

## **Probabilistic snow mapping using station data**

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**Abstract.** We will describe a flexible method to generate ensemble gridded fields of snow water equivalent (SWE) in complex terrain. The method is based on locally-weighted regression, in which spatial attributes from station locations are used as explanatory variables to predict spatial variability in SWE. For each time step, regression models are used to estimate the cumulative distribution function (c.d.f.) of SWE at each grid cell, and ensembles are synthesized by using realizations from correlated random fields to extract values from the gridded SWE c.d.f.s.

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