**Speaker: Adam Sykulski (Lancaster University)**

**Date: 13/10/2020 on Microsoft Teams**

**Title: Time series parameter estimation and some applications**

**Abstract:**
Maximum likelihood estimation of time series parameters is often intractable for non-trivial covariance structures. In this talk I discuss the de-biased Whittle Likelihood - a method we recently developed that can estimate time series parameters for massive datasets using Fast Fourier transforms. The procedure is related to, but distinct from, the standard and well-known Whittle Likelihood - and I will make these distinctions more clear in the talk. We have adapted the procedure to allow for missing data, non-Gaussianity, long memory, and spatial random fields. We have found numerous application benefits, and I will highlight results from our most recent project on estimating parameters of ocean wave models from significant wave height observations.

Joint work with Sofia Olhede (EPFL), Arthur Guillaumin (NYU), Jonathan Lilly (Theiss Research), Keerati Suibkitwanchai (Lancaster University), Jake Grainger (Lancaster University)