

1124-05-161

Amrita Acharyya* (amrita.acharyya@utoledo.edu), University of Toledo, Toledo, OH, and
Jon M Corson and **Bikash C Das**. *Profinite Fundamental Group and Universal Cover of Profinite Graphs*.

We define a covering of a profinite graph to be a projective limit of a system of covering maps of finite graphs. With this notion of covering, we develop a covering theory for profinite graphs which is in many ways analogous to the classical theory of coverings of abstract graphs. For example, it makes sense to talk about the universal cover of a profinite graph and we show that it always exists and is unique. We define the profinite fundamental group of a profinite graph and show that a connected cover of a connected profinite graph is the universal cover if and only if its profinite fundamental group is trivial. (Received September 06, 2016)