

1089-18-158

**Kiyoshi Igusa\*** (igusa@brandeis.edu) and **Gordana G Todorov**. *Infinite group actions on Frobenius cyclic posets*. Preliminary report.

A cyclic poset is a generalization of a cyclically ordered set. Linearizations of these categories are Frobenius categories in the special case when the cyclic poset is Frobenius. In our previous paper we considered finite group actions on Frobenius cyclic posets and produced continuous cluster categories of type D as examples. In this paper we extend this construction to infinite groups and, as examples, we construct the well-known cluster tubes and certain cluster categories of surface type. The advantage of this construction is that it gives an elementary description of all of the objects in the triangulated category and also explains the tagged arcs as being part of the idempotent completion construction. (Received February 12, 2013)