

# SEMINAR

**BRAD DART, MEMORIAL UNIVERSITY**

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**2 P.M.**

**HH-3017**

## **AN INTRODUCTION TO FUNCTORS AND SHEAVES**

### **Abstract:**

Sheaves are a tool used in geometry and topology to track local data of a topological space and can be viewed as a special kind of functor. Their abstract and general nature allow for a number of different interpretations: manifolds, schemes, and other geometric objects can often be described as a sheaf of rings, a popular approach in algebraic geometry. I use both geometric and category-theoretical language to describe sheaves and will provide a number of examples. If time allows, I will indicate some very basics about how sheaf cohomology works. I will also indicate some generalizations of sheaves that are applicable in logic and number theory. This talk should be accessible to those with a basic knowledge of topology, and preferably some differential geometry and/or category theory.