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**Marius V Ionescu\***, Department of Mathematics, University of Connecticut, Storrs, CT 06269,  
and **Robert S Strichartz**. *On pseudodifferential operators on fractals*. Preliminary report.

In this talk, which is based on joint work with Robert Strichartz, we present a theory of pseudodifferential operators on fractafolds. We extend some previous results due to Strichartz, Rogers, Teplyaev, Allan, Barany, and others. We study the symbolic calculus for spectral operators, as well as  $L^p$ -boundedness of both spectral and pseudodifferential operators. In particular, we discuss Sobolev spaces on fractafolds. (Received August 10, 2008)