1154-14-1326     **Hannah Larson** and **Isabel Vogt\***, Stanford University, Department of Mathematics, 450 Serra Mall, Building 380, Stanford, CA 94305. *An enriched count of the bitangents to a smooth plane quartic curve.*

Recent work of Kass–Wickelgren gives an enriched count of the 27 lines on a smooth cubic surface over arbitrary fields, generalizing Segre's signed count count of elliptic and hyperbolic lines. Their approach using $\mathbb{A}^1$-enumerative geometry suggests that other classical enumerative problems should have similar enrichments when the answer is computed as the degree of the Euler class of a relatively orientable vector bundle. In this talk, we consider the closely related problem of the 28 bitangents to a smooth plane quartic. Subtleties arise because the relevant vector bundle is not relatively orientable. (Received September 14, 2019)