Guozhen Lu* (guozhen.lu@uconn.edu), Department of Mathematics, University of Connecticut, Storrs, CT 06269. Concentration-compactness principle and existence of ground state solutions to certain quasilinear equations.

In this talk, we present a number of results on concentration-compactness principle for Trudinger-Moser inequalities on Euclidean spaces, Riemannian manifolds, Heisenberg groups, etc. and apply them to establish the existence of ground state solutions to certain quasilinear partial differential equations. These are joint works with Jungang Li (University of Connecticut, USA), Maochun Zhu (Jiangsu University, China) and Lu Chen and Caifeng Zhang (Beijing Normal University, China). (Received March 21, 2017)