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Shoo Seto* (shoseto@ucsb.edu). *The first eigenvalue of the p -Laplacian with integral curvature condition.*

The p -Laplacian is a generalization of the usual Laplacian by minimizing the L^p energy functional instead of the L^2 energy. While the regularity of solutions to the p -Laplace eigenvalue equation is different for $p \neq 2$, its first nonzero eigenvalue admits generalizations. In this talk, we will discuss various sharp estimates of the first nonzero eigenvalue for the p -Laplacian with integral curvature condition. In particular, we generalize the Cheng upper bound, the Lichnerowicz-Obata lower bound, and the Faber-Krahn isoperimetric inequality. This is based off joint work with Guofang Wei. (Received September 16, 2017)