

Modern data based and complex systems approaches to climate dynamics

Virtual school, offered by the Mathematics of Planet Earth CDT (mpecdt.org)

Principal Lecturer: Professor Henk Dijkstra, Utrecht University

Schedule of lectures (all times given are UK time)

Tuesday, 29/09/2020

9:00 Welcome, overview, and formalities

9:15-10:15 **Stochastic Climate Dynamics, I (Dijkstra)**

10:15-10:30 Break

10:30-11:30 **Stochastic Climate Dynamics, II (Dijkstra)**

11:30-12:00 Discussion and intro to project on Toy Stochastic Climate Models

Tuesday, 06/10/2020

9:15-10:15 **Specialist lecture: Palaeoclimate Variability (Anna von der Heydt, IMAU-UU)**

10:15-10:45 Break

10:45-11:45 **Tipping Elements and Transition Behaviour, I (Dijkstra)**

11:45-12:00 Discussion

12:00-1:30 Break

1:30-2:30 **Tipping Elements and Transition Behaviour, II (Dijkstra)**

2:30-3:00 Discussion and intro to project on Bifurcation Analysis

Tuesday, 13/10/2020

09:15-10:15 **Intrinsic Climate Variability, I (Dijkstra)**

10:15-10:30 Break

10:30-11:30 **Intrinsic Climate Variability, II (Dijkstra)**

11:30-12:00 Discussion and intro to project on Delay Models

12:00-1:30 Break

1:30-2:30 **Specialist lecture: Oceanic thermohaline circulation (Laura Jackson, Met Office)**

Tuesday, 20/10/2020

9:15-10:15 **Weather and Climate Prediction, I (Dijkstra)**

10:15-10:30 Break

10:30-11:30 **Weather and Climate Prediction, II (Dijkstra)**

11:30-12:00 Discussion and intro to project on ENSO prediction

12:00-1:30 Break

1:30-2:30 **Specialist lecture: Predictability (Antje Weisheimer, ECMWF and Oxford)**

Tuesday, 27/10/2020

9:15-10:15 **Climate Change, I (Dijkstra)**

10:15-10:30 Break

10:30-11:30 **Climate Change, II (Dijkstra)**

11:30-12:00 Discussion

12:00-1:30 Break

1:30-3:00 **Presentations from project groups**