Department of Ocean and Resources Engineering

Seminar

Sediment By-passing at Ameland Inlet and its Effect on Inlet Behavior and Beach Modulations

by

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Abstract

The Ameland Inlet is part of the Dutch Wadden Sea System. It is located between the Islands of Terschelling and Ameland and its morphological behavior is unique in the sense that the inlet modulates between a one-channel and a two-channel condition with a period of approximately 50 years.

This presentation discusses the morphological features of this system and how the channel modulations are related to littoral drift and by-passing characteristics. Kraus (2000) presented an interesting model for bar-bypassing, describing the relationship between bar volumes and bypass modulations. Prof. Cheung expanded Kraus’s model concept to include sediment storage in gorge area and in flood shoals. The modulations in littoral drift and sand bypassing can be further used to verify and predict modulations in beach erosion and accretion along the Ameland (downdrift) shoreline.