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Construction of a graphical interface for 1D numerical models *Supervisors:* J.B. Faure, A. Paquier & B. Camenen (RiverLy, River Hydraulics team)

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The main objective of the « PamHyr : Computing interface for 1D models » project is to rewrite in the python language a platform for pre- and post-processing of one-dimensional hydrosedimentary calculation software developed by the « River hydraulics » team, named PamHyr. With the support of the teams of numericians and modellers from INRAE and CNR, I will take over the PamHyr platform, initially developed in Java and I will rewrite it in Python in order to be more scalable, and to integrate several updates concerning the team's one-dimensional calculation software (Mage, RubarBE and AdisTS) to the platform.

The planned development will be done with the following program :

- Reconstruction of the current PamHyr code structure in Python
- Integration of Mage, RubarBE and AdisTS codes
- Implementation of a results mapping routine
- Testing and validation of the platform for each of the codes and their different functionalities





Example of schematized river network using Pamhyr