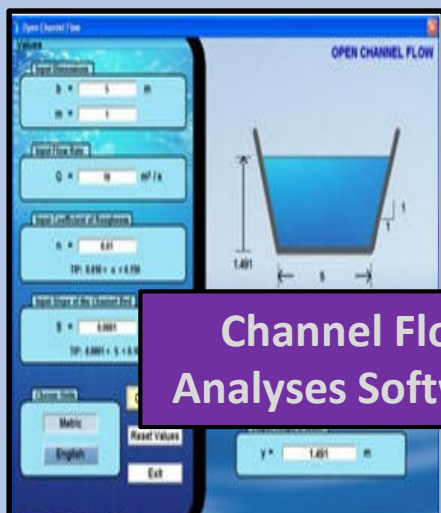


Advanced Hydraulics CE H0700

Instructor: Prof. Michael Piasecki (mpiasecki@ccny.cuny.edu)



Channel Flow
Analyses Software



Roman Aqueduct
in Segovia, Spain

In this course you will learn:

- to analyze **channel (or stream)** flow using a number of governing physical principles such as energy, continuity and momentum equations.
- to assess **outflows of lakes and reservoirs** into straight channels and the influence of their **slope** on flow regimes
- to analyze different channel segments when **controls** are present and what changes of **slope, direction, material, and shape** have on the flow parameters
- to tackle **ordinary differential equations** numerically to investigate **transient sections** and the surface profiles that form.
- to analyze basic **time dependent** flows in 1-D channels and lastly, and most importantly, why **water flows downhill!**

You will work on challenging HW problems and also get a chance to use your knowledge to work on a Project of your choosing using Channel flow software such as HEC-RAS to carry out and analyze a real world problem. Last but not least, you will present your work using the



format, for added fun.



Sierra Nevada to LA
Aqueduct