

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, March 28
2:00 – 3:00 PM
Maria Sanford, Room 101

MAXIMAL SPACE-LIKE SURFACES IN THE ANTI-DE SITTER THREE DIMENSIONAL SPACE

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Abstract: In this talk we will introduce the three dimensional Anti-De Sitter space with the Lorentz metric that it naturally carries and then we will define the notion of space-like surfaces and maximal surfaces.

We will show the non existence of maximal space-like tori in the three dimensional Anti-De Sitter space, and moreover, the non existence of maximal space-like surfaces with two distinct principal curvatures $\pm k(m)$, with $|k(m)|$ greater than some positive constant. This result extends a recent Theorem that considers maximal space-like hypersurfaces in n -dimensional Anti-De Sitter space with $n \geq 4$.

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