

Bargaining: Theory and Experiments (MSc)

Lecturer

Dr Emin Karagözoğlu (Assistant Professor of Economics, Department of Economics, Bilkent University, Ankara, Turkey).

Course objectives

Our objective is to introduce students the key concepts in bargaining, major approaches used in modeling/studying bargaining (e.g., cooperative and noncooperative game theory, experimental economics, and behavioral economics), interactions between these approaches, special topics in bargaining, and future directions in bargaining research.

Course content

The following is a provisional schedule. The exact content and the sequence in which the content will be covered can change.

The course starts with an emphasis on the importance of the study of negotiations from different perspectives. Then, we first introduce the key ingredients of a simple bargaining problem. Later, we introduce two major theoretical approaches used to study bargaining problems in economics: cooperative game theoretical and noncooperative game theoretical approach. After that, we study the extensions of the basic models and special topics in bargaining in this theoretical framework. In the second part of the course, we focus on experimental and behavioral approaches to study bargaining problems. Here, we will start with early bargaining experiments, investigate various types of bargaining protocols frequently used in experimental work, and again look at special topics (e.g., fairness, focal points, first offers, unstructured bargaining, stake-size effects, time pressure, joint production etc.). In the final part of the course, we focus on topics we think should and will be studied by bargaining scholars more in the years to come.

Prerequisites

An introductory level of knowledge in economics and game theory. All the concepts that are used in the course will be defined, explained, and discussed during the course.

Instructional methods

Lectures, classroom experiments, online video material, and discussions.

Reading list

There is a rich reading list for the course. Readings are divided into two groups: required and optional. To benefit from the course and lectures to the greatest possible extent, students **should** try to read the required ones. The optional readings are to complete your understanding and serve as an extended bibliography.

THEORY

Axiomatic/Cooperative Bargaining Theory:

Required Readings:

- Chun, Y. (1988) The equal-loss principle for bargaining problems. *Mathematical Social Sciences*, 26, 103-106.
- Kalai, E. (1977) Proportional solutions to bargaining situations: Interpersonal utility comparisons. *Econometrica*, 45(7), 1623-1630.
- Kalai, E. and M. Smorodinsky (1975) Other solutions to Nash's bargaining problem. *Econometrica*, 43(3), 513-518.
- Kıbrıs, Ö. (2010) Cooperative game theory approaches to negotiations. In Handbook of Group Decision and Negotiation, Advances in Group Decision and Negotiation, Volume 4, 151-166
- Nash, J. F. Jr. (1950) The bargaining problem. *Econometrica*, 18(2), 155-162.
- Nash, J. F. Jr. (1953) Two person cooperative games. *Econometrica*, 21(3), 128-140.
- Osborne, M. J. and A. Rubinstein (1990) *Bargaining and Markets*. Academic Press.

Optional Readings:

- Balakrishnan, P. V., Gomez, J. C., and R. V. Vohra (2011) The tempered aspirations solution for bargaining problems with a reference point. *Mathematical Social Sciences*, 62(3), 144-150.
- Gupta S. and Z. A. Livne (1988) Resolving a conflict situation with a reference outcome: an axiomatic model. *Management Science*, 34(11), 1303-1314.
- Karagözoğlu, E., Keskin, K. and E. Özcan-Tok (2016) Between anchors and aspirations: A new family of bargaining solutions. *Bilkent University, Department of Economics Working Paper*.
- Karagözoğlu, E. and S. Rachmilevitch (2017) Duality, area considerations, and the Kalai-Smorodinsky solution. *Operations Research Letters*, 45(1), 30-33.
- Karagözoğlu, E. and E. Özcan-Tok (2018) Iterated egalitarian compromise solution to bargaining problems and midpoint domination. *Operations Research Letters*, 46(3), 282-285.
- Roth, A. E. (1979) *Axiomatic Models of Bargaining*. Lecture Notes in Economics and Mathematical Systems #170, Springer Verlag.

