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**Guozhen Lu\*** (gzlu@wayne.edu), Department of Mathematics, University of Connecticut, Storrs, CT 06269. *Concentration-compactness on the Heisenberg group and Riemannian manifolds.*

We will report works on Lions type concentration-compactness principle on the Heisenberg group and Riemannian manifolds where symmetrization argument does not work. We adapt an argument of level sets for functions under consideration to avoid the symmetrization argument used in the Euclidean setting to establish such a concentration-compactness principle there. We then apply the concentration-compactness principle to establish the existence of solutions to certain classes of quasilinear PDEs. These are joint works with Jungang Li and Maochun Zhu. (Received July 18, 2016)