



CNRM, UMR 3589

## SEMINAIRE CNRM

*jeudi 21 octobre 2021 à 11h*

### **CONVECTION-PERMITTING ENSEMBLE PROJECTIONS FOR CLIMATE CHANGE RISK ASSESSMENT**

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en visioconférence

**Code visio = <https://bluejeans.com/715108137/4349>**

#### **Abstract:**

Climate projections at very high resolution (km-scale grid spacing) are becoming affordable. These ‘convection-permitting’ models (CPMs), commonly used for weather forecasting, better represent small-scale processes in the atmosphere such as convection and are able to provide credible projections of changes in local weather extremes. At the UK Met Office we have carried out climate change simulations at 2.2km resolution over a pan-European domain, and also the first ensemble of CPM climate projections over a UK domain as part of the next set of UK Climate Projections (UKCP). In this talk I will highlight new understanding of changes in high-impact events from these CPM simulations, including hourly rainfall extremes important for flash flooding, temperature extremes over cities, extreme windstorms and sting-jets, and lightning. We are also now moving beyond single realisations of climate change at these scales, to ensembles of CPM projections allowing a first estimate of uncertainties in future changes in local weather extremes. I will discuss the new information emerging and the importance of this for climate change risk assessment.



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