

## Geometry, Topology and Dynamics Seminar

### *On Invariant Random Subgroups of Block-Diagonal Limits of Symmetric Groups*

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**Abstract:** We classify the ergodic invariant random subgroups of block-diagonal limits of symmetric groups in the cases when the groups are simple and the associated dimension groups have finite dimensional state spaces. These block-diagonal limits arise as the transformation groups (full groups) of Bratteli diagrams that preserve the cofinality of infinite paths in the diagram. Given a simple full group  $G$  admitting only a finite number of ergodic measures on the path-space  $X$  of the associated Bratteli diagram, we prove that every non-Dirac ergodic invariant random subgroup of  $G$  arises as the stabilizer distribution of the diagonal action on  $X^n$  for some  $n \geq 1$ . As a corollary, we establish that every group character  $\chi$  of  $G$  has the form  $\chi(g) = \text{Prob}(g \in K)$ , where  $K$  is a conjugation-invariant random subgroup of  $G$ .

Monday, November 12 at 3:00 PM in 636 SEO