

1154-20-551

James Belk and **Matthew C. B. Zaremsky*** (mzaremsky@albany.edu). *Twisted Brin-Thompson groups*. Preliminary report.

In joint work with Jim Belk we introduce versions of Brin-Thompson groups that are “twisted” by a group G . These are related to Röver-Nekrashevych groups $V_d(G)$ for G a self-similar group, except that for twisted Brin-Thompson groups, G can be any group. Twisted Brin-Thompson groups are always simple, and allow us to prove various results, for example, 1) every finitely generated group embeds as a quasi-isometrically embedded subgroup of a finitely generated simple group, 2) for each n there exists a simple group of type F_{n-1} but not F_n that contains every right-angled Artin group (RAAG), and 3) there exists a simple group of type F_∞ containing every RAAG. Since the class of groups embeddable into RAAGs is quite robust, the same is true for groups embeddable into our groups. (Received September 06, 2019)