

THE UNIVERSITY OF GEORGIA DEPARTMENT OF STATISTICS

Colloquium Series

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Adversarial Risk Analysis

Adversarial Risk Analysis (ARA) is a decision-theoretic alternative to game theory, applicable to corporate competition, auctions, and counterterrorism. In ARA, one builds a model for the strategic decision making of one's opponent(s), and then places subjective Bayesian distributions over unknown quantities. This structure enables the analyst to compartmentalize distinct kinds of uncertainty. Within this framework one can use standard Bayesian techniques to develop a probability distribution over the actions of the opponent. Given this distribution, the decision theorist chooses the action that maximizes expected utility.