to characteristic loading. The results obtained in the tests vary according to the type and arrangement of fibers, the water content, the size of grains (grains size distribution) and percentage of composite fibers. Therefore, it is important to estimate the strength of concrete according to available data and in the case of lacking of enough experimental data. For this purpose, neural network technique was used to predict the strength of concrete based on mix proportions. At first the results of experimental tests carried out in PWUT laboratory on fiber reinforced concrete specimens are presented and then the missing experimental data and gaps in compressive strength trends are predicted by back propagation method in neural network. It is worth mentioning that it can also be used to study the different mix parameters on concrete strength.

کلمات کلیدی:

neural network, back propagation, fiber reinforced concrete, composite fibers

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/60626