UNIVERSITY AT ALBANY
State University of New York

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Colloquium

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The Bargmann transform

Tuesday, October 17, 2025
3:00 p.m. SS-256
(tea & coffee at 2:40 p.m.)

Abstract. The Bargmann transform is an integral operator that maps L^2 of the real line unitarily onto the Fock space F^2 of the complex plane. Thus it establishes a correspondence between operators on L^2 and those on F^2, and serves as a bridge between real analysis, complex analysis, harmonic analysis, and functional analysis. I will talk about the action of the Bargmann transform on several classical operators on L^2, including the Fourier transform, the Hilbert transform, and linear canonical transforms. These examples lead to several natural classes of operators on the Fock space that were studied by various authors in recent years, including myself and some of my collaborators.