

Brown University
Economics 2160
Risk, Uncertainty and Information
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General References

- Mas-Colell, Whinston and Green, *Microeconomic Theory*, Oxford University Press, (1995).
- Diamond and Rothschild, *Uncertainty and Economics: Readings and Exercises*, Academic Press, (1974).
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- Macho-Stadler and Perez-Castrillo, *An Introduction to the Economics of Information: Incentives and Contracts*, Oxford University Press, (1997).
- Bolton and Dewatripont, *Contract Theory*, MIT Press, (2005).

1. Decision Making under Uncertainty

Preferences over lotteries. Expected utility. Risk aversion. Stochastic dominance. Riskiness. Non-expected utility. Information structures.

Mas-Colell, Whinston and Green, chapter 6.

Von Neumann and Morgenstern, *Theory of Games and Economic Behavior*, Princeton University Press, (1944).

Savage, *The Foundations of Statistics*, Wiley, (1954).

Arrow, *Essays in the Theory of Risk Bearing*, Chicago, (1971).

Pratt, "Risk Aversion in the Small and in the Large," *Econometrica* **32**, (1964), reprinted in Diamond and Rothschild.

- Rothschild and Stiglitz, "Increasing Risk (I): a Definition," *Journal of Economic Theory* **2**, (1970), reprinted in Diamond and Rothschild.
- Aumann and Serrano, "An Economic Index of Riskiness," *Journal of Political Economy* **116**, (2008).
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- Machina, "Choice under Uncertainty: Problems Solved and Unsolved," *Journal of Economic Perspectives* **1**, (1987).
- Camerer, "Individual Decision Making," in *Handbook of Experimental Economics*, Princeton, (1995).
- Rabin, "Risk Aversion and Expected Utility Theory: a Calibration Theorem," *Econometrica* **68**, (2000).
- Cox and Sadiraj, "Small- and Large-Stakes Risk Aversion: Implications of Concavity Calibration for Decision Theory," *Games and Economic Behavior* **56**, (2006).
- Palacios-Huerta and Serrano, "Rejecting Small Gambles under Expected Utility," *Economics Letters* **91**, (2006).
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- Blackwell, "Comparison of Experiments," Proceedings of the 2nd Berkeley Symposium on Mathematical Statistics and Probability, University of California Press, (1951).
- Azrieli and Lehrer, "The Value of a Stochastic Information Structure," *Games and Economic Behavior* **63**, (2008).

2. Models with a Small Number of Agents

Adverse selection, signaling and screening. Moral hazard and the principal-agent model. Complete and incomplete contracts.

Mas-Colell, Whinston and Green, chapters 13 and 14.

Akerloff, "The Market for 'Lemons'" Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* **89**, (1970).

Spence, *Market Signaling*, Harvard, (1974).

Holmstrom and Myerson, "Efficient and Durable Decision Rules with Incomplete Information," *Econometrica* **51**, (1983).

Rothschild and Stiglitz, "Equilibrium in Competitive Insurance Markets: an Essay in the Economics of Imperfect Information," *Quarterly Journal of Economics* **80**, (1976).

Riley, "Informational Equilibrium," *Econometrica* **47**, (1979).

Cho and Kreps, "Signaling Games and Stable Equilibria," *Quarterly Journal of Economics* **102**, (1987).

Grossman and Hart, "An Analysis of the Principal-Agent Problem," *Econometrica* **51**, (1983).

Holmstrom, "Moral Hazard and Observability," *Bell Journal of Economics* **10**, (1979).

Rogerson, "The First Order Approach to Principal-Agent Problems," *Econometrica* **53**, (1985).

Maskin and Tirole, "Unforeseen Contingencies, Property Rights and Incomplete Contracts," *Review of Economic Studies* **66**, (1999).

Hart and Moore, "Foundations of Incomplete Contracts," *Review of Economic Studies* **66**, (1999).

Segal, "Complexity and Renegotiation: a Foundation for Incomplete Contracts," *Review of Economic Studies* **66**, (1999).

3. Markets under Asymmetric Information

Centralized markets. General equilibrium under uncertainty. Radner equilibrium, rational expectations equilibrium. Decentralized markets. Search. Matching and bargaining. Other non-cooperative game theoretic trading models. Cooperative game theoretic trading models: the core.