Non-Cooperative Bargaining Theory:

Required Readings:

- Chatterjee, K. (2010) Noncooperative bargaining theory. Handbook of Group Decision and Negotiation, Advances in Group Decision and Negotiation, Volume 4, 141-149.
- Muthoo, A. (2000) A non-technical introduction to bargaining theory. *World Economics*, 1-2, 145-166.
- Nash, J. F. Jr. (1953) Two person cooperative games. *Econometrica*, 21(3), 128-140.
- Osborne, M. J. and A. Rubinstein (1990) *Bargaining and Markets*. Academic Press.
- Rubinstein, A. (1982) Perfect equilibrium in a bargaining model. *Econometrica*, 50(1), 97-110.
- Sutton, J. (1986) Non-cooperative bargaining theory: An introduction. *Review of Economic Studies*, 53(5), 709-724.

Optional Readings:

- Roth, A. E. (1985) *Game Theoretic Models of Bargaining*. Cambridge University Press.

Special Topics:

Nash Program, Arbitration, Equal Division, and Implementation:

Required Readings:

- Abreu, D. and D. Pearce (2015) A dynamic reinterpretation of Nash bargaining with endogenous threats. *Econometrica*, 83, 1641–1655.
- Anbarcı, N. (2001) Divide-the-dollar game revisited. *Theory and Decision*, 50(4), 295-304.
- Anbarcı, N., and J. H. Boyd (2011) Nash demand game and the Kalai–Smorodinsky solution. *Games and Economic Behavior*, 71, 14–22.
- Ashlagi, I., Karagözoğlu E., and B. Klaus (2012) A non-cooperative support for equal division in estate division problems. *Mathematical Social Sciences*, 63(3), 228-233.
- Brams, S. J. and A. E. Taylor (1994) Divide the dollar: Three solutions and extensions. *Theory and Decision*, 37(2), 211-231.
- Cetemen, E. D. and E. Karagözoğlu (2014) Implementing equal division with an ultimatum threat. *Theory and Decision*, 77(2), 223-236.
- Karagözoğlu, E. and S. Rachmilevitch (2018) Implementing egalitarianism in a class of Nash demand games. *Theory and Decision*, forthcoming.

Optional Readings:

- Bolton, G. E. (1997) The rationality of splitting equally. *Journal of Economic Behavior and Organization*, 32(3), 365-381.
- Rachmilevitch, S. (2017) Punishing greediness in divide-the-dollar games. *Theory and Decision*, 82(3), 341-351.
- Young, P. H. (1993) An evolutionary model of bargaining. *Journal of Economic Theory*, 59(1), 145-168.

Endogenous Disagreement/Reference Points:

Required Readings:

- Anbarcı, N., S. Skaperdas, and C. Syropoulos (2002) Comparing bargaining solutions in the shadow of conflict: How norms against threats can have real effects. *Journal of Economic Theory*, 106(1), 1-16.
- Busch, L-A. and Q. Wen (1995) Perfect equilibria in a negotiation model. *Econometrica*, 63(3), 545-565.
- Compte, O. and P. Jehiel (2004) Gradualism in bargaining and contribution games. *Review of Economic Studies*, 71(4), 975-1000.
- Driesen, B., A. Perea, and H. Peters (2012) Alternating offers bargaining with loss aversion. *Mathematical Social Sciences*, 64(2), 103-118.
- Karagözoğlu, E. and K. Keskin (2016) Endogenous reference points in bargaining. *Bilkent University, Department of Economics, Working Paper*.
- Shalev, J. (2002) Loss aversion in bargaining. *Theory and Decision*, 52, 201-232.

Optional Readings:

- Bozbay, I., Dietrich, F., and H. Peters (2012) Bargaining with endogenous disagreement: The extended Kalai– Smorodinsky solution. *Games and Economic Behavior*, 74(1), 407-417.
- Esteban, J. and J. Sakovics (2008) A theory of agreements in the shadow of conflict: The genesis of bargaining power. *Theory and Decision*, 65(3), 227-252.

