1145-11-2183 **Alexander J Barrios***, Carleton College, Department of Mathematics and Statistics, One North College Street, Northfield, MN 55057. *Good Elliptic Curves with Specified Torsion Subgroup.*

Let E be a rational elliptic curve and define its modified Szpiro ratio to be $\sigma_m(E) = \frac{\max\left\{\left|c_4^3\right|, c_6^2\right\}}{N_E^6}$ where c_4 and c_6 are the invariants associated to a minimal model of E and N_E is its conductor. We say that a rational elliptic curve is good if $\sigma_m(E) > 6$. By Mazur's Torsion Theorem, there are 15 possible groups T satisfying $E(\mathbb{Q})_{\text{tors}} \cong T$. In this talk we show that for each of these possible T, there are infinitely many good elliptic curves E with $T \hookrightarrow E(\mathbb{Q})$. In addition, we will use this result to attain computational data that parallels the work done by the ABC@Home project for the modified Szpiro conjecture. (Received September 25, 2018)