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Jose Israel Rodriguez* (jrodriguez43@wisc.edu), Van Vleck, 480 Lincoln Dr, Madison, WI 53706. *Galois groups in statistics.*

Galois groups encode the internal structure of field extensions. Less well-known is that (families) of systems of polynomial equations also have Galois groups that encode the internal structure of the equations.

A strong interest in the subject comes from applying numerical continuation methods to compute Galois groups of polynomial systems appearing in applications. This is in addition to developments in enumerative geometry, computer vision, number theory, and sparse polynomial system solving.

The aim of this talk is to make give three distinct connections of Galois groups in statistics. The first is to Gaussian mixture models, the second is to the maximum likelihood degree of toric varieties, and the third is to data “at infinity”. (Received September 14, 2020)