

## **Ramit Debnath**

**Title:** "Conspiracy Spillovers are Shaping Public Attitudes Towards Climate Technologies"

**Abstract:** Public perception of emerging climate technologies, such as greenhouse gas removal (GGR) and solar radiation management (SRM), will strongly influence their future development and deployment. Our large-scale, comparative study of 1.5 million tweets covers 15 GGR and SRM technologies and uses state-of-the-art deep learning models to show how attention and expressions of sentiment and emotion developed between 2006 and 2021. We find that in recent years, attention has shifted from general geoengineering themes to specific GGR methods. On the other hand, there is little attention paid to specific SRM technologies, and they often coincide with conspiracy narratives. Probing deeper into the online narratives using network theory, we find that specific conspiracy theories influence public reactions toward geoengineering, especially regarding "chemtrails" (where airplanes allegedly spray poison or modify weather through contrails). Furthermore, conspiracies tend to spillover, shaping regional debates in the UK, USA, India, and Sweden and connecting with broader political considerations. We also find that positive emotions rise on both the global and country scales following events related to SRM governance, and negative and neutral emotions increase following SRM projects and announcements of experiments. Finally, we also find that online toxicity shapes the breadth of spillover effects, further influencing anti-SRM views.

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