



A Methodological approach for calculating braided gravel bed stream geometry

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Since braided gravel bed rivers continually change their morphology, it is difficult to define their cross-section geometry. In this paper a parameter T is introduced that correlates water discharge, bed slope and sediment size in gravel bed rivers and which is a function of morphological factors k and f , standing respectively for the ratio of the wetted perimeter to the square root of the discharge and for the square of the Froude number. Analysis of experimental field and laboratory data from the literature has shown a relationship between parameter T and sediment discharge. By applying such a relationship, with flow motion and sediment transport equations, braided gravel bed river width and depth may be calculated.