

Dr. Eva Riccomagno,
Dipartimento di Matematica , Università di Genova

„Chain event graphs“

Chain event graphs are statistical models for the description and analysis of discrete asymmetric processes. A CEG is a function of an event tree, which describes how a process unfolds, and a set of elicited equivalence relationships.

CEGs share many advantages with Bayesian Networks and are an interesting alternative to them for example when dependence between variables has been found to be context specific; when the product sample space structure intrinsic to the efficiency of BN learning is not universal or when the model is more meaningfully specified through an event tree rather than relationships between a given set of measurements.

After introducing CEGs and showing that by definition they are algebraic statistical models, we'll briefly discuss how conditional independencies can be read from the graph's topology; progresses made in developing propagation algorithms and in developing methodology for eliciting models of this type. Mostly we'll examine how causal hypotheses can be expressed and examined with CEGs.