TEMPLE UNIVERSITY

Department of Mathematics

Analysis Seminar

Room 617 Wachman Hall

Monday, April 30, 2018, 2:40 p.m.

On the geometric quantization of (some) Poisson manifolds

by Jonathan Weitsman

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Abstract: We review geometric quantization in the symplectic case, and show how the program of formal geometric quantization can be extended to certain classes of Poisson manifolds equipped with appropriate Hamiltonian group actions. These include b-symplectic manifolds, where the quantization turns out to be finite dimensional, as well as more singular examples (b^k-symplectic manifolds) where the quantization is finite dimensional for odd k and infinite dimensional, with a very simple asymptotic behavior, when k is even.

This is a joint work with Victor Guillemin and Eva Miranda.