Mas-Colell, Whinston and Green, chapter 19.

Radner, "Equilibrium under Uncertainty," in *Handbook of Mathematical Economics* (vol. II), North-Holland, (1982).

Diamond, "A Model of Price Adjustment," *Journal of Economic Theory* **3**, (1971).

Burdett and Judd, "Equilibrium Price Dispersion," *Econometrica* **51**, (1983).

Wolinsky, "Information Revelation in a Market with Pairwise Meetings," *Econometrica* **58**, (1990).

Serrano and Yosha, "Information Revelation in a Market with Pairwise Meetings: the One-Sided Information Case," *Economic Theory* **3**, (1993).

Blouin and Serrano, "A Decentralized Market with Common Values Uncertainty: Non-Steady States," *Review of Economic Studies* **68**, (2001).

Gottardi and Serrano, "Market Power and Information Revelation in Dynamic Trading," *Journal of the European Economic Association* **3**, (2005).

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Satterthwaite and Shneyerov, "Dynamic Matching, Two-Sided Incomplete Information, and Participation Costs: Existence and Convergence to Perfect Competition," *Econometrica* **75**, (2007).

Wilson, "Information, Efficiency and the Core of an Economy," *Econometrica* **46**, (1978).

Forges, Minnelli and Vohra, “Incentives and the Core of an Exchange Economy: A Survey,” *Journal of Mathematical Economics* **38**, (2002).

Vohra, “Incomplete Information, Incentive Compatibility and the Core,” *Journal of Economic Theory* **86**, (1999).

Forges, Mertens and Vohra, “The Ex-Ante Incentive Compatible Core in the Absence of Wealth Effects,” *Econometrica* **70**, (2002).

Serrano and Vohra, “Information Transmission in Coalitional Voting Games,” *Journal of Economic Theory* **134**, (2007).

Myerson, “Virtual Utility and the Core of Games with Incomplete Information,” *Journal of Economic Theory* **136**, (2007).

Serrano, Vohra and Volij, “On the Failure of Core Convergence in Economies with Asymmetric Information,” *Econometrica* **69**, (2001).

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Kamishiro and Serrano, “Information Transmission and Core Convergence in Quasilinear Economies,” Working Paper, Brown University, 2008.

4. Implementation Theory

Dominant strategy implementation. Nash implementation. Bayesian implementation. Current topics.

Mas-Colell, Whinston and Green, chapter 23.

Serrano, “The Theory of Implementation of Social Choice Rules,” *SIAM Review* **46**, (2004).

Jackson, “A Crash Course in Implementation Theory,” *Social Choice and Welfare* **18**, (2001).

Gibbard, “Manipulation of Voting Schemes: a General Result,” *Econometrica* **41**, (1973).

- Satterthwaite, “Strategy-Proofness and Arrow’s Conditions: Existence and Correspondence Theorems for Voting Procedures and Social Welfare Functions,” *Journal of Economic Theory* **10**, (1975).
- Maskin, “Nash Equilibrium and Welfare Optimality,” *Review of Economic Studies* **66**, (1999).
- Abreu and Sen, “Virtual Implementation in Nash Equilibrium,” *Econometrica* **59**, (1991).
- Jackson, “Bayesian Implementation,” *Econometrica* **59**, (1991).
- Serrano and Vohra, “Some Limitations of Virtual Bayesian Implementation,” *Econometrica* **69**, (2001).
- Serrano and Vohra, “A Characterization of Virtual Bayesian Implementation,” *Games and Economic Behavior* **50**, (2005).
- Eliasz, “Fault-Tolerant Implementation,” *Review of Economic Studies* **70**, (2003).
- Cabrales and Serrano, “Implementation in Adaptive Better-Response Dynamics,” Working Paper, Brown University, 2007.
- Tumennasan, “To Err is Human: Implementation in Quantal Response Equilibria,” Mimeo, Brown University, 2008.
- Bergemann and Morris, “Strategic Distinguishability with an Application to Robust Virtual Implementation,” Mimeo, Yale University and Princeton University, 2007.
- Artemov, Kunimoto and Serrano, “Robust Virtual Implementation with Incomplete Information: Towards a Reinterpretation of the Wilson Doctrine,” Working Paper, Brown University, 2007.