

1125-55-210 **Mikael Vejdemo-Johansson*** (mvj@math.csi.cuny.edu), 2800 Victory Boulevard, 1S-215,
Staten Island, NY 10314. *Persistent homology and algebraic foundations: a survey.*

Persistent homology is a cornerstone of contemporary topological data analysis. Since the field got started, several algebraic developments have had concrete algorithmic and conceptual repercussions: opening up new analysis methods, and new computational methods emerging from the algebraic foundations.

Many ongoing directions of research today introduce sheaves as a next step in extending these algebraic foundations, and this session includes several speakers working in these directions. For this talk, we will look at the existing history, with an overview of existing algebraic foundations and their effects. (Received August 12, 2016)