SYMMETRY AND THE FORCES OF NATURE

09.19.18 09.26.18 MATH 350 5 - 6 pm

Professor Jeffrey Fox



Symmetry is a powerful idea both inside and outside of mathematics. This talk and its sequel, will be about a small corner of physics where symmetry is responsible for three of the basic forces of nature. This isn't a physics talk, and I'm not a physicist, but it is meant to illustrate a beautiful application of symmetry. We'll see a little bit about the electromagnetic and the weak, really the electroweak, force and how symmetry groups dictates the structure of these forces.

In terms of mathematics, I will only assume a knowledge of calculus and some linear algebra. No physics beyond a vague notion of what a force is will be assumed.

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