

Kirwan partial desingularization for toric varieties

by Yogesh More

Motivated by the result that the G -equivariant Chow groups of a space Y are the Chow groups of Y/G for a geometric quotient $Y \rightarrow Y/G$, we raise the following question:

Given a categorical quotient $p : C \rightarrow X$, can we find a commutative diagram

$$\begin{array}{ccc} C' & \longrightarrow & C \\ p' \downarrow & & \downarrow p \\ X' & \longrightarrow & X \end{array}$$

such that $p' : C' \rightarrow X'$ geometric quotient and $X' \rightarrow X$ is a proper birational morphism?

We address this question when X is a toric variety and $p : C \rightarrow X$ is the Cox quotient. This is joint work with Dan Edidin.