YUFENG JIANG, Univeristy of Utah, 155S 1400E JWB 233, Salt Lake City, UT, 84112, USA
The integral Chow ring of toric Deligne–Mumford stacks

It is well-known that the integral Chow ring of a smooth toric variety is isomorphic to the "Stanley–Reisner" ring of its fan. Iwanari generalized this result to any toric orbifold, i.e., the integral Chow ring of a toric orbifold is isomorphic to the "Stanley–Reisner" ring of the corresponding orbifold fan.

Generalizing the quotient construction of simplicial toric varieties by D. Cox, Borisov, Chen and Smith defined toric Deligne–Mumford stacks. We prove that toric Deligne–Mumford stacks in the sense of Borisov–Chen–Smith can be constructed from toric orbifolds by taking roots of line bundles over the toric orbifolds. Using this result we compute the integral Chow ring of toric Deligne–Mumford stacks.