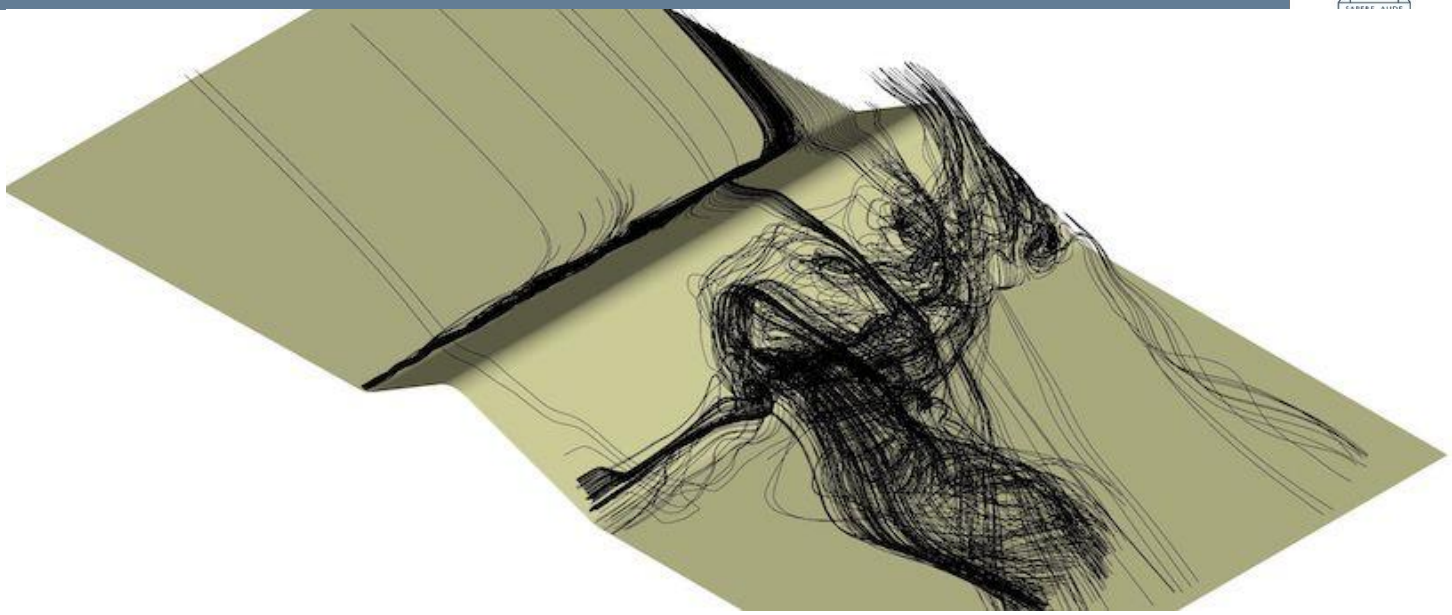
School of Surveying Te Kura Kairūri

Lunchtime Seminar Series



Modelling wind flow over coastal dune systems

Associate Professor Sarah Wakes
Head of Department, Department of Mathematics & Statistics

Foredune systems play an important role in the protection of coastal lands as well as the communities that live close to the shoreline. Mitigating the threat of sea level rise, urban development on the coast, and the likelihood of more frequent, larger storm events requires time, money, and a sound knowledge of the dynamic nature of these complex beach-dune systems. In order to predict how coastal dunes respond to a range of stressors, it is critical to understand wind flow behaviour in the vicinity of dunes. Site-specific observational measurements are invaluable, but they are weather dependent, resource intensive, time consuming, and ultimately, limited in scope and coverage. Thus, model simulations of wind flow over beach-dune systems provide a complementary opportunity to explore a fuller range of conditions than might be possible with field experimentation. Computational Fluid Dynamics and Machine Learning techniques are used to explore and identify key parameters related to wind flow and dune geomorphology.

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Thursday 22nd April 2021 (12pm – 1pm)

L1 Lecture Theatre | School of Surveying, 310 Castle Street
OR Join remotely: https://zoom.us/join (ID: 329 427 2033, P/W: 310310)