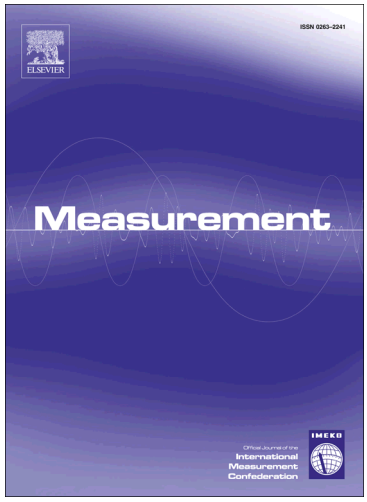

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Zohreh Sheikh Khozani, Hossein Bonakdari, Amir Hossein Zaji

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Application of a genetic algorithm in predicting the percentage of shear force carried by walls in smooth rectangular channels

Zohreh Sheikh Khozani[1,*], Hossein Bonakdari[2], Amir Hossein Zaji[3]

[1]Ph.D .Student, Department of Civil Engineering, Razi University, Kermanshah, Iran

[2]Professor, Department of Civil Engineering, Razi University, Kermanshah, Iran

[3]Ph.D .Student, Department of Civil Engineering, Razi University, Kermanshah, Iran

[*]Corresponding author, Phone: +98 831 427 4537, Fax: +98 831 428 3264, e-mail: *y.sheikh2131@gmail.com*.

Keywords: genetic algorithm, artificial neural network, genetic programing, average shear force, rectangular channel.

ABSTRACT

Shear stress comprises basic information for predicting average depth velocity and discharge in channels. With knowledge of the percentage of shear force carried by walls ($\%SF_w$) it is possible to more accurately estimate shear stress values. The $\%SF_w$ in smooth rectangular channels was predicted by extending two soft computing methods: Genetic Algorithm Artificial (GAA) neural network and Genetic Programming (GP). In order to investigate the percentage of shear force, 8