Exotica in dimension four

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007 Kemeny, 4:00PM
3:30 pm in 300 Kemeny

Abstract

Four dimensional manifolds are mathematical models of our universe. During the past three decades, ideas and methods from geometry, topology and physics disclosed a phenomenon unique to this dimension: the existence of families of infinitely many distinct differentiable four-manifolds which are all the same up to homeomorphisms. How does one find such spaces? How to pass from one another? The purpose of this talk is to explain these questions and present our best answers to them up to date.

This talk should be accessible to graduate students.