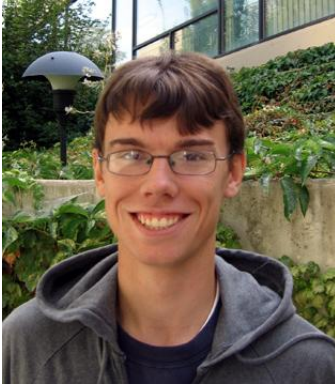


Justin Poinsatte



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The NSPIRE IGERT Program is a multidisciplinary student doctoral training program designed to create a new generation of scientists with broad and rigorous training in nitrogen cycling who seamlessly integrate nitrogen cycle science for effective communication with public policy makers.

Carbon and Nitrogen Dynamics during Ecosystem Recovery and Succession

Justin's research is focused on changes in carbon and nitrogen dynamics on nutrient-limited areas of Mt. St. Helens. The goal of the research is to provide a better understanding of the fundamentals of soil and plant nitrogen transformations, including mechanisms of nitrogen addition and retention and the interactions between carbon availability and microbial communities. The NSPIRE program allows interactions with other fields such as atmospheric chemistry, population ecology, hydrology, and soil chemistry and provides for an open framework to incorporate interdisciplinary approaches into this research. Results will further our understanding of fundamental processes of carbon and nitrogen interactions and will lead to greater knowledge of ecosystem function, and can also be applied to restoration efforts to inform how productivity and biodiversity can be restored in disturbed areas. Finally, the young, rapidly evolving ecosystems of Mt. St. Helens can be used as a model to understand basic carbon and nitrogen cycling within the soil, which can then be applied to more complex ecosystems.

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