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Smoke and Mirrors: Rethinking Observations, Models, and Mitigation of Wildfires



DATE: Wednesday, April 23, 2025

TIME: 11:00 AM – 12:00 PM MT (VIRTUAL)

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SUMMARY: In this talk, I will highlight my recent research, which uncovers that: 1) current monitoring systems are inadequate for accurately measuring concentrations and tracking the transport of wildfire smoke; 2) conventional chemical transport models drastically overestimate smoke patterns, underscoring the need for bespoke modeling approaches; and 3) prescribed burns in the western U.S. can significantly reduce future wildfire smoke emissions and serve as a viable mitigation strategy, but these burns are often least effective in the WUI—a critical area of policy focus.

These findings emphasize that our current wildfire science approaches and policy narratives are deeply entrenched. Rather than discouraging action, I will touch on how such challenges can motivate researchers to develop creative solutions and enhance data quality and application to address society's pressing needs.

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