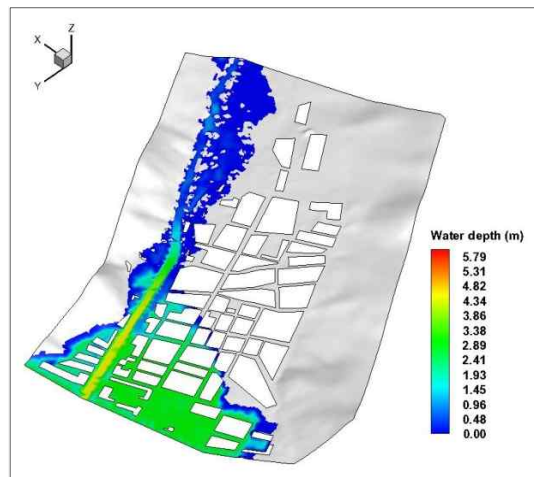
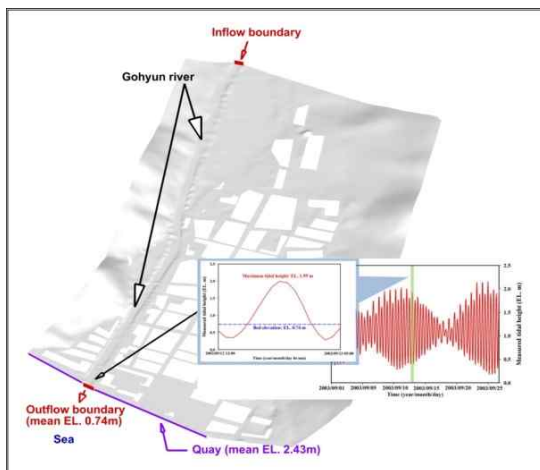


A Numerical Simulation of Flood Inundation in a Coastal Urban Area: Application to Gohyun River in Geoje Island in Korea

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ABSTRACT

In this study, the simulations and analyses of flood flow due to a river inundation in a coastal urban area are carried out using a two-dimensional finite volume method with well-balanced HLLC scheme. The target area is a coastal urban area around Gohyun river which is located at Geoje city in Kyungnam province in Korea and was extremely damaged due to the heavy rainfall during the period of the typhoon “Maemi” in September 2003. For the purpose of the verification of the numerical model applied in this study, the simulated results are compared and analyzed with the inundation traces. Moreover, the flood flow in a urban area is simulated and analyzed based on the scenarios of inflow to the river with the increase and decrease of the intensity of the heavy rainfall.



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