Polynomial systems of graphical models

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Linear structural equation models are multivariate statistical models encoded by mixed graphs and studied in algebraic statistics. Given a structural equation model, one can determine whether the model is identifiable by studying a system of polynomial equations. In this talk, we will introduce this system of polynomial equations and how it relates to the property of identifiability. In addition, we will discuss results on the identifiability degree for structural equation models that are known to be locally identifiable. This talk will discuss work started at the 2018 ICERM semester on Nonlinear Algebra with the hope that the presented systems can serve as a possible application for new monodromy tools.