

The XXXIV International School of Hydraulics, 11-14 May 2015, Żelechów, Poland

## **On evaluating flow resistance of rigid vegetation using classic hydraulic roughness at high submergence levels: an experimental work**

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### **ABSTRACT**

Vegetation resistance is generally evaluated using drag coefficient  $C_D$  related to friction factor  $f$ ; however some Authors (examined possibility of employing classic hydraulic roughness, (i.e., Nikuradse or Strickler), to calculate vegetation resistance in case of high submergence ( $h/k > 5$ , in which  $h$  is flow height and  $k$  represents vegetation height). In order to compare conventional roughness at high submergence levels, an experimental methodology was developed, particularly focusing on fully submerged and rigid vegetation, for different hydraulic conditions and varying non-dimensional vegetation density.