Thomas Brazelton* (tbraz@math.upenn.edu). An enriched count of $m$-planes meeting planes of codimension $m$. Preliminary report.

This talk will detail an arithmetic count of $m$-planes intersecting $mp$ general codimension $m$ planes over any perfect field, in the case where $m$ and $p$ are both even. These computations recover familiar enumerative geometry results such as four lines in 3-space, as well as the complex degree of the Wronski as computed by Schubert, and the real degree as computed by Eremenko and Gabrielov. This work is part of the ongoing program in $A^1$-enumerative geometry, developed by Wickelgren, Kass, Levine, and others, to use Voevodsky’s machinery of $A^1$-homotopy theory to enrich results in classical enumerative geometry over a wider range of fields. (Received July 12, 2019)