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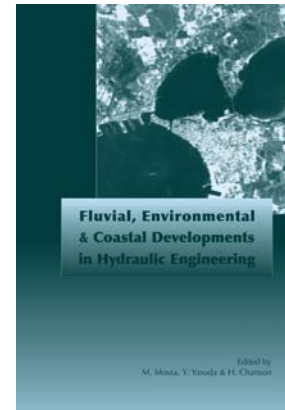
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NEW!

*Fluvial, Environmental and Coastal
Developments in Hydraulic Engineering*
Proceedings of the International Workshop
on State-of-the-Art Hydraulic Engineering,
16-19 February 2004, Bari, Italy

**Editors: Michele Mossa, Youichi Yasuda
& Hubert Chanson**



In this volume the energy loss of skimming flows is investigated systematically under a wide range of discharges, channel slopes, step heights, and dam heights. It is well known that in recent years environmental problems have an increasing pivotal role. The section on environmental and coastal hydraulics presents results on jet-wave interaction, which is still rare in literature. It also includes an attempt to reproduce the principal ocean circulation patterns by means of a numerical model, and to validate this with field measurements, using a Vessel Mounted Acoustic Doppler Profiler (VM-ADP). Other topics covered in this section are (a) tidal bores, which have a significant impact on estuarine systems, and (b) new fishway design and the effect of fishways on the migration of aquatic animals, including a design method for arranging the proposed fishway in the slit-type concrete Sabo dam. Various types of flow conditions are formed in accordance with inflow Froude number, boundary-layer development at inflow section, aspect ratio, relative downstream depth, channel geometry, Reynolds number, and air concentration at inflow section. As systematical clarification of the transitional flows is most significant for effective hydraulic design of hydraulic structures, various types of transitional flows are analyzed, and presented.

The volume is of special interest to scientists and students of hydraulics and fluid mechanics, to engineers, and to specialists in the field of environmental protection.

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