

Title: Galoisian model theory: the role(s) of Grothendieck (à son insu !)

Abstract: In the 1980s, Bruno Poizat uncovered many natural connections between classical Galois theory and model theory of that time. He showed how Shelah's construction of imaginary elements revealed the possibility of extending the classical Galois correspondence to many other first order theories. Two decades later, some of these connections were reconstructed (by Kamensky in his doctoral thesis) in frameworks naturally corresponding to Grothendieck's version of Galois theory from SGA1. And recently, Hrushovski's work has embarked in a further generalization of these connections, through an analysis of "definability patterns" in arbitrary first order theories. I will highlight two aspects of this story: first, the role of Grothendieck (and Makkai/Reyes) in making this possible, combined with Poizat's use of Shelah's early work, and then the new lines of generalization of model theoretic Galois theory to non-elementary contexts.

