

# Topology, Arithmetic, & Dynamics Seminar

Homotopy types as a foundation for mathematics

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Abstract: The Curry-Howard correspondence formalizes an analogy between computer programs and mathematical proofs. This talk will introduce alternative foundations for mathematics animated by this analogy. The basic object is called a type, which can be simultaneously interpreted as something like a set or as something like a mathematical proposition. Homotopy type theory refers to the recent discovery that a type can also be interpreted as something like a topological space. We will discuss the implications of this homotopy theoretic interpretation for the so-called *univalent* foundations of mathematics.

Date: **Friday, October 13, 2017**

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

Place: **4106 Exploratory Hall**

For special accommodations, please contact Sean Lawton via email at [slawton3@gmu.edu](mailto:slawton3@gmu.edu).