1150-42-514 **Philip T. Gressman*** (gressman@math.upenn.edu), University of Pennsylvania, David Rittenhouse Lab, 209 S 33rd Street, Philadelphia, PA 19104. *Oscillatory multilinear Radon-like transforms.*

One of the challenges of the program in harmonic analysis, initiated in work of Christ, Li, Tao, and Thiele, to understand the behavior of multilinear oscillatory integrals is that the desired estimates generally lack geometric stability, meaning that decay can be completely destroyed when arbitrarily small nonlinear perturbations are added to the linear projections in the CLTT framework. This talk will address recent work, joint with E. Urheim, on the question of finding and quantifying nondegeneracy for the best-possible multilinear estimates outside the CLTT framework which do possess such geometric stability. The approach leads naturally to objects which can be reasonably called oscillatory multilinear Radon-like transforms and the method of proof relies on a simple but novel wave packet decomposition which captures geometric effects extremely efficiently. (Received July 15, 2019)