

1124-81-345

Tomoki Ohsawa* (tomoki@utdallas.edu), 800 W Campbell Rd, Richardson, TX 75080-3021.

Geometry and Dynamics of Gaussian Wigner Functions.

I will talk about how to exploit geometry to relate the dynamics of the Gaussian wave packet (wave function) with that of the corresponding Gaussian Wigner function. The key geometric fact is that the momentum map corresponding to the action of the symplectic group $\mathrm{Sp}(2d, \mathbb{R})$ on the Siegel upper half space gives rise to the covariance matrix of the Gaussian Wigner function. As a result, the momentum map provides a bridge between the symplectic/Hamiltonian structures of the two dynamics. This is a joint work with Cesare Tronci. (Received September 12, 2016)