

## PhD Course in Coastal and Estuarine Morphodynamics

Skallingen Laboratory, University of Copenhagen, Ho – Blåvand, Denmark, 30 June - 8 July 2014

### Aims and contents of the course

Many practical issues in estuaries and coastal seas, such as coastal protection against flooding, navigation into harbours, water and bottom quality or ecology, require the availability of detailed knowledge about the physical system in its (un)disturbed state. Observations and models of currents, waves, sediment transport and morphological changes in estuaries and coastal seas are a major input for that.

The aim of this Advanced Course is to provide the participants with a coherent overview of the state-of-art knowledge about morphodynamic processes in estuaries and coastal seas. This includes topics in hydrodynamics and sediment transport processes. The morphodynamics will also cover a wide range of scales, from the short-term (seconds) and small scale (cm) behaviour of ripples in channels to the long-term (centuries) and large scale (km) behaviour of the Danish Wadden Sea. Particular attention will be paid to coupling between observations of processes and features and physical concepts. This will be achieved by combining lectures with field exercises. We will also discuss the impact of climate change and sea level rise on the Danish Wadden Sea environment.

The course is intended for PhD students and (PostDoc) researchers working on topics related to the morphodynamics of aeolian, fluvial, estuarine, coastal and marine environments. The course is especially suited for physical geographers, coastal oceanographers, marine geologists, coastal engineers, environmental ecologists.

### Format of the course

The course will consist of a mixture lectures, field exercises, supervised group projects and an excursion in the area. The morning sessions are reserved for the lectures by international experts and the afternoon sessions will be used to work on field exercises - group projects. These group projects (approx.. 4 participants) are small research projects and deal with a specific topic related to the summer course under supervision of an expert. The group projects will end with a 30-minute presentation of the outcome of the project.

Participants who attend the course will also be expected to give a short presentation of their PhD project or their major research activities.

### Further information and registration

The course is organised by the University of Copenhagen (Aart Kroon), the University of Utrecht (prof. Huib de Swart) and the University of Plymouth with support from DANCORE. You are very welcome to contact Aart Kroon with any question related to this course ([ak@ign.ku.dk](mailto:ak@ign.ku.dk)). In order to register please send an e-mail to Aart Kroon with the following information:

- Full name
- Department, University/Research Institute, Address, Phone number and E-mail
- Title of your PhD project or your major research topic
- Status (PhD fellow, [postdoc] researcher)
- Single page with summary/short description of your PhD project/research topic
- Single page with motivation to attend the course

### Deadline for registration: May 19, 2014. Invitations will be sent out before May 24, 2014.

Participant fee is DKK 6,300 or € 850. This fee includes summer school material, excursions, lodging and all meals during the course at the Skallingen Laboratory. The journey to and from the Skallingen Laboratory is at the participants' own expense. Information about payment of the course through the University of Copenhagen will follow with the invitations in May. Minimum number of participants: 10, maximum number of participants: 18.

Best regards

Huib de Swart and Aart Kroon