

ISU Algebra Seminar



Title: On Galois Theory with an Invitation to Category Theory (Part I & Part II)

Speaker: Lucian Ionescu

Location: STV 310

Time: Noon- 12:50 pm on Thursday (02/13/20, 02/20/20)

Abstract:

Part I: Category Theory is the modern math language allowing to structure mathematical knowledge (makes it easier to learn). A basic introduction allows to better understand the relation between groups and fields for instance, targeting Galois Theory. Applied to cyclic groups, Category Theory provides a nice pedagogical introduction (toy model) to Galois Theory in the context of Elementary Number Theory;

Part II: I call it Arithmetic Galois Theory, but “Klein-Galois Geometry” is quite a good alternative. Some arithmetic Galois groups will be computed. Contrary to the apparent simplicity, these foundations help clarify more advanced topics (only links will be provided), like Grothendieck’s Anabelian Geometry and the role of Motives in the Theory of Periods.

Students are encouraged to browse **before the talk:** https://en.wikipedia.org/wiki/Category_theory