

## **Modelling spatial extreme events with environmental applications**

### **Abstract:**

Spatial extreme value analysis has been an area of rapid growth in the last decade. The focus has been on modelling the spatial componentwise maxima by max-stable processes. Here, we will explain the limitations of these modelling approaches and show how spatial models can be developed that overcome these deficiencies by exploiting the flexible conditional multivariate extremes models of Heffernan and Tawn (2004). We illustrate the benefits of these new spatial models through applications to North Sea wave analysis and to widespread UK river flood risk analysis.

Full paper available:

<https://www.sciencedirect.com/science/article/pii/S2211675317302786>