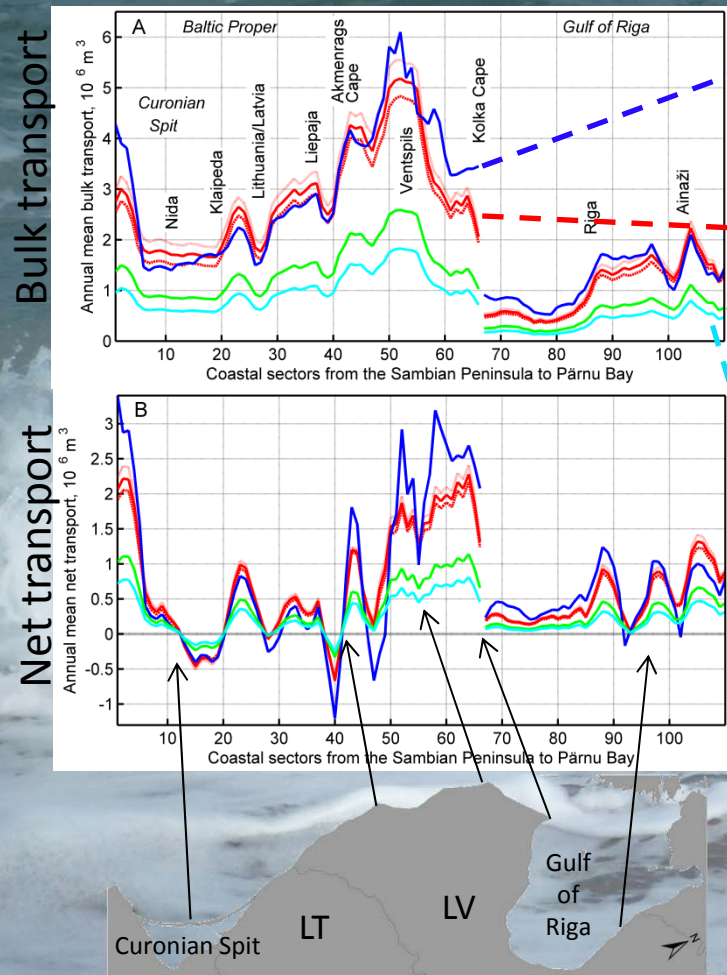


# On sensitivity of wave-driven alongshore sediment transport patterns with respect to model setup and sediment properties

Maija Viška and Tarmo Soomere

Institute of Cybernetics, Tallinn University of Technology, Tallinn, Estonia (maija@ioc.ee)



Accounting for only refraction, assuming that shoaling is balanced by other processes

Full shoaling and refraction

Significant wave height as input for CERC formula (with 3 mean grain size 0.063-1.0mm)

Full shoaling and refraction

Root mean square wave height as input for the wave energy but group velocity estimated based on the significant wave height

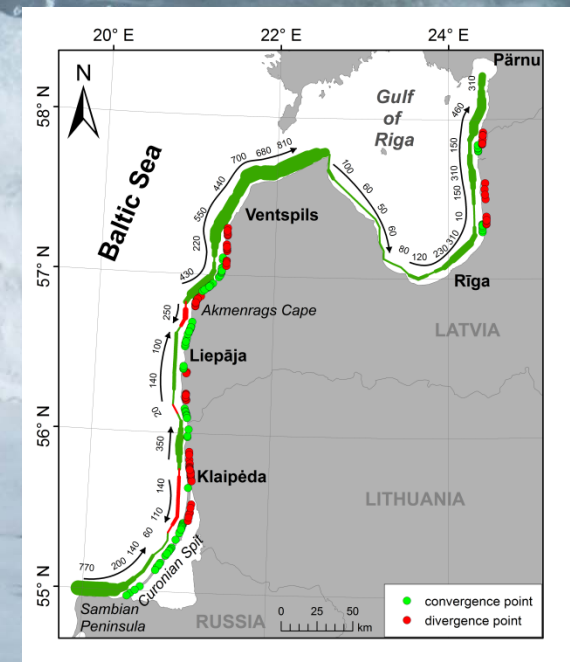
Full shoaling and refraction

Root mean square wave height as input for the CERC formula

Calculations using the “mixed” specification of the wave height (for the wave energy and for the group speed at the breaking line) led to a reasonable match of the simulated and observed transport rates

Sediment flux **convergence** and **divergence areas** pattern is **stable** even with:

- variations in typical grain size
- different interpretations of wave height changes



CERC (Coastal Engineering Research Centre) - potential sediment transport is proportional to wave energy flux