Join us for a special seminar:

Rapidly-Adjusting Perceptions of Temperature in a Changing Climate

Thursday, September 20, 2018
3:30PM in Krannert 758

Presented by:

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ABSTRACT: As the global climate changes, people are exposed to weather that is increasingly unusual relative to historical or pre-industrial conditions. However, expectations, memory limitations, and cognitive biases may influence people's subjective experience of the weather. How do people judge today's weather as typical or atypical? And how might that judgement shift in response to gradually-changing climatic conditions? Here we show that experience of weather in recent years, rather than longer historical periods, determines the baseline against which current weather is evaluated, potentially obscuring the signal of anthropogenic climate change as subjectively experienced. We employ variation in decadal trends in temperature at weekly and county resolution over the continental United States, combined with discussion of the weather drawn from over two billion social media posts. These data indicate that the remarkability of particular temperatures, measured as the volume of posts about weather that they generate, changes on relatively short timescales. We develop a learning model from our empirical results and apply it to climate model output to project the perception of temperature anomalies arising from future climate change. The rapidly-shifting baselines we observe have substantial implications for the public perception of anthropogenic warming.

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