1163-46-1020   **Ishan Ishan** (`ishan.ishan@vanderbilt.edu`), **Jesse Peterson***
(`jesse.d.peterson@vanderbilt.edu`) and **Lauren Ruth** (`lruth@mercy.edu`). *Von Neumann equivalence and properly proximal groups.*

We will introduce the notion of von Neumann equivalence between groups and von Neumann algebras. This is a non-commutative generalization of measure equivalence for groups. We show that a number of analytic properties such as amenability, the Haagerup property, and property (T) are preserved by this equivalence. We also show that proper proximality, which was introduced recently by R. Boutonnet, A. Ioana, and the speaker, is preserved by von Neumann equivalence. We then obtain examples of non-inner amenable groups that are not properly proximal. This is joint work with I. Ishan, and L. Ruth. (Received September 14, 2020)