- Hyndman, K. (2011) Repeated bargaining with reference-dependent preferences. *International Journal of Game Theory*, 40(3), 527-549.
- Karagözoğlu, E. and K. Keskin (2015) A tale of two bargaining solutions. *Games*, Special Issue on Bargaining Games, 6(2), 161-174.
- Li, D. (2007) Bargaining with history-dependent preferences. *Journal of Economic Theory*, 136(1), 695-708.

Focal Points:

Required Readings:

- Binmore, K., Swierzbinski, J., Hsu, S., and C. Proulx (1993) Focal points and bargaining. *International Journal of Game Theory*, 22(4), 381-409.
- Schelling, T. (1960) *Strategy of Conflict*. Harvard University Press.

Optional Readings:

- Roth, A. E. (1985) Toward a focal-point theory of bargaining. In *Game-Theoretic Models of Bargaining*, Chapter 12, 259–268, Cambridge University Press.

Bargaining Delay:

Required Readings:

- Admati, A. and M. Perry (1987) Strategic delay in bargaining. *Review of Economic Studies*, 54(3), 345 - 364.
- Cramton, P. C. (1991). Strategic delay in bargaining with two-sided uncertainty. *Review of Economic Studies*, 59(1), 205-225.
- Fershtman, C. and D. Seidmann (1993). Deadline effects and inefficient delay in bargaining with endogenous commitment. *Journal of Economic Theory*, 60(2), 306-321.
- Gül, F. and H. Sonnenschein (1988). On delay in bargaining with one-sided uncertainty. *Econometrica*, 56(3), 601-611.
- Jehiel, P. and B. Moldovanu (1995). Negative externalities may cause delay in negotiation. *Econometrica*, 63(6), 1321-1355.
- Karagözoğlu, E. and K. Keskin (2018) Time-varying fairness concerns, delay, and disagreement in bargaining. *Journal of Economic Behavior and Organization*, 147, 115-128.
- Perry, M. and P. Reny (1993). A non-cooperative bargaining model with strategically timed offers. *Journal of Economic Theory*, 59(1), 50-77.
- Rubinstein, A. (1985). A bargaining model with incomplete information about time preferences. *Econometrica*, 53(5), 1151-1172.
- Sakovics, J. (1993). Delay in bargaining games with complete information. *Journal of Economic Theory*, 59(1), 78-95.
- Yıldız, M. (2004). Waiting to persuade. *Quarterly Journal of Economics*, 119(1), 223-248.
- Yıldız, M. (2011). Bargaining with optimism. *Annual Review of Economics*, 3(1), 451-478.

Optional Readings:

- Abreu, D. and F. Gül (2000). Bargaining and reputation. *Econometrica*, 68(1), 85-117.
- Akin, Z. (2007). Time inconsistency and learning in bargaining games. *International Journal of Game Theory*, 36(2), 275-299.

- Ali, S. N. M. (2006). Waiting to settle: Multilateral bargaining with subjective biases. *Journal of Economic Theory*, 130(1), 109-137.
- Avery, C. and P. Zemsky (1994). Option values and bargaining delays. *Games and Economic Behavior*, 7(2), 139-153.
- Bac, M. (2000). Signaling bargaining power: Strategic delay versus restricted offers. *Economic Theory*, 16(1), 227-237.
- Chen, Y. and X. Luo. (2008). Delay in a bargaining game with contracts. *Theory and Decision*, 65(4), 339-353.
- Cho, I-K. (1990). Uncertainty and delay in bargaining. *Review of Economic Studies*, 57(4), 575-595.
- Cramton, P. C. (1984). Bargaining with incomplete information: An infinite horizon model with two-sided uncertainty. *Review of Economic Studies*, 51(4), 579-593.
- Feinberg, Y. and A. Skrzypacz (2005). Uncertainty about uncertainty and delay in bargaining. *Econometrica*, 73(1), 69-91.
- Galasso, A. (2010). Over-confidence may reduce negotiation delay. *Journal of Economic Behavior and Organization*, 76(3), 716-733.
- Merlo, A. and C. Wilson (1998). Efficient delays in a stochastic model of bargaining. *Economic Theory*, 11(1), 39-55.
- Vidal-Puga, J. J. (2008). Delay in alternating-offers model of bargaining. *International Journal of Game Theory*, 37(4), 457-474.

