

# Implement a volume based 2D flood simulation



The project will consist of experimental work including laboratory treatment of swimming pool water samples with UV or ozone followed by chlorination with quantification of treatment doses. The student has to perform analysis of chlorination by-products with GC-MS and evaluate effects of treatment combinations on by-products formation.

Tool: programming in MATLAB or Python or R, MIKE Flood simulations for comparison

Tasks:

- implement and test simulation tool based on existing articles
- compare simulation results to those obtained with MIKE Flood

## Project type

Topic is suitable for MSc

## Pre-requisite

general understanding of flooding + urban drainage, interest in programming a flood simulation tool

## Group size

1 student

## Department of supervisors

Main supervisor: DTU Environment

Co-supervisor: DTU Environment

## Contact person

Postdoc Roland Löwe, DTU Environment ([rolo@env.dtu.dk](mailto:rolo@env.dtu.dk)) or

Professor Karsten Arnbjerg-Nielsen, DTU Environment ([karn@env.dtu.dk](mailto:karn@env.dtu.dk))

