CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, September 17
2:00 – 3:00 PM
Maria Sanford, Room 101

SKEW LOOPS AND QUADRIC SURFACES

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ABSTRACT

A differentiable loop in 3-space is *skew* if it has no pair of parallel tangent lines. The existence of skew loops is not obvious, but they are actually plentiful. Indeed, we proved some years ago (with Mohammad Ghomi) that they can be found on any surface having a point of positive Gauss curvature (i.e., local convexity)---*unless* that surface is quadric. Put another way, the absence of skew loops characterizes ellipsoids among all compact surfaces! The relationship between skew loops and *negatively* curved surfaces has proven harder to expose, however. We can report some recent progress on that question, however, and hope to conclude our talk by describing it.

For further information:
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