

HOW TO IDENTIFY MILNOR FIBERS OF SMOOTHINGS OF QUOTIENT SINGULARITIES

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This is part of my joint paper “Milnor fibers and symplectic fillings of quotient surface singularities” (arXiv:1507.06756) with Heesang Park, Dongsoo Shin and Jongil Park. I will explain how MMP is used to identify the Milnor fiber of a smoothing of a 2-dimensional quotient singularity. This is used to give a geometrical one-to-one correspondence between Milnor fibers and certain zero continued fractions, for the case of cyclic quotient singularities, which recovers the correspondence of Kollár-Shepherd-Barron, Christophersen-Stevens, and Lisca (connecting Milnor fibers with symplectic fillings). The MMP used is a small part of a bigger explicit MMP for families of surfaces described in my joint paper “Flipping surfaces” with Paul Hacking and Jenia Tevelev.

Joint work with Heesang Park (Konkuk University, South Korea), Dongsoo Shin (Chungnam National University, South Korea) and Jongil Park (Seoul National University, South Korea).