

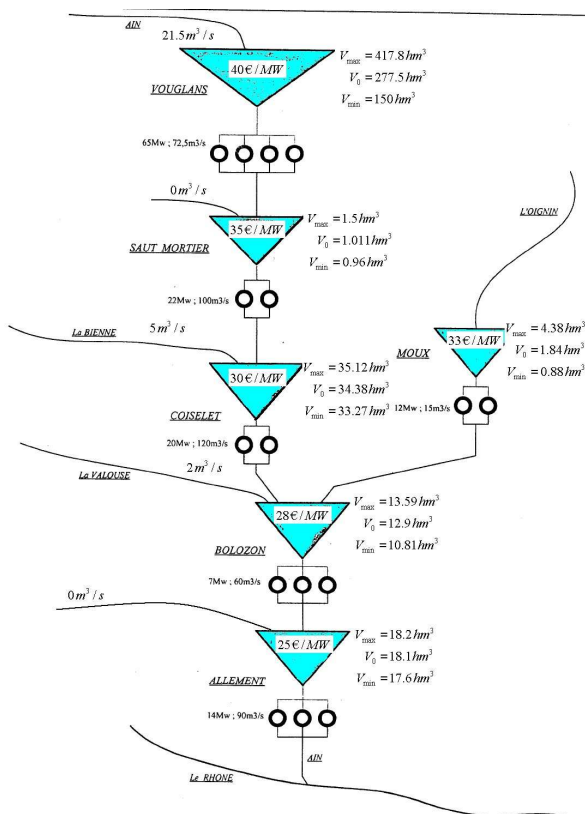
# 6-months internship for Master 2 students on Challenging mixed integer nonlinear programming problems for the maintenance planning for hydropower plants

## Project topic:

The aim of the project is to study a crucial problem in energy management: **the maintenance planning of hydropower plants**. It is a challenging optimization problem and it is very important as the

strategical decisions taken on the maintenance planning influence the availability of hydropower stations that play an important role in the unit commitment (UC) problem solved daily by utility companies. The main contribution of the project will be to propose **mixed integer nonlinear programming approaches** that take into account both the standard constraints in maintenance planning in hydropower plants and the nonlinear aspects of the power output function, often linearized in the literature.

The project involves researchers from CNRS & École Polytechnique (France), École Polytechnique Montreal (Canada), EDF R&D (France). Although not mandatory, the internship can be followed by a PhD.



## Required background:

mathematical programming, algorithms, coding

## Contacts:

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