Statistics Seminar

Modeling a Causal Relationship between Teacher Moves and Student Discourses in Mathematics Classes

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Abstract: Often, mathematics educators use time-stamped and coded transcripts of classroom observations to study the relationship between the pedagogical moves of the teacher and student discourse. Typically, the analysis involves only qualitative methods. In this research, we are developing a quantitative analytic tool to study the causal relationship between the two-time series: teacher moves and student responses. We modeled the teacher process as a homogeneous Poisson process and students process as a nonhomogeneous Poisson process. Our model will assess the relationship between homogeneous and nonhomogeneous Poisson processes.

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