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The global influence of ice-ocean interactions in Antarctica

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In this seminar, I will explore the oceanic processes that drive melting of the Antarctic Ice Sheet, and consequent global sea level rise. Different processes lead certain areas of the Antarctic Ice Sheet to be more susceptible to rapid ocean-driven melting, while other areas to be more resilient. I will also show the emergence of a feedback between the ice sheet and Southern Ocean: increased melting leads to warming of the oceanic waters surrounding Antarctica, with consequences for future sea level rise. I will conclude by describing how increased melting of the Antarctic Ice Sheet as well as changes in sea ice affect the global ocean abyss and its ability to store anthropogenic heat and carbon.