

## **Wronskians and Monodromy in Real Schubert Calculus**

Jake Levinson, Simon Fraser University

The Wronski problem is to find and count the rational curves in  $P^n$  with prescribed inflection points. The Shapiro--Shapiro Conjecture, discovered in the 90s and proven in '05/'09 by Mukhin--Tarasov--Varchenko, says that when the inflection points are real, the curve itself is defined by real polynomials: an unusual example of a real algebraic geometry problem with real solutions. Subsequent work has shown that the monodromy action (over  $R$ ) for this problem is, remarkably, isomorphic to the action on Young tableaux of certain classical combinatorial bijections, including the Littlewood-Richardson rule.

I will discuss this story, along with recent work, joint with Kevin Purbhoo, generalizing the Conjecture to allow flexes in complex conjugate pairs. We go slightly beyond monodromy: in some cases, we have to understand how solutions collide.