

In Terray (2021, 2022) we have shown, based on a few iconic use cases, that dynamical adjustment allows a straightforward approach to extreme event attribution within a conditional framework. The approach is used to isolate two different contributions to an extreme event: a dynamic contribution (related to purely atmospheric circulation changes) and a residual (that includes the contribution from ocean or land surface changes and any externally-forced contribution). Combining dynamical adjustment with a SMILE ensemble of simulations allows to go one step further by robustly separating the total residual term in two components, one related to the forced response and the other related to internal variability, including the influence of low-frequency ocean modes. Finally, we illustrate how the combination of observations, SMILE and dynamical adjustment can be used to infer the potential influence of low-frequency internal variability on observed extreme events.

Terray, L.: A dynamical adjustment perspective on extreme event attribution, *Weather Clim. Dynam.*, 2, 971–989, <https://doi.org/10.5194/wcd-2-971-2021>, 2021

Terray, L.: A Storyline Approach to the 2021 Northwestern North American Heatwave. To be submitted to *GRL*, 2022.