Topology, Arithmetic, & Dynamics Seminar

Accessing Geometry via Function Spaces

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Function spaces naturally arise when taking a limit of a sequence of discrete sets. For example, when approximating a manifold or a fractal as a limit of graphs, considering a limit of discrete graph Laplacians allows one to prove convergence to a limiting operator. Implicitly, the domain of the limiting operator is being approximated as a limit of discrete function spaces. I will first show how these proofs work, and then show how the resulting function spaces are being used for visualization (via isometric embeddings) and finding symmetries. Finally, I will explore some connections between algebras defined on these function spaces and the underlying geometric structure.

Date: **Friday, March 10, 2017**
Time: **2:30-3:20 pm**
Place: **4106 Exploratory Hall**

For special accommodations, please contact Sean Lawton via email at `slawton3@gmu.edu`.