1058-28-112 **Sze-Man Ngai*** (smngai@georgiasouthern.edu), Department of Mathematical Sciences, Georgia Southern University, Statesboro, GA 30458. *Fractal Laplacians defined by iterated function systems with overlaps.*

We study spectral asymptotics of a class of Laplacians defined by iterated function systems with overlaps. We also study the computation of the eigenfunctions and eigenvalues of the Laplacians. Part of this work is joint with J. Chan, J. Chen, J. Hu, and K.-S. Lau. (Received February 09, 2010)