Title	Ecological modelling of transitional water ecosystems
Brief description of the topic	Transitional waters are diverse, highly productive, ecologically important systems on a global scale and highly valuable for the services they provide to human societies. In turn these areas are ones of the most impacted by the global change vectors (temperature, riverine discharges, water level). The capacity to forecast the dynamics of both physical and ecological processes in these systems is of great scientific (complex interactions) and practical importance. The Harmful Algal Blooms (HABs) are typical for the transitional water ecosystems in the Northern Europe and have serious economic, ecosystem and health impacts as they produce compounds that are toxic to wildlife and humans. The ability to foresee HAB occurrence at a certain location will allow water authorities to take measures on time and reduce the risks. Work is expected to be organized around the use of ecological models developed jointly by KU(Lithuania) and ISMAR-CNR(Italy). PhD student could have a practical placement in DELTARES and training visits to ISMAR-CNR and Istanbul University. Models could be applied to investigate and forecast different processes as well as application of nutrient reduction technologies including so called 'active' or 'living' barrier units to improve water quality
Requirements for a candidate	Good IT practical skills as well as experience in numerical modelling is expected.
Existing research experience	Klaipeda University and partner organizations have international level experience in ecological model development and applications. A number of publications derived from the output of international projects could provide a good guidance for the PhD project. The PhD study will be supported by the HORIZON2020 ECOPOTENTIAL, and GGF project EcoServe.
Existing research infrastructure and support	Annual stipend: €5,740-6.400 (duration 4 years); Support for travel and consumables: ~€7,400 for 4 years; All necessary computational facilities (computer GRID system) as well as access to the databases are available in the premises of the Marine Research Institute of the Klaipeda University.
Potential supervisor(s)	Prof. Dr. Artūras Razinkovas-Baziukas (arturas.razinkovas-baziukas@ku.lt); Prof. Dr. Georg Umgiesser (KU, ISMAR-CNR) Ass. Prof. Petras Zemlys (KU)
Potential scientific advisor	Dr. Ali Erturk (Istanbul University)