EXPERIMENTS

Early Bargaining Experiments / Various Bargaining Protocols:

Required Readings:

- Binmore, K., Shaked, A., and J. Sutton (1985). Testing noncooperative bargaining theory: A preliminary study. *American Economic Review*, 75(5), 1178-1180.
- Bolton, G. (1991). A comparative model of bargaining: Theory and evidence. *American Economic Review*, 81(5), 1096-1136.
- Güth, W., Schmittberger, R. and B. Schwarz (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior and Organization*, 3(4), 367-88.
- Nydegger, R. V. and G. Owen (1975). Two person bargaining: An experimental test of the Nash axioms. *International Journal of Game Theory*, 3(4), 239-349.
- Roth, A. E., M. W. K. Malouf, and J. K. Murnighan (1981). Sociological versus strategic factors in bargaining. *Journal of Economic Behavior and Organization*, 2(2), 153-177.
- Roth, A.E. and J. K. Murnighan (1982). The role of information in bargaining: An experimental study. *Econometrica*, 50(5), 1123-1142.
- Stone, J. (1958). An experiment in bargaining games. *Econometrica*, 26(2), 286-296.

Optional Readings:

- Contini, B. (1968). The value of time in bargaining negotiations: Some experimental evidence. *American Economic Review*, 58(3), 374-393.
- Flood, M. M. (1958). Some experimental games. *Management Science*, 5(1), 5-26.
- Roth, A. E. (1983) Toward a theory of bargaining: An experimental study in economics. *Science*, 220, 687-691.
- Siegel, S. and L. E. Fouraker (1960). Bargaining and Group Decision Making: Experiments in Bilateral Monopoly, New York, McGraw-Hill.

Special Topics:

Fairness/Justice:

Required Readings:

- Babcock, L., and G. Loewenstein (1997). Explaining bargaining impasse: the role of self-serving biases. *Journal of Economic Perspectives*, 11(1), 109-126.
- Babcock, L., G. Loewenstein, S. Issacharoff, and C. Camerer (1995). Biased judgments of fairness in bargaining. *American Economic Review*, 85(5), 1337-1343.
- Bazerman, M. H. (1985). Norms of distributive justice in interest arbitration. *Industrial Labor Relations Review*, 38(4), 558-570.
- Birkeland, S. and B. Tungodden (2014) Fairness motivation in bargaining: A matter of principle. *Theory and Decision*, 77, 125-51.
- Bolton, G. E. and A. Ockenfels (2000). ERC: A theory of equity, reciprocity and competition. *American Economic Review*, 90(1), 166-193.
- Forsythe, R., J. L. Horowitz, N. E. Savin, and M. Sefton (1994). Fairness in simple bargaining experiments. *Games and Economic Behavior*, 6(3), 347-369.
- Hoffman, E. and M.L. Spitzer (1985). Entitlements, rights, and fairness: An experimental examination of subjects' concepts of distributive justice. *Journal of Legal Studies*, 14(2), 259-97.
- Zwick, R. and X-P Chen (1999). What price fairness? A bargaining study. *Management Science*, 45(6), 804-823.

Optional Readings:

- Bereby-Meyer, Y. and M. Niederle. (2005). Fairness in bargaining. *Journal of Economic Behavior and Organization*, 56, 173-186.
- Buchan, N., Croson, R. T., and E. J. Johnson (2004). When do fair beliefs influence bargaining behavior? Experimental bargaining in Japan and the United States. *Journal of Consumer Research*, 31(June), 181-190.
- Burrows, P. and G. Loomes (1994). The impact of fairness on bargaining. *Empirical Economics*, 19(2), 201-221.
- De Bruyn, A. and G. E. Bolton (2008). Estimating the influence of fairness on bargaining behavior. *Management Science*, 54(10), 1774-1791.
- Harrison, G. W. and K. A. McCabe (1996). Expectations and fairness in a simple bargaining experiment. *International Journal of Game Theory*, 25(3), 303-327.

