

Topology, Arithmetic, & Dynamics Seminar

Manifolds, Schemes, Deligne-Mumford stacks, and
Orbifolds: Why they're all topoi.

David Carchedi

Department of Mathematical Sciences
George Mason University
Fairfax VA

I will give a gentle eagle-eyed tour of the theory presented in my preprint "Higher Orbifolds and Deligne-Mumford Stacks as Structured Infinity-Topoi". Specifically, I will explain Grothendieck's idea of how topoi generalize topological spaces, and how this view point can be used to put manifolds, schemes, Deligne-Mumford stacks, and orbifolds all on the same footing. I will then use this formalism to give a completely categorical characterization of these geometric spaces, which was previously unknown. This tour will be mostly heuristic, but the main ideas will be clearly explained. Time permitting, I will indicate some concrete applications of this classification result.

Date: **Friday, March 3rd, 2017**

Time: **2:30-3:20pm**

Place: **4106 Exploratory Hall**

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