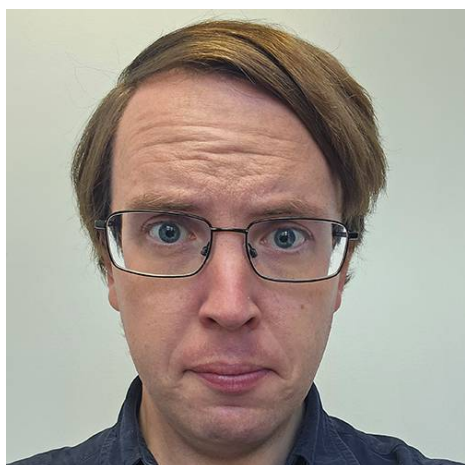


Peter Crooks

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2026 Faculty Researcher of the Year Award Nominee

College of Arts & Sciences | Department of Mathematics & Statistics



Peter was born and raised in Halifax, Canada. He graduated from Dalhousie University with an honors math bachelor's degree, and from the University of Toronto with master's and doctoral degrees in pure mathematics. Peter subsequently pursued postdoctoral studies at Leibniz Universität Hannover, the Hausdorff Research Institute for Mathematics, and Northeastern University. In Fall 2022, he became an assistant professor of pure mathematics at Utah State University. His research is supported by grants from the National Science Foundation and Simons Foundation.

Peter's research unifies parts of algebraic geometry, geometric representation theory, mathematical physics, and symplectic geometry. His approach is to harness Lie theory, the most coherent framework for continuous symmetry to date. Recent successes include Peter's joint work with Maxence Mayrand, titled Symplectic reduction along a submanifold. It has been published in *Compositio Mathematica*, one of the most impactful journals in Peter's research area. Among other things, this paper generalizes

the 50-year-old theory of Marsden-Weinstein reduction. Another recent success is Peter's single-authored article Universal families of twisted cotangent bundles, published in *Proceedings of the American Mathematical Society*. Peter pursues these and other follow-up research opportunities with his graduate students, Xiang Gao, Bailey Jorgensen, C. Xavier Parent, Mitchell Pound, and Casen Thompson.