## CCSU department of mathematical sciences COLLOQUIUM

Friday, September 30 4:30 – 5:30 PM Maria Sanford, Room 101

## SYSTOLES ON COMPACT MODULAR SURFACES

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<u>Abstract</u>: In this talk we will first introduce systoles and talk briefly about systolic geometry. Then we will move to Riemann surfaces, and a very interesting family of surfaces – the modular surfaces constructed using principal congruence subgroups of  $PSL(\mathbb{Z}, 2)$ . We will get a nice picture of the regular triangulation of the modular surfaces and we will see how number theory can help us in studying the systoles. Finally we will talk about work in progress analyzing what happens to these systoles as we compactify the surfaces.

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