

Leif Moon Nielsen



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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.

Linkages connecting aquatic carbon and nitrogen dynamics between terrestrial atmospheric and oceanic environments

Leif is interested in studying carbon (C) and nitrogen (N) dynamics (transport, transformation and storage) in aquatic systems, and the linkage between land, ocean and atmosphere that streams and rivers possess. Streams and rivers are important systems for the transport of C and N from terrestrial to oceanic environments, but are also important areas for the transformation of C and N to the atmosphere. There is an estimated 2–3 Gt of C and N transported down streams and rivers each year, with ~50 percent of that C and N being transformed in streams and rivers. Leif wants to understand how humans impact C and N dynamics between land, ocean and atmosphere within the aquatic environment. Leif's research will study components of: 1) the timing and source of C and N from terrestrial systems to streams and rivers, 2) the transport of C and N to the ocean, 3) the location and magnitude of C and N stored within streams and rivers, 4) the transformation of C and N in streams and rivers, 5) and the release of C and N from streams and rivers to the atmosphere. With minimal inclusion of aquatic systems in regional and global C and N budgets, models, and inventories, Leif hopes to increase social and political awareness about the importance of aquatic systems in C and N cycles.

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