Geophysical Research Abstracts
Vol. 21, EGU2019-9870, 2019
EGU General Assembly 2019

Stress Analysis of Arched Type Groundsill

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In view of the short and rapid nature of rivers in Taiwan, groundsill work is often used as soil and water conservation structures in terms of stabilizing riverbed, guide the flow direction and reduce the erosion, but its planning and design is less systematic.
This study intends to simulate the stress, moment and displacement distribution of the arched type groundsill, its maximum value, and the influence of different water depths on the rigid bed by the structural analysis software, ABAQUS. As well as to simulate flowing through the arched type groundsill with the three-dimensional computational fluid dynamics software, ANSYS-FLUENT. Through the simulation of the flow field characteristics of the software, to understand its three-dimensional flow field distribution and vorticity distribution.