
ETHAN ROSS, University of Toronto
Singular Reduction of Polarizations

A polarization on a symplectic manifold (M, ω) is an involutive complex Lagrangian subbundle P of the complexified tangent bundle $T^{\mathbb{C}}M$. Kähler structures are special cases of polarizations which intersect their complex conjugates trivially. Much work has been done discussing how Kähler structures behave under symplectic reduction, with only partial results for the reduction of more general polarizations. In this talk I will discuss the reduction of polarizations and also extend to the setting of singular reduction explored by Sjamaar-Lerman.