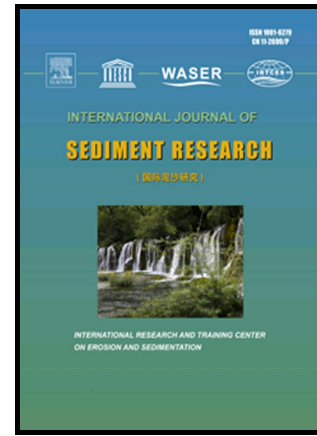


Author's Accepted Manuscript

An analysis of shear stress distribution in circular channels with sediment deposition based on Gene Expression Programming

Zohreh Sheikh Khozani, Hossein Bonakdari, Isa Ebtehaj



PII: S1001-6279(17)30127-0
DOI: <http://dx.doi.org/10.1016/j.ijsrc.2017.04.004>
Reference: IJSRC115

To appear in: *International Journal of Sediment Research*

Received date: 9 August 2016
Revised date: 2 December 2016
Accepted date: 26 April 2017

Cite this article as: Zohreh Sheikh Khozani, Hossein Bonakdari and Isa Ebtehaj
An analysis of shear stress distribution in circular channels with sediment deposition based on Gene Expression Programming, *International Journal of Sediment Research*, <http://dx.doi.org/10.1016/j.ijsrc.2017.04.004>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain

An analysis of shear stress distribution in circular channels with sediment deposition based on Gene Expression Programming

Zohreh Sheikh Khozani^a, Hossein Bonakdari^{b,*}, Isa Ebtehaj^a

^a*Ph.D. Candidate, Department of Civil Engineering, Razi University, Kermanshah, Iran*

^b*Professor, Department of Civil Engineering, Razi University, Kermanshah, Iran*

*Corresponding author, Phone: +98 833 427 4537, Fax: +98 833 428 3264, E-mail:

bonakdari@yahoo.com

Abstract

Knowledge of the boundary shear stress distribution in channels is important because it is a key factor affecting on erosion and sedimentation rates. The presence of sediment deposits in sewers is often reported during operation, and circular channels are frequently used in sewer networks. Gene expression programming (GEP) is applied in this study to determine an equation for evaluating the shear stress distribution along the wetted perimeter of a circular channel with a flat bed, because of the presence of sediment on the bed. In view of the parameters affecting the shear stress distribution, five dimensionless parameters are applied to develop six GEP models to be used with 905 experimental data. The impact of the shear

Download English Version:

<https://daneshyari.com/en/article/8911139>

Download Persian Version:

<https://daneshyari.com/article/8911139>

[Daneshyari.com](https://daneshyari.com)