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*Mathematics and Climate Change*

Observations of increases in global average air temperature, widespread melting of snow and ice, and rising global average sea level make clear that the climate system is warming. Mathematical models of the climate system show that most of the observed increase in global average temperature since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations. In this talk, I will describe some of the new and exciting directions that climate change science has taken in recent years, and how mathematics continue to advance our understanding of the ongoing changes observed in the climate system.