

# **THE USE OF ADVANCED HYDRAULIC TOOLS TO OBTAIN FLOOD HAZARD MAPS**

**Tomi Alexandrel HRĂNICIUC<sup>1</sup>, Anca BĂLAN<sup>2</sup>**

e-mail: hraniciuc\_tomi@yahoo.com

---

## **Abstract**

The aim of this paper is to obtain a hazard map using hydraulic modeling tools. Floods are some of the natural phenomena that have deeply marked human society, being some of the most widespread disasters around the world and also the largest producer of damage and casualties. Flood events cannot be avoided, but they can be managed, and their effects can be reduced by measures and actions to help mitigate the risks associated with these phenomena. To study these phenomena or prediction of their evolution in time, we need physical or mathematical models that reproduce them with accuracy as fine. A very useful tool for the study of phenomena related to free surface water runoff is represented by hydraulic modeling. Currently, hydraulic modeling is successfully applied worldwide, both in scientific research and in engineering.

**Key words:** water management, flood hazard map, hydraulic modeling.