5007-57-483 **Lorena Armas-Sanabria*** (lorenaarmas089@gmail.com). *Positive Artin presentations.*

Given a group G in terms of generators and relations, $< x_1, x_2, \cdots, x_n : r_1, r_2, \cdots, r_n >$, we say that this is an n-Artin presentation if it satisfies the following equation

$$\prod_{i=1}^{n} r_i^{-1} x_i r_i = \prod_{i=1}^{n} x_i$$

in the free group F_n $(:= F(x_1, x_2, \cdots, x_n))$. This was introduced by F. González-Acuña in 1974. He proved that if a closed orientable 3-manifold is obtained by integral Dehn surgery on a closed pure n-braid, then its fundamental group has in a natural way an n-Artin presentation, and conversely, from an n-Artin presentation, we can recover a framed closed pure n-braid and then a 3-manifold M. In this poster I give a description and classification of positive Artin presentations, that is, of presentations in which each relator r_i is a positive word. In particular a characterization is given of the positive presentations, which says that if the fundamental group of a 3-manifold obtained by Dehn surgery on a closed pure n-braid admits a positive Artin presentation then the closed pure n-braid is strongly invertible. Also, an example is given of a 3-manifold whose fundamental group does not admit any positive Artin presentation. (Received May 14, 2013)