Poor Air Quality: Problems and Solutions in a Changing Climate

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The World Health Organization estimates that approximately 3-million premature deaths per year are due to outdoor air pollution. Hazardous air quality occurs when atmospheric conditions allow natural and anthropogenic pollutants to accumulate and persist in the near-surface environment. Climate change-driven alteration of atmospheric circulation, the hydrologic cycle, and temperature regimes is expected to modify the meteorological conditions and ambient chemistry that help to regulate pollutant formation, accumulation, and dispersal – though the magnitude, direction, geographic footprint, and public health impact of these changes remains poorly resolved. Despite these uncertainties, design solutions that limit both greenhouse gas and air pollutant emissions are becoming increasing viable, and in some cases widely adopted. In this talk we will explore projected changes in air quality meteorology, as well as the benefits and consequences of design