

# HYPERGEOMETRIC MOMENTS VIA HECKE TRACE FORMULAS

BRIAN GROVE

ABSTRACT. The study of moments for hypergeometric functions over finite fields was initiated by Ono, Saad, and Saikia in 2021. The authors define and establish the moments for hypergeometric data of length two and length three in specific cases. I will discuss a framework for establishing hypergeometric moments for length two data using Hecke trace formulas. This framework allows us to show additional cases of hypergeometric moments for length two data and recover the length two moments of Ono, Saad, and Saikia.