



Speaker: Mark Behrens
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Thursday, February 14, 2013
4:00 PM
127 Hayes-Healy Hall

Title: "Exotic spheres and topological modular forms"

Abstract:

An exotic sphere is a smooth manifold which is homeomorphic, but not diffeomorphic, to a standard sphere. In which dimensions do there exist exotic spheres? I will discuss what we know about the answer to this question in terms of the classical work of Kervaire and Milnor, the recent solution of the Kervaire invariant problem by Hill, Hopkins, and Ravenel, and a current project with Hill, Hopkins and Mahowald, where we use topological modular forms to detect exotic spheres.