Reference/Focal Points:

Required Readings:

- Bolton, G. E. and E. Karagözoğlu (2016) On the influence of hard leverage in a soft leverage bargaining game: The importance of credible claims. *Games and Economic Behavior*, 99, 164-179.
- Gaechter, S. and A. Riedl (2005). Moral property rights in bargaining with infeasible claims. *Management Science*, 51(2), 249-263.
- Güth, W., Huck, S., and W. Müller (2001). The relevance of equal splits in ultimatum games. *Games and Economic Behavior*, 37(1), 161-169.
- Huyck, J. Van, Battalio, R., Mathur, S., Huyck, P. Van, and A. Ortmann (1995). On the origin of convention: Evidence from symmetric bargaining games. *International Journal of Game Theory*, 24(2), 187-212.
- Isoni, A., Poulsen, A., Sugden, R., and K. Tsutsui (2014). Efficiency, equality, and labelling: An experimental investigation of focal points in explicit bargaining. *American Economic Review*, 104(10), 3256-3287.

Optional Readings:

- Güth, W. (1995). On ultimatum bargaining experiments - A personal review. *Journal of Economic Behavior and Organization*, 27(3), 239-344.
- Isoni, A., Poulsen, A., Sugden, R., and K. Tsutsui (2013). Focal points in tacit bargaining situations: Experimental evidence. *European Economic Review*, 59, 167-188.
- Janssen, M. (2006). On the strategic use of focal points in bargaining situations. *Journal of Economic Psychology*, 27(5), 622-634.
- Roth, A. E. (1985). Toward a focal-point theory of bargaining. In *Game-Theoretic Models of Bargaining*, Chapter 12, 259–268, Cambridge University Press.

First Offers:

Required Readings:

- Galinsky, A. D. and T. Mussweiler (2001). First offers as anchors: The role of perspective taking and negotiator focus. *Journal of Personality and Social Psychology*, 81(4), 657–669.
- Galinsky A. D., G. Ku, and T. Mussweiler (2009). To start low or to start high? The case of auctions versus negotiations. *Current Directions in Psychological Science*, 18(6), 357–361.
- Park, S., G. E. Bolton, L. Rothrock, and J. Brosig (2010). Towards an interdisciplinary perspective of training intervention for negotiations: Developing strategic negotiation support contents. *Decision Support Systems*, 49(2), 213–221.
- Schweinsberg, M., Ku, G., and M. Pillutla (2012). Starting high and ending with nothing: The role of anchors and power in negotiations. *Journal of Experimental Social Psychology*, 48(1), 226-231.

Optional Readings:

- Oech, J. and A. Galinsky (2003). First offers in negotiations: Determinants and effects. unpublished manuscript.
- Orr, D. and C. Guthrie (2006). Anchoring, information, expertise, and negotiation: New insights from meta-analysis. *Ohio State Journal on Dispute Resolution*, 21(3), 597–628.

Time-Pressure:

Required Readings:

- Alberti, F., S. Fischer, W. Güth, and K. Tsutsui (forthcoming) Concession bargaining: An experimental comparison of protocols and time horizons. *Journal of Conflict Resolution*.
- Karagözoğlu, E. and M. G. Kocher (2017) Bargaining under time pressure from deadlines. Manuscript under submission.
- Cappelletti, D., Güth, W., and M. Ploner (2011) Being of two minds: Ultimatum offers under cognitive constraints. *Journal of Economic Psychology*, 32, 940–950.
- Güth, W., M. V. Levati, and B. Maciejovsky (2005) Deadline effects in sequential bargaining: An experimental study. *International Game Theory Review*, 7, 117–135.
- Sutter, M., M. Kocher, and S. Strauss (2003) Bargaining under time pressure in an ultimatum game. *Economics Letters*, 81, 341–347.

Optional Readings:

- Carnevale, P. J. D. and E. J. Lawler (1986) Time pressure and the development of integrative agreements in bilateral negotiations. *Journal of Conflict Resolution*, 30, 636–59.
- Druckman, D. (1994) Determinants of compromising behavior in negotiation: A Meta-analysis. *Journal of Conflict Resolution*, 15, 523–55.
- Lim, S. A. and K. J. Murnighan (1994) Phases, deadlines, and the bargaining process. *Organizational Behavior and Human Decision Processes*, 58, 153–71.

