Abstract: The combination of inertia and uncertainty makes the coupled climate-human system dangerously hard to control. Emissions cuts are necessary to manage climate risks, but they are not necessarily sufficient. I will argue for a broad solar geoengineering research program--from laboratory to outdoor field experiments--that aims to develop new technologies that can limit climate risks while minimizing side effects. I will show new results on human health impacts and on the use of solid artificial aerosols in the stratosphere. Finally, I will discuss the public policy of deployment suggesting strategies that are moderate, temporary and responsive.