MSRI–Evans Talk

March 30   **Barbara Fantechi**, International School for Advanced Studies (SISSA/ISAS) Italy

Algebraic stacks without schemes

Algebraic stacks are about 40 years old, and play a growing role both within algebraic geometry and in its relation with high energy physics; increasingly, they are seen as geometric objects, interesting in their own right.

In this talk we'll give an outline of the relevant definitions, focusing on the case of smooth stacks over the complex numbers so as to avoid scheme-related complications. We'll then outline a few classical applications and a selection of current research. The focus will be on examples rather than on detailed rigor.

Prerequisites for the talk are some familiarity with the basics of complex manifolds, or at least differentiable manifolds; a nodding acquaintance with categories and functors would be helpful.