

# **Syllabus for “Introduction to Auctions”**

## **Prof. Andy Skrzypacz, September 2009**

Books that cover a lot of auction topics that I recommend are:

Vijay Krishna “Auction Theory”

Paul Milgrom “Putting Auction Theory to Work”

Paul Klemperer “Auctions: Theory and Practice” (this book is available online here: )

<http://www.paulklemperer.org/index.htm>

The first day will focus on describing standard auctions, equilibria in first-price and second-price auctions and then Revenue Equivalence Theorem.

The second day will focus on optimal auctions, and the paper “Auctions vs Negotiations” to highlight the value of additional bidders.

The third day will focus on auctions with contingent payments, with correlated values, winner’s curse, and the Linkage Principle method.

Here are some papers that are related to these topics:

“\*” in the list of papers indicate the first-order reading.

### **1. Introduction to Auctions, Revenue Equivalence.**

\* William Vickrey (1961), "Counterspeculation, Auctions, and Competitive Sealed Tenders", *Journal of Finance*, XVI, 8-37.

\*Vijay Krishna “Auction Theory” Chapters 2, 3.

Paul Milgrom “Putting Auction Theory to Work” Chapters 1, 2.

R. Preston McAfee; John McMillan (1987) “Auctions and Bidding” *Journal of Economic Literature*, Vol. 25, No. 2. (Jun., 1987), pp. 699-738.

Paul Milgrom “Auctions and Bidding (1989): A Primer” *The Journal of Economic Perspectives*, Vol. 3, No. 3. (Summer, 1989), pp. 3-22.

Paul Klemperer (1999). "Auction Theory: A Guide to Literature." *Journal of Economic Surveys* 13(3): 227-286.

### **2. Mechanism Design, Optimal Auctions, Bargaining (Independent Private Values);**

\*Roger B. Myerson (1981), "Optimal Auction Design", *Mathematics of Operations Research*, 6 (1), February 58-73.

\*Roger B. Myerson and Mark A. Satterthwaite (1983), "Efficient Mechanisms for Bilateral Trading", *Journal of Economic Theory*, 29 (2), April 265-81.

\*Jeremy Bulow and John Roberts (1989), "The Simple Economics of Optimal Auctions", *Journal of Political Economy* 97 (5), October 1060-90.

\*Jeremy Bulow and Paul Klemperer (1996), "Auctions versus Negotiations", *American Economic Review*, 86 (1), March 180-94.

\*Vijay Krishna "Auction Theory" Chapter 5.

Paul Milgrom "Putting Auction Theory to Work" Chapters 3,4

Peter Cramton, Robert Gibbons, and Paul Klemperer (1987), "Dissolving a Partnership Efficiently", *Econometrica*, 55 (3), May, 615-32.

John G. Riley and William F. Samuelson (1981), "Optimal Auctions", *American Economic Review*, 71 (3), June 381-92.

### **3. The Linkage Principle, Affiliation, Common Value, Auctions with Contingent Payments.**

\*Paul R. Milgrom and Robert J. Weber (1982a), "A Theory of Auctions and Competitive Bidding", *Econometrica* 50 (5), September, 1089-122.

\*Paul R. Milgrom and Robert J. Weber (1982b), "The Value of Information in a Sealed-Bid Auction", *Journal of Mathematical Economics*, 10 (1), June, 105-14.

\*Robert G. Hansen (1985), "Auctions with Contingent Payments", *American Economic Review*, 75 (4) (September, pp. 862-865.

\*DeMarzo, P., Kremer, I. and Skrzypacz, A. (2005), "Bidding with Securities: Auctions and Security Design," *American Economic Review* 95 (4) September, 936 – 959.

Vijay Krishna "Auction Theory" Chapters 6, 7 and 10.

Paul Milgrom "Putting Auction Theory to Work" Chapter 5.

Mathew Jackson and Ilan Kremer (2006) "The Relevance of a Choice of Auction Format in a Competitive Environment" forthcoming in *Review of Economic Studies*

Jacques Cremer and Richard P. McLean (1985) "Optimal Selling Strategies Under Uncertainty for a Discriminating Monopolist When Demands are Interdependent", *Econometrica* 53 (2), March 345-61.

John G. Riley (1988), "Ex Post Information in Auctions", *Review of Economic Studies* LV (3), No. 183, July, 409-29.

R. Preston McAfee and John McMillan, "Competition for Agency Contracts", *RAND Journal of Economics*, 18 (2) (Summer, 1987), pp. 296-307.

Richard Engelbrecht-Wiggans, Paul R. Milgrom, Robert J. Weber (1983) "Competitive Bidding and Proprietary Information," *Journal of Mathematical Economics*, 11, 161-169.

Kenneth Hendricks and Robert H. Porter (1988) "An Empirical Study of an Auction with Asymmetric Information", *American Economic Review*, 78, (5), pp. 865-883.

Kenneth Hendricks; Robert H. Porter; Charles A. Wilson (1994) "Auctions for Oil and Gas Leases with an Informed Bidder and a Random Reservation Price," *Econometrica*, 62, (6). pp. 1415-1444.