

MATHACROSSCAMPUS

Kenneth Golden

Modeling the Melt: What math tells us about sea ice and polar ecosystems in a warming climate

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The Arctic is often described as ground zero for climate change. Precipitously declining sea ice is impacting the polar marine environment and its ecosystems, with ripples felt far beyond the polar regions. Predicting the fate of Earth's sea ice packs requires a lot of math. Come along with Ken Golden, the Indiana Jones of Mathematics, as he tells how math is transforming our understanding of sea ice and its role in climate and polar ecosystems. From tiny brine inclusions inside the ice to sea ice dynamics on oceanic scales, and from microbes to polar bears, he'll tour a broad range of advances in the mathematics, physics, and biology of sea ice, and conclude with an exciting video of an Antarctic expedition.

Ken Golden is a Distinguished Professor of Mathematics and Adjunct Professor of Biomedical Engineering at the University of Utah, with principal research interests in mathematics of sea ice and climate, polar ecosystems, and composite materials. He has been on eighteen polar expeditions, given over 500 invited lectures on six continents, including three presentations in the U.S. Congress, and won numerous teaching awards. His work has been covered by media around the world, including profiles in Science, Scientific American, Physics Today, and the BBC. Golden is a Fellow of the Society for Industrial and Applied Mathematics, an Inaugural Fellow of the American Mathematical Society, and a Fellow of the Explorers Club, whose members have included Neil Armstrong, Jane Goodall, and Sir Edmund Hillary.

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