Spokane Regional Mathematics Colloquium
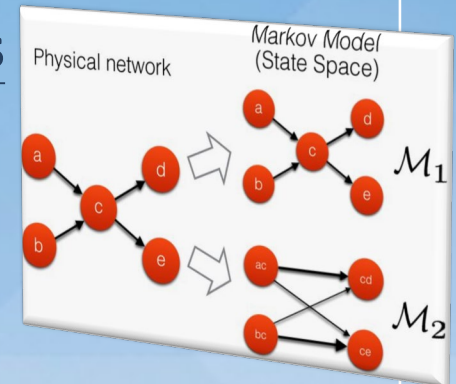
Attractiveness, Coupling, and Interacting Particles

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In this talk, I'll discuss coupling of random variables and what it means for random variables to be stochastically ordered. I'll show how stochastic ordering and coupling are used in interacting particle systems (IPS). An IPS is a continuous-time, discrete-space Markov process where the state at each spatial location changes randomly according to certain rules. An IPS that satisfies a certain stochastic ordering is called attractive. I'll show the requirements for an IPS to be attractive and discuss how I extended this theory. We'll explore relationships between Poisson processes, exponential clocks, how to represent all of this in a nice graphical way, and apply it to some models.

WHERE: GONZAGA UNIVERSITY | HUGHES HALL, ROOM 130

WHEN: WEDNESDAY, MAY 1, 2019, 5PM-6PM

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