

## Schubert decompositions and Euler characteristics of quiver Grassmannians

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### **Abstracts:**

Due to a formula of Caldero and Chapoton, cluster variables are an elementary expression in the Euler characteristics of quiver Grassmannians  $\text{Gr}(e, M)$  for exceptional modules  $M$ . Cerulli and Haupt provided a combinatorial description for the Euler characteristic if  $M$  is unramified. This led to explicit presentations of cluster algebras and Lusztig's semicanonical bases.

In this talk, I will explain how we can extend this combinatorial description to the unramified case. The technique of proof is to establish Schubert decompositions into affine spaces, which reduces the calculation of Euler characteristics to counting Schubert cells.