1145-42-1083 **Zane Kun Li*** (zkli@math.ucla.edu). *Decoupling for the moment curve in* $\mathbb{R}^3$ *inspired from efficient congruencing.* Preliminary report.

Wooley and Bourgain, Demeter, and Guth were both able to prove Vinogradov's mean value theorem. The former used methods from number theory while the latter used methods from harmonic analysis. Similarities have been observed but no direct dictionary between the two methods has been written. We sketch some ideas for proving decoupling for the moment curve in 3D using ideas inspired from efficient congruencing. Our proof is a bilinear proof while Bourgain-Demeter-Guth's proof of decoupling for the moment curve is a trilinear proof. We mention some bilinear Kakeya phenomena that we have observed. This is work in progress joint with Kirsti Biggs and Sarah Peluse. (Received September 18, 2018)