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Andrés Villaveces* (avillavecesn@unal.edu.co), Departamento de Matemáticas, Universidad Nacional de Colombia, Bogotá, 111321, Colombia, and **Zanjar Ghadernezhad**. *Around the Small Index Property and Reconstruction of Classes from Automorphism Groups, in Non-Elementary Classes*. Preliminary report.

The problem of reconstructing a structure M from its automorphism group $Aut(M)$ has led to deep interaction between logic, topology, descriptive set theory and group theory, historically. Works of Lascar, Hodges, Shelah among others have reframed the problem as a problem of reconstructing the first order theory of a saturated structure. Results from descriptive set theory have been useful in the countable case, other ideas are useful in the uncountable cases. The "Small Index Property" has isolated a specific instance of "topology reduced to group theory" for the action of the group.

We study versions of the Small Index Property for homogeneous models in abstract elementary classes, and we generalize the issue of reconstruction/interpretation to those contexts. (Received September 16, 2014)