

1113-05-109

**Craig Timmons\*** ([craig.timmons@csus.edu](mailto:craig.timmons@csus.edu)). *Extremal results in finite quasifields.*

Using a graph theoretic approach, we generalize several results that hold in finite fields to the setting of finite quasifields. This includes sum-product type estimates and a Szemerédi-Trotter type theorem. Fundamental to our proofs is estimating eigenvalues of algebraically defined graphs. This is joint work with Thang Pham, Michael Tait, and Le Anh Vinh. (Received August 14, 2015)