Empirical observations and experimental results in economics over the last several decades, have begun to question, with increasing frequency and intensity, both economic assumptions and predictions that underlie classical economics. They forced economists to rethink their model of individuals and groups economic behavior. Questions such as, when and under what circumstances, individual are less rational then depicted in the classical model, and what other, less self centered, arguments of preferences are important to recognize and model? In search of a richer and more realistic assumptions and models about human behavior and decision-making, economists have turned to controlled laboratory experiments. The resulting work has significantly impacted how economists think about individual decision-making, game and group theory, and behavior within markets. (The impact of economic experiments on the field became especially clear when Vernon Smith and Daniel Kahneman shared the Nobel Prize in the fall of 2002.) One of the most excited outcome of this new experimental and behavioral program is the viable dialog resulted, mainly in the recent years, between experimentalists and theorists.

In his (Al Roth) introduction to, Laboratory Experimentation in Economics: Six Points of View, Cambridge University Press, 1987, Roth, A. E. (ed.), he writes:

“Although it became increasingly evident that no classification scheme would be adequate to the task of demonstrating the relationships as well as the differences between different bodies of work, I organized the paper around three principal kinds of dialogues, which I referred to as “Speaking to Theorists,” “Searching for Facts,” and “Whispering in the Ears of Princes.”

It is worth noting that all the three dialogs come under “dialogues” which may be surprising since one may expect, as in other sciences to find “testing theories” as the most or maybe even the only thing that experimental economics cares about so we’ll need to understand why (or should) experimental economics be so different. And of course experimental economics is also about testing theories and providing “wind tunnel” for testing and improving mechanisms (e.g., auctions) to be implemented by governments and corporations.

It is not possible to cover the full range of areas where experimental methods are used in a semester and there is more than one way to organize such a course. We can have a list of issues and methodological challenges and discuss them pointing to the relevant literature. Instead, we have chosen subjects/areas where both of us studied and published, since in these are the areas that we are most knowledgeable, while addressing the methodological concerns most relevant in
these areas. As a result, the reference list contains disproportional number of our own work and we may have overlooked and/or omitted many others’ good works. (See in the syllabus below).

There is more than one possibility to organize such course. We can have a list of issues and methodological challenges and discuss them pointing to the relevant literature. We have decided to simply cover topics from our research program (E.g., WARP, auctions) and cover the experimental literature while addressing of the issues and the methodological challenges and our solutions (syllabus below).

The plan is to cover the following topics: Private-Values and Common-Values Auctions. (4-5 lectures); How robust are “well known” anomalies to deliberations, (1 lecture); Bounded Rationality, (2 lecture). Students’ presentations, (2 meetings).

**General Reading, Texts:**

It is difficult to single out simple text or source of readings. Here are some references to general sources.


[http://www.econ.ohio-state.edu/kagel/Auction_survey_1_11_all.pdf](http://www.econ.ohio-state.edu/kagel/Auction_survey_1_11_all.pdf)

These handbooks contain chapters, by leading experimentalist that survey the literature up to that time in the chapter particular area. The second Volume is forthcoming but the relevant, auction, Chapter will be made available.


<table>
<thead>
<tr>
<th>Lecture # and Date</th>
<th>Subject(s)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4) Fri. Feb. 14</td>
<td><strong>Auctions: Private Values</strong></td>
<td></td>
</tr>
<tr>
<td>5) Fri. Feb. 21</td>
<td><strong>Auctions: Private Values</strong></td>
<td></td>
</tr>
<tr>
<td>6) Fri. Feb. 28</td>
<td><strong>Auctions: Common Values</strong></td>
<td></td>
</tr>
<tr>
<td>7) Fri. Mar. 07</td>
<td><strong>Auctions: Common Values</strong></td>
<td></td>
</tr>
<tr>
<td>10) Fri. Apr. 04</td>
<td>Robustness and Anomalies</td>
<td></td>
</tr>
<tr>
<td>11) Fri. Apr. 11</td>
<td><strong>Bounded Rationality</strong></td>
<td></td>
</tr>
<tr>
<td>12) Fri. Apr. 18</td>
<td><strong>Bounded Rationality</strong></td>
<td></td>
</tr>
<tr>
<td>13) Fri. Apr. 25</td>
<td>Students presentations</td>
<td></td>
</tr>
<tr>
<td>14) Fri. May. 02</td>
<td>Students presentations</td>
<td></td>
</tr>
</tbody>
</table>
Auctions: Private Values: Single and Multi Unit (MU) IPV, APV.

- Motivation: history, importance: value and volumes of trade; best application of game theory. The four “standard” (“simple) auction rules (formats).
- Equilibria, of the standard auction in the benchmark, Vickrey, environment.
- Converge of the main results from Riley & Samuelson; Myerson, both (1981). E.g. Revenue Equivalence, “strategic equivalence, optimal auctions.
- Comparative statics: risk aversion (RA); correlations; number of bidders, etc.
- MU demand auctions. Demand reduction; Complementary; Package auctions.

Experimental issues:

- Testing theory.
- Deviation from Nash Equilibrium (NE): Overbidding in standard auctions and explanations: Risk aversion; Joy of Winning (JOW); Regret; Bounded Rationality.

Methodological Experimental issues:

- How to incentivize; Instructions; Randomization of groups; Unit of observation; Subject population, controls such as risk preferences.

References to lectures 4 and 5: in * indicates first priority readings.

Theoretical:

Klemperer, Paul, Auctions: Theory and Practice, Princeton University Press, 2004. (Most of this is available on line.)


Experimental:


Auctions: Common Value Auctions and the Winner’s Curse (WC).

- Equilibria, and main theoretical results Convergence, Willingness to Pay
- Strategic equivalence FPA, DA.
- Comparative statics: risk aversion (RA); correlations; number of bidders.
- Almost Common Values.
- Theories to Explain the WC (probably will introduce in another lecture)

Experimental issues:

- Testing theory.
- Overbidding in CVA and the WC.
- Learning and Experience
- Mitigating the WC.
- Subject Populations.

Methodological Experimental issues:

- Similar to previous and; How to deal with losses in experiments?

References to lectures 6 and 7: in * are first priority readings.

Theoretical:


Experimental:


Levin D. and P. Reiss, 2013-WP, “Could we overcome the Winner’s Curse by (Behavioral) Auction Design?”

How robust are “well known” anomalies to deliberations.

- Experimental work and the production of anomalies.
- The importance of using (and misusing) of anomalies in economics.
- Anomalies and the economic model.

Methodological Experimental issues:

- Different ways of allowing deliberations strengths and weaknesses.
- Free deliberation with vs. creating predetermined messages.
- “Truth wins” learning in deliberations: synergies or just first order effects.

References to lectures 10.


More will be added later
References to lectures 11 and 12: in * are first priority readings.

Theoretical:


Experimental:

Levin D., and P. Reiss (2013-WP), “Could we overcome the Winner’s Curse by (Behavioral) Auction Design?”
Meetings 13 and 14 are Students Presentations.

Additional Bibliography on auctions for interested student; theory and experimental:
auction and IO, Multi units etc.;

Multi-unit demand auctions

Cramton and Schwartz, 2002, “Collusive bidding in the FCC spectrum auctions” Contributions to economic analysis and policy (see Cramton’s web site for a copy to download).

Package/Combinatorial/Synergies


Auctions and IO


**More on Auctions, IO, and Internet Auctions**


