

CCSU  
DEPARTMENT OF MATHEMATICAL SCIENCES

# COLLOQUIUM

Friday, September 19  
2:00 – 3:00 PM  
Maria Sanford, Room 101

## MINIMAL TRANSLATIONAL SURFACES IN THE EUCLIDEAN SPACE

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(Joint work with Rafael Lopez)

**Abstract:** A surface in the Euclidean space is called minimal if its mean curvature vanishes everywhere. The most basic example is a plane, i.e. the x-y plane which can be parametrized by  $X(s,t)=(s,0,0)+(0,t,0)$ . A minimal surface is called *translational* if it can be parametrized as the sum of two curves in the Euclidean space, this is, if the surface can be written as  $X(s,t) = \alpha(s) + \beta(t)$  with  $\alpha(s)$  and  $\beta(t)$  regular curves. As seen before, planes are translational surfaces. Besides the planes, so far the only known examples come from a family of surfaces discovered by Scherk in 1835. In this talk we present a whole classification of translational minimal surfaces and we explain in detail a family of new examples discovered in this classification.

**For further information:**

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