

MATHEMATICS COLLOQUIUM

Marginal Independence and Partial Set Partitions

Independence models are widely used in probabilistic modeling, including in computational biology, statistics, and machine learning. In spite of their ubiquity, there is a large gap between the families of independence models that are easy to parametrize and completely general independence models. Focusing specifically on marginal independence models, we establish a bijection between marginal independence models on n random variables and split closed order ideals in the poset of partial set partitions. We also establish that every discrete marginal independence model is a toric variety in an appropriate coordinate system. Everything will be defined and the talk will be accessible to first year graduate students and advanced undergraduate students. This is joint work with Francisco Ponce Carrión.

THURSDAY

NOVEMBER

14

4:30 - 5:30PM
LECONTE COLLEGE
ROOM 444



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