Predicting the compressive strength of a quaternary blend concrete using Bayesian regularized Neural Network

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Fig. S1. Scatter matrix showing the distribution of the inputs and output as well as their relationship with each other



Fig. S2. Correlation matrix map for the relationship between inputs and output

		_	_				- 1.0
OPC	- 1	-0.4	-0.76	-0.86	5.4e-18	0.24	- 0.8
MK	-0.4	1	0.24	0.22	2.2e-17	0.11	- 0.6
FA	-0.76	0.24	1	0.35	-9.6e-18	-0.052	- 0.4
A	0.96	0.22	0.25	1	2 20 17	0.25	- 0.0
RH	-0.60	0.22	0.55	1	-5.56-17	-0.55	0.2
day	-5.4e-18	2.2e-17	-9.6e-18	-3.3e-17	1	0.79 -	0.4
omStr	0.24	0.11	-0.052	-0.35	0.79	1 -	-0.6
ð	OPC	MK	EA	PHA	dav	ComStr	-0.8
	OPC	MIX	FA	NHA	uay	comstr	

Fig. S3. Correlation matrix map for the relationship between inputs and output. The exact values are shown in the plots

Table S1. A summary of results from parametric (polynomial) regression models

Polynomial	R ²		RMSE		MSE	
Power	Training	Testing	Training	Testing	Training	Testing
1	0.76	0.84	2.429	2.501	5.900	6.255
2	0.95	0.96	1.502	1.777	2.256	3.158
3	0.94	0.92	1.707	2.482	2.913	6.160

The performances of parametric regression require improvement.