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Edward Richmond* (edward.richmond@okstate.edu) and **William Slofstra**. *Staircase diagrams and the enumeration of smooth Schubert varieties.*

Staircase diagrams are certain partially ordered sets defined over a graph. When the graph is the Dynkin diagram of a simple Lie group, these diagrams correspond to smooth Schubert varieties of the corresponding flag variety. Staircase diagrams have two applications. First, they encode much of the geometric and combinatorial data of Schubert varieties. Second, these diagrams give a way to calculate the generating series for the number of smooth Schubert varieties of any type. This extends the work of M. Haiman who calculated this generating series in type A. This talk is on joint work with W. Slofstra. (Received February 16, 2016)