Lehrstuhl für Algebra und Darstellungstheorie | Pontdriesch 10-16 | 52062 Aachen | GERMANY

Fifth annual conference of the SFB-TRR 195

Monday, Sept 13, 5:05 pm

Daniel Corey

Initial degenerations of Grassmannians and spinor varieties

We construct closed immersions from initial degenerations of Gr_0(d,n)---the open cell in the Grassmannian Gr(d,n) given by the nonvanishing of all Plücker coordinates---to limits of thin Schubert cells associated to diagrams induced by the face poset of the corresponding tropical linear space. These are isomorphisms in many cases, including (d,n) equal to (2,n), (3,6) and (3,7). As an application, Gr_0(3,7) is schön, and the Chow quotient of Gr(3,7) by the maximal torus in PGL(7) is the log canonical compactification of the moduli space of 7 points in P^2 in linear general position, making progress on a conjecture of Hacking, Keel, and Tevelev. Finally, I will discuss recent work on extending these results to the Lie-type D setting.