Modelling coastal hazards
Numerical modeling is core practice nowadays in coastal engineering. Simulation results are routinely used to perform hindcasts; assess future coastal developments; or as design input. As such, future engineers must develop a sound understanding of the applicability, the capabilities, and the limitations of different numerical modeling approaches. In this module students will learn to apply commonly used numerical methods in coastal modelling. They will apply well-known hydrodynamic and morphodynamic model systems in practical situations; apply input reduction and schematisation techniques for morphodynamic simulation speedup, and choose the appropriate model for a given problem. Importantly, they will learn to explain the results of complex models and to translate them into practical outcomes.