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**Open Gromov-Witten theory -- introduction and recent developments**

Abstract

Enumerative geometry deals with questions of the form "How many objects  $X$  there are that satisfy property  $Y$ ". One branch of it is Gromov-Witten theory, that deals with counts of pseudo-holomorphic curves in symplectic manifolds. Open Gromov-Witten theory poses analogous questions for curves with boundary, and the presence of boundary creates many extra difficulties. In this talk, I will give a little background, discuss some of the fundamental issues, some of the proposed solutions, and some recent advances in the field.

No prior knowledge of symplectic geometry or Gromov-Witten theory will be assumed.