

Opportunities to Use Remote Sensing in Understanding Permafrost and Ecosystems: A Workshop

Committee

Prasad Gogineni

Co-Chair

Dr. Gogineni is a Deane E. Ackers Distinguished Professor in the Electrical Engineering and Computer Science Department at the University of Kansas and Director of the NSF Science and Technology Center for Remote Sensing of Ice Sheets (CReSIS). He is an IEEE Fellow and served as Manager of NASA's Polar Program Office from 1997 to 1999. Dr. Gogineni received the Louise Byrd Graduate Educator Award at the University of Kansas and was a Fulbright Senior Scholar at the University of Tasmania in 2002. He has been involved with radar sounding and imaging of ice sheets for more than 15 years and contributed to the first successful demonstration of SAR imaging of the ice bed through more than 3-km thick ice. Dr. Gogineni has authored or co-authored over 100 archival journal publications and more than 200 technical reports and conference presentations.

Vladimir E. Romanovsky

Co-Chair

Dr. Vladimir E. Romanovsky is a Professor of Geophysics in the Geophysical Institute and Geology and Geophysics Department with the University of Alaska, Fairbanks. He is involved in research in the field of permafrost geophysics, with particular emphasis on the ground thermal regime, active layer and permafrost processes, and the relationships between permafrost, hydrology, biota and climate. He is also dealing with the scientific and practical aspects of environmental and engineering problems involving ice and permafrost, subsea permafrost, seasonally frozen ground, and seasonal snow cover. Dr. Romanovsky is also interested in the improvement of mathematical methods (analytical and numerical modeling) in geology and geophysics.

Jessica Cherry

Member

Dr. Jessica Cherry is a Research Assistant Professor at the University of Alaska, Fairbanks. Her research interests include arctic hydrology and climate, large-scale snow physics, land-atmosphere interaction on synoptic and longer time-scales, frozen ground, and water resources and economics. She received her Ph.D. in Climate Science and Hydrology from Columbia University in 2006.

Claude Duguay

Member

Dr. Claude Duguay is a Professor at the University of Waterloo. His main research interests are in remote sensing and modeling of cold regions with the intent of deepening our knowledge, understanding and predictive capabilities of lake/land-atmosphere/climate interactions. Some of his current areas of interest include the development of satellite-based lake and permafrost-related products, the response of lakes to contemporary and future (projected) climate conditions, the role of lakes in weather and climate, and improvement of the representation of cryospheric processes in lake model schemes as implemented in numerical weather prediction and climate models. Dr. Duguay received his Ph.D. at the University of Waterloo in 1989.

Scott Goetz

Member

Dr. Scott Goetz is the Deputy Director and a Senior Scientist at the Woods Hole Research Center. His research focuses on analysis of environmental change, including monitoring and modeling links between climate and land use change of various types (e.g., urbanization, fire disturbance, deforestation) and their combined influence on biological diversity, water quality and ecosystem carbon cycling. Dr. Goetz received his Ph.D. from the University of Maryland in 1996.

M. T. Jorgenson

Member

Mr. M. Torre Jorgenson is head of Alaska Ecoscience. His most recent research has focused on the development of ecological land classifications of military lands and national parks throughout Alaska, which have employed analysis of satellite imagery, true-color and infrared photography, ground-truthing, and GIS spatial analysis to develop maps suitable for land-use assessments. Mr. Jorgenson also has been involved in assessing effects of global warming on sea-level rise and ecological changes on the Yukon-Kuskokwim Delta, coastal erosion along the Beaufort Sea coast, permafrost degradation in central and northern Alaska, and monitoring landscape change through repeat photography in southwestern Alaska.

Mahta Moghaddam

Member

Dr. Mahta Moghaddam is a Professor at the University of Southern California. Her research interests include radar systems, remote sensing, environmental sensing, medical imaging, focused microwave therapy systems, inverse scattering, and subsurface sensing. Dr. Moghaddam has introduced innovative approaches and algorithms for quantitative interpretation of multichannel radar imagery based on analytical inverse scattering techniques applied to complex and random media. She has also developed quantitative approaches for multisensor data fusion by combining radar and optical remote sensing data for nonlinear estimation of vegetation and surface parameters. She has led the development of new radar instrument and measurement technologies for subsurface and subcanopy characterization. Dr. Moghaddam received her Ph.D. in Electrical and Computer Engineering from the University of Illinois, Urbana-Champaign in 1991.