CCSU

DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, September 20
3:00 – 4:00 PM
Maria Sanford, Room 101

SMALL UNCOUNTABLE CARDINALS AND TOPOLOGY

IVAN GOTCHEV

CENTRAL CONNECTICUT STATE UNIVERSITY

Abstract: Many people believe that every question in mathematics has a definite answer even if we do not know that answer yet. In this talk, after we give all necessary definitions, we will mention several questions that arise naturally in Zermelo-Fraenkel set theory with the axiom of choice (ZFC), and in topology that cannot be answered unless we add a new axiom to ZFC. One well-known such question is if the so-called Continuum Hypothesis (CH) is true or false in ZFC. But there are many more. Our goal is, if time permits, to finish our talk with a long-standing open problem, which has been recently solved by M. Malliaris and S. Shelah, that two of the so-called small uncountable cardinals are in fact equal.

This talk is aimed for a wide audience of people who could enjoy good mathematical results.