

Relaxation, teleconnection and storylines

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This paper commemorates the 70th birthday of a distinguished colleague and friend, Richard Greatbatch, celebrating a fruitful collaboration that has spanned over two decades. As part of our joint journey in the early 2000s, we set out to unravel the complexities of teleconnections within the Earth's climate system. Utilizing the relaxation approach, we went to explore the intricate relationships that govern atmospheric interactions across vast distances – so-called teleconnections.

In recent years, the scope of our research has expanded, employing the relaxation approach to craft compelling storylines that encapsulate recent extreme weather events and their manifestation in various climatic contexts. This narrative technique has proven instrumental in rendering the abstract concept of climate change into a more concrete and relatable language, thereby enhancing understanding what climate change means to people.

Beyond these applications, the relaxation approach has also demonstrated its versatility in other pivotal areas of climate science. Notably, it has been applied to the evaluation of climate models, leveraging data from field campaigns such as the Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC). Furthermore, it has shown promise in the initialization of coupled predictions, offering potential improvements in the accuracy and reliability of climate forecasts.

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