

## **Interactions between the land surface and convection: who wins?**

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### *Abstract:*

It is well known from satellite imagery that convective clouds can organize in structures mirroring the structure of the underlying surface. A typical example is the organization of clouds along coastlines resulting from the effect of sea breezes on the development of convection. But can convection override such effects? This question is investigated in this talk with the help of two examples. In the first example the modulation of existing surface heterogeneity by falling precipitation is investigated. The second example concerns the potential effect of the land surface on squall line propagation. For our investigations we use idealized large-eddy simulations, large-domain convection-permitting simulations integrated over the Atlantic region and observations from the Sahel region.