Waipapa Taumata Rau University of Auckland | SCIENCE DEPARTMENT OF MATHEMATICS

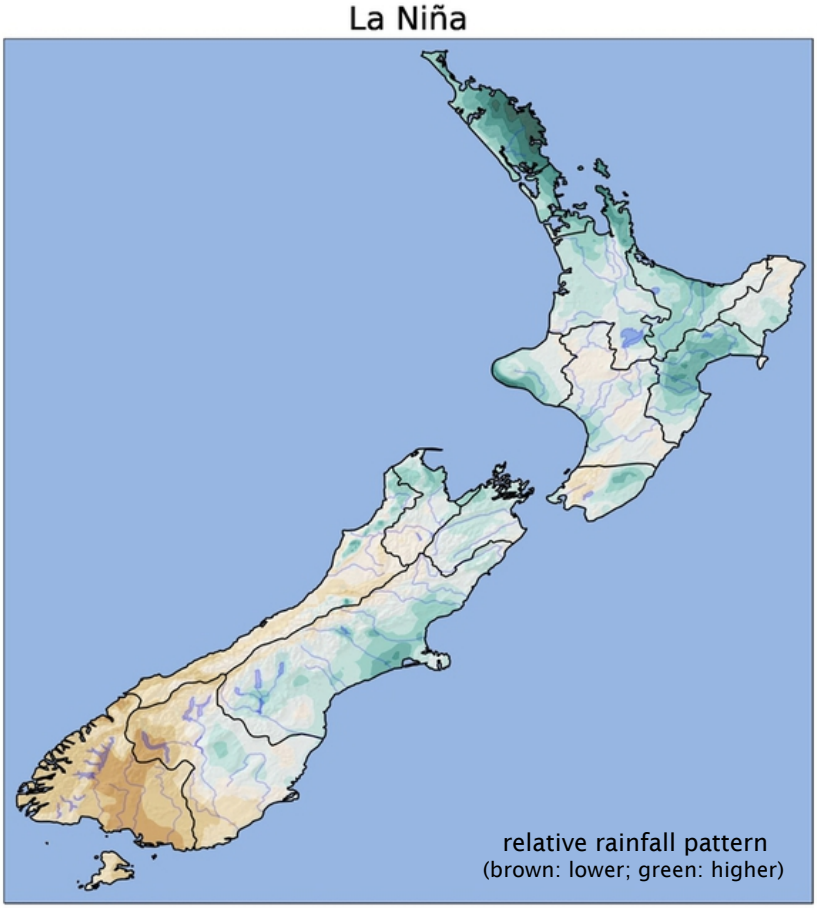
## The Michael Erceg Public Lecture

Professor Henk Dijkstra, University of Utrecht, Michael Erceg Senior Visiting Fellow

# Complexity of the ENSO phenomenon

The El Niño - Southern Oscillation (ENSO) phenomenon is the dominant mode of interannual variability in the climate system. Both extreme phases, El Niño and La Niña, have substantial regional climate impacts, also on New Zealand. La Niña conditions are present in October 2025 and are predicted to be favoured through December 2025 to February 2026.

This talk will give an overview of the complexity of the ENSO phenomenon by using elementary physics and conceptual mathematical climate models — addressing the basic mechanism, the different ENSO types, the predictability of the extreme phases, and the long-term projected changes under global warming.




Henk A. Dijkstra (PhD in applied mathematics, 1988, Groningen University, NL) is professor of Dynamical Oceanography at the Institute for Marine and Atmospheric research Utrecht and director of the Centre for Complex Systems Studies within the Department of Physics of Utrecht University. He was trained as an applied mathematician and held positions at Cornell University, and Colorado State University.
His main research interests are on climate variability, in particular climate transitions, with a focus on the role of the oceans. He is a member of the Royal Netherlands Academy of Arts and Sciences (since 2002), a Fellow of the Society for Industrial and Applied Mathematics and, in 2005, he received the Lewis Fry Richardson medal from the European Geosciences Union. In 2022, he was one of the recipients of a European Research Council Advanced Grant.

## 6 pm Thursday 20 November

**Lecture Theatre MLT2, Ground Floor**
**Building 303, 38 Princess Street**

**Refreshments will follow the lecture**

*The Michael Erceg Senior Visiting Fellowship is made possible by generous support from the Margaret and John Kalman Charitable Trust*