1116-VE-1771   **Neha Gupta*** (`ngupta10@illinois.edu`). *Geometric Group Theory and Untangling Ear-Phones.*

Suppose you get your ear-phones entangled around a doughnut with two holes... an entirely probable scenario! Then how "big" does your doughnut need to be to in order for you to successfully untangle your ear-phones? This is going to be a gentle introduction to groups, and how they connect to geometry. We will slowly build up to answering our original question. This is joint work with Ilya Kapovich. (Received September 21, 2015)