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Yunping Jiang* (yunping.jiang@qc.cuny.edu), Department of Mathematics, Queens College of CUNY, 65-30 Kissena Blvd, Flushing, NY 11367. *A Simple Proof of Ruelle's Perron-Frobenius Theorem and Its Applications to Equilibrium Measures and Correlations in Dynamics.*

In this talk I will give a simple proof of Ruelle's Perron-Frobenius Theorem. After that I will talk about some applications of this theorem in the study of equilibrium measures and decay rates of correlations for uniformly expanding and non-uniformly expanding dynamical systems. Finally, I will mention a conjecture about second eigenvalues of Ruelle operators. (Received January 31, 2018)