



METADATA

Title: River Hydraulics and Hydraulic Structures

Other Titles: -

Language: Greek

ISBN: 978-960-603-466-4

Subject: ENGINEERING AND TECHNOLOGY

Keywords: Rivers / Geomorphology - Ecology / Hydraulic Structures / Hydraulics of Natural Open Channels / Sediments

Bibliographic Reference: Hrisanthou, V. (2015). River Hydraulics and Hydraulic Structures [Undergraduate textbook]. Kallipos, Open Academic Editions. <http://dx.doi.org/10.57713/kallipos-493>

Abstract

The present electronic book contains six chapters. The first chapter is introductory and refers to the geomorphology and ecology of the rivers. In the second chapter, the term "river regulation" is analytically explained and dimensioning methods for the cross sections of a river under regulation are given. In the third chapter, hydraulic structures, through which the river or stream regulation is attained, are presented. Apart from the regulation hydraulic structures, complementary structures for the fish passage to the upstream of a river are described. The fourth chapter includes river hydraulics, namely natural open channel hydraulics. In concrete terms, computational methods are analyzed, which are applied to the regulation hydraulic structures mentioned in the previous chapter. In the fifth chapter, as a

kind of appendix, basic knowledges about sediments and sediment transport are delivered that are absolutely related to river hydraulics and river hydraulic structures. Finally, the sixth chapter contains an arithmetic example concerning the topographic and hydraulic study of a check dams cascade. The computations in this example are relied on basic knowledges of the third, fourth and fifth chapters. The electronic book addresses mainly undergraduate and postgraduate students of Civil Engineering, Rural and Surveying Engineering, Environmental Engineering, and Agriculture and Forestry Departments, as well as practice engineers. Of course, the book cannot replace the experience required for the study of a river hydraulic structure; however, it contributes to the confrontation with technical problems in rivers.

...

