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Amrita Acharyya, Jon M Corson and Bikash C Das* (bikash.das@ung.edu). *Varieties of Profinite Graphs.*

Given a category C of finite graphs, we say that a graph Γ is a $Pro-C$ graph, if it is the inverse limit of an inverse system of C -graphs and surjective C -maps. Initially, we investigate some $Pro-C$ graphs satisfying certain nice properties. Then, we specialize to a specific category that arises naturally when considering end point compactifications (viewed as profinite graphs in a certain way) of abstract connected graphs. In the analogous situation for groups, classes of finite groups H that satisfy various closure properties are of interest and a $Pro-H$ group is defined to be an inverse limit of an inverse system of H -groups and surjective homomorphisms. (Received November 04, 2019)