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Some Results in Coxeter Schubert Calculus

In this talk, I will give an overview of Coxeter Schubert calculus following the recent preprint by Bergeron, Gagnon, Spink and Tewari. Coxeter Schubert calculus is the study of intersections of Coxeter Schubert cycles, which may be viewed as torus-invariant subvarieties of Schubert cycles defined via a fixed Coxeter word. I will first give a brief summary of Schubert cycles on complete flag varieties, followed by the construction of Coxeter Schubert cycles and their relations to (ordinary) Schubert cycles. Then, I will present some positivity results in Coxeter Schubert calculus, with a focus on how these results connect to positivity in ordinary Schubert calculus. In particular, all of the results presented are valid in a torus-equivariant setting. No prior knowledge of Schubert calculus will be assumed from the audience.