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Undergraduate Modeling Workshop
May 20-25, 2018
PROJECT ABSTRACTS

Group Leader:
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Project VI: Forest Cover

"Inference on forest variables from complete-coverage LiDAR data and sparse observations"

Abstract: We have two sources for forest variables, from direct measurements, which are always expensive and would be sparse in space, and correlated LiDAR data that has complete coverage. The Bonanza Creek Experimental Forest (BCEF) is a Long-Term Ecological Research (LTER) site consisting of vegetation and landforms typical of interior Alaska. People are interested in three forest variables: above-ground biomass (AGB); tree density (TD); basal area (BA). The brightness, greenness, and wetness tasseled cap indices can be used as covariates to explain the forest variables. In the undergraduate workshop project, students can brainstorm from the easiest regression models to more sophisticated spatial models and compare the differences of inferences from different ideas.

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