

1161-57-235

Florian Stecker* (stecker@utexas.edu), **Gye-Seon Lee** and **Jaejeong Lee**. *Non-positive triangle reflection groups in $SL(3, R)$* . Preliminary report.

We are interested in discrete subgroups of $SL(3, R)$ which are isomorphic to fundamental groups of closed surfaces or 2-orbifolds. Two varieties of these are known: the "positive" ones correspond to convex projective structures and are stable under arbitrary continuous deformations. The non-positive ones are stable only under small deformations and their limit curves are not convex, and not even differentiable. In the case of a triangle reflection group, we can show exactly when how far we can deform until the subgroup ceases to be discrete. Furthermore, we show that at the transition point there is still a continuous, but non-transverse, limit curve. (Received August 17, 2020)