1056-14-971   **Chirag M Lakhani*** (`cmlakhan@ncsu.edu`), 604D Smedes Pl., Raleigh, NC 27606. *GIT Compactification of the Quintic Threefolds.*

Quintic threefolds are some of the simplest examples of Calabi-Yau varieties. An interesting relationship, discovered by string theorists, is that every Calabi-Yau variety X has a mirror Calabi-Yau variety Y. In fact mirror symmetry is a relationship which relates complex structure moduli space of X to the complexified Kahler moduli of it's mirror Y. In this talk I will describe the complex structure moduli space from the point of view of GIT. In particular, I will discuss singularities which occur in this moduli space and their relationship to mirror symmetry. (Received September 20, 2009)