



Radical Pi presents:

Catastrophe Theory

by Professor Sergei Chmutov

The catastrophe theory appeared in mid 1960's in works of the French mathematician Rene Thom (1923-2002). Magazines reported about a revolution in mathematics comparable with Newton's invention of calculus. The aim of the theory was to model discontinuous change of a system as a response to a local smooth change of its parameters. Thom claimed that there are 7 typical elementary catastrophes. As a philosophical theory it has many funny non mathematical speculations. The rigorous mathematical theory started with a theorem of H. Whitney about the stable singularities of maps of one plane to another. Later on this approach was developed by V. Arnold to a big beautiful mathematical theory known as singularity theory and having many mysterious connections with various parts of mathematics and physics. I will review the beginning of this theory, describe 7 elementary catastrophes, and discuss some of its applications.

Wednesday, April 9, 5:00 PM

Undergraduate Math Study Space (MA 052)

Free pizza!

