



# LEADERSHIP FOR THE ARCTIC

## Dr. Donald K. Perovich

### Research Geophysicist

U.S. Army Corps of Engineers  
Cold Regions Research Engineering Laboratory

### Leadership in Arctic Science and Research

*Perspective on Change*

Thursday 0945-1145

I am a Research Geophysicist at the U.S. Army Cold Regions Research and Engineering Laboratory and am an Adjunct Professor, Thayer School of Engineering, Dartmouth College. I received a Ph.D in Geophysics from the University of Washington in 1983.

My research is focused on the geophysics of sea ice, with particular emphasis on electromagnetic, thermodynamic, and morphological properties. The central goal of my research is deceptively simple to state: understand the interaction of solar radiation with sea ice. This simple statement belies the rich complexity of the topic. The interaction of solar radiation with sea ice is intimately interrelated with sea ice optical properties, thermodynamics, physical properties, sea ice ecology, and radiative transfer theory. A central element of my research is assessing the role of the sea ice albedo feedback in the Arctic climate system. Past work also included studies of sea ice growth and decay, mass balance, and thermodynamic properties. I have been pursuing these issues through a combination of laboratory studies, field experiments, and theoretical models.

In 2010 and 2011 I served as co-Chief Scientist of the NASA sponsored Impact of Climate Change on the Ecosystems and Chemistry of the Arctic Pacific Environment program .



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April 12-13, 2012  
U.S. Coast Guard Academy  
New London, CT

