

1172-55-44

Evan E Franchere, Usman Hafeez, Peter Marcus, Kyle Ormsby, Angélica M Osorno*
(aosorno@reed.edu), **Weihang Qin** and **Riley Waugh**. *Transfer systems and weak factorization systems.*

N_∞ operads over a group G encode homotopy commutative operations together with a class of equivariant transfer (or norm) maps. Their homotopy theory is given by transfer systems, which are certain discrete objects that have a rich combinatorial structure defined in terms of the subgroup lattice of G . In this talk, we will show that when G is finite Abelian, transfer systems are in bijection with weak factorization systems on the poset category of subgroups of G . This leads to an involution on the lattice of transfer systems, generalizing the work of Balchin-Bearup-Pech-Roitzheim for cyclic groups of squarefree order. (Received August 11, 2021)