



## **The Past as Prologue: Learning from the Climate Changes in Past Centuries (Hans Oeschger Medal Lecture)**

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I will review work over the past decade aimed at establishing the nature of, and factors underlying, patterns of large-scale climate variability in past centuries. I will discuss evidence from proxy climate reconstructions spanning the past millennium, the comparison of proxy reconstructions with simulations with climate model simulations forced by past natural and anthropogenic forcing, and results from climate modeling experiments in which proxy evidence is assimilated directly into coupled ocean-atmosphere model simulations. I will also discuss insights from proxy forward modeling that suggest the possibility that estimates of climate sensitivity derived entirely or partly from tree-ring evidence of past temperature changes may be biased low.