

## **Added-value and retained-value of Regional Climate Models: Mediterranean examples**

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The lecture deals with the added-value of using Regional Climate Models (RCMs) to simulate and understand the Mediterranean climate specificities. Starting from generic considerations about the RCM laws, the lecture is illustrated with Mediterranean climate study examples. It is also demonstrated that not only added-value can be expected from RCMs, but also drawbacks or “retained-value” with respect to the large-scale forcing. The notions of RCM internal variability, RCM choice uncertainty, perfect-mode big-brother/little-brother framework and spectral nudging are discussed. The added-value examples cover the following topics: wind, precipitation, air-sea fluxes, river discharges, extreme events, regional ocean processes.