“It is a capital mistake to theorise before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to twist facts.”

Sherlock Holmes

Description. The course will attempt to predict human behavior based on an analysis of the decisions that underlie behavior. We will review the normative model of decision making and cognitive characteristics of the processes of Judgement and Decision Making. Particular attention will be given to descriptive models that allow for quantitative predictions. We will also discuss the findings of experiments, cognitive models of thinking and learning, and practical implications of research in the field.

Text and evaluations. There are no required textbooks for this course. Readings and materials will be provided by the instructor. The final exam will include questions about the papers discussed in class. The final mark will be a weighted average of class participation, class presentations, and final exam – with weights 20%, 40%, and 40%, respectively.

Introductory readings


1. Expected Utility Theory (EUT): axioms and violations; descriptive limitations of EUT.


2. Some alternatives to EUT: Prospect Theory, Cumulative Prospect Theory, Regret Theory, Case-Based Decision Theory.


4. The experience-description gap, the sampling approach.


7. Incorporating fairness and reciprocity in the utility function.


9. **Learning in Games: Reinforcement Learning, Fictitious Play and the role of foregone payoffs, hybrid models, neural network models, a choice prediction competition**