

1158-05-105

Sami Assaf* (shassaf@usc.edu). *Combinatorial models for Schubert calculus.*

Schubert calculus began in the 1880s when Hermann Schubert began asking enumerative questions in geometry, such as how many lines in space are incident to four given lines. Efforts to build a rigorous foundation for these questions led to the development of cohomology rings and modern intersection theory. In the 1980s, Lascoux and Schutzenberger defined an explicit basis for polynomials, called Schubert polynomials, whose structure constants precisely compute these intersection numbers. Despite this concrete model, we still lack a combinatorial understanding of Schubert structure constants. In this talk, I present several generating polynomial models for Schubert polynomials that compute these intersection numbers for various cases. (Received February 25, 2020)