Meet Aleksey Sheshukov

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Aleksey Sheshukov is an Associate Professor and Extension Water Quality Specialist in the Department of Biological & Agricultural Engineering at Kansas State University. His research aims at investigating hydrologic and water-quality processes in agroecosystems under changing climate using a variety of theoretical, computational, and monitoring approaches. He has published on the topics of watershed hydrology, surface-subsurface interactions, and the effects of conservation practices on non-point source pollution, as well as on frozen soil and permafrost degradation. His research program is funded by multi-disciplinary grants from NSF, USDA, USGS, EPA, and NRCS. Applications of his research ranged from the polar regions of Norway and Siberia to semi-arid climate of the High Plains. He teaches courses on watershed modeling, management, and ecological risk assessment. At Kansas State University his research program is tightly integrated with extension activities on providing educational support and engaging citizens in conservation and protection of Kansas watersheds. He developed watershed assessment plans in Kansas and Missouri to mitigate nonpoint source pollution from agricultural fields. He is a recipient of the Big XII Faculty Fellowship Award, College of Engineering Public Service Award, and NSF PolarSTEAM fellow.

"***How do you plan on advancing UCOWR's mission of leading in education, research and public service in water resources?"***

Water stored in both liquid and solid forms in polar regions present a vast resource of fresh water on the planet. Change in climate patterns, seasonality and intensity of precipitation events threaten to cause fundamental shifts in cold regions hydrology affecting distribution of water at the Earth's surface and degradation of underlying permafrost. Such changes will impact environment, people, and build infrastructure. The UCOWR is positioned well to play an important role in not only supporting the scientists studying water resources but also providing opportunities for engagement of a wider community. The issues of changing hydrologic regimes, altered snow dynamics, thawing permafrost, rain-on-snow events, and other water-related matters require development of novel approaches that integrate inputs from different sciences, cross the boundaries of different disciplines, and connect different groups of people. Thus, I propose to further UCOWR's mission by enhancing its role on promoting support for emerging water issues in the regions of seasonally and continuously frozen grounds. My expertise in watershed hydrology and holding a principal role in multi-disciplinary projects on natural and social systems in the Arctic have prepared me to lead as a Board member in organizing various networking events and engaging UCOWR delegates and community partners in discussing water resource issues in cold regions. At the annual conference I will propose and lead a session on cold regions hydrology and recruit speakers with diverse scientific, professional, and cultural backgrounds.