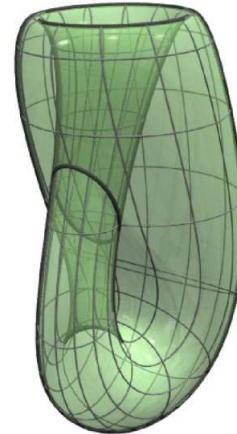
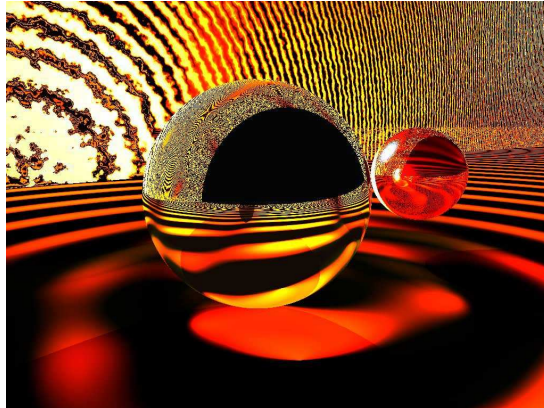




Joint COLLOQUIUM

with Departments of CS and Math



Dr. John Baez

Department of Mathematics
UC Riverside

Physics, Topology, Logic and Computation: A Rosetta Stone

Abstract

In particle physics, Feynman diagrams are used to reason about quantum processes. Similar diagrams can be used to reason about logic, where they represent proofs, and computation, where they represent programs. With the rise of interest in quantum cryptography and quantum computation, the explanation became clear: there is extensive network of analogies between physics, topology, logic and computation. In this introductory talk I, will make some of these analogies precise using a wonderfully general branch of mathematics called category theory.

***3:00-4:00 p.m., Friday, April 9th, 2010
McLane Hall 162***

Refreshments provided!