Stake Size Effects:

Required Readings:

- Andersen, S., Ertac, S., Gneezy, U., Hoffman, M. and A. J. List (2011). Stakes matter in ultimatum games. *American Economic Review*, 101(7), 3427–3439.
- Cameron, L. A. (1999). Raising the stakes in the ultimatum game: Experimental evidence from Indonesia. *Economic Inquiry*, 37(1), 47-59.
- Karagözoğlu, E. and Ü. B. Urhan (2017). The effect of stake size in experimental bargaining and distribution games: A survey. *Group Decision and Negotiation*, 26(2), 285-325.
- List, J. A. and T. L. Cherry (2000). Learning to accept in ultimatum games: Evidence from an experimental design that generates low offers. *Experimental Economics*, 3(1), 11-29.
- Munier, B. and C. Zaharia (2003). High stakes and acceptance behavior in ultimatum bargaining. *Theory and Decision*, 53(3), 187-207.
- Slonim, R. and A. E. Roth (1998). Learning in high stakes ultimatum games: An experiment in the Slovak Republic. *Econometrica*, 66(3), 569–96.

Optional Readings:

- Konow, J. (2005). Blind spots: The effects of information and stakes on fairness bias and dispersion. *Social Justice Research*, 18(4), 349-90.
- List, J. A. and T. L. Cherry (2000). Learning to accept in ultimatum games: Evidence from an experimental design that generates low offers. *Experimental Economics*, 3(1), 11-29.
- List, J. A. and T. L. Cherry (2008). Examining the role of fairness in high stakes allocation decisions. *Journal of Economic Behavior and Organization*, 65(1), 1-8.

FUTURE DIRECTIONS

Bargaining with Production/Investment and Bargaining over Contracts:

Required Readings:

- Bolton, G. E. and E. Karagözoğlu (2016) On the influence of hard leverage in a soft leverage bargaining game: The importance of credible claims. *Games and Economic Behavior*, 99, 164-179.
- Cappelen, A. W., A. D. Hole, E. Ø. Sørensen, B. Tungodden (2007) The pluralism of fairness ideals: an experimental approach. *American Economic Review*, 97(3), 818–827.
- Cappelen, A. W., E. Ø. Sørensen, B. Tungodden (2010) Responsibility for what? fairness and individual responsibility. *European Economic Review*, 54(3) 429–441.
- Gantner, A., Güth, W., and M. Königstein (2001). Equitable choices in bargaining games with joint production. *Journal of Economic Behavior and Organization*, 46(2), 209-225.
- Karagözoğlu, E. (2012). Bargaining with Joint Production. Chapter 24 in *Oxford Handbook of Economic Conflict Resolution* (eds. Gary E. Bolton and Rachel Croson), Oxford University Press, New York.
- Karagözoğlu, E. and A. Riedl (2015). Performance information, production uncertainty and subjective entitlements in bargaining. *Management Science*, 61(11), 2611-2626.

- Rode, J. and M. Le Menestrel (2011). The influence of decision power on distributive fairness. *Journal of Economic Behavior and Organization*, 79(3), 246-255.

Optional Readings:

- Cappelen, A. W., A. D. Hole, E. Ø. Sørensen, B. Tungodden (2007) The pluralism of fairness ideals: an experimental approach. *American Economic Review*, 97(3), 818–827.
- Cappelen, A. W., E. Ø. Sørensen, B. Tungodden (2010) Responsibility for what? fairness and individual responsibility. *European Economic Review*, 54(3) 429–441.
- Cherry, T. L., P. Frykblom, J. F. Shogren (2002) Hardnose the dictator. *American Economic Review*, 92(4), 1218–1221.
- Franco-Watkins, A. M., Edwards, B. D., and Acuff Jr, R. E. (2013) Effort and fairness in bargaining games. *Journal of Behavioral Decision Making*, 26, 79–90.
- Luhan, W., O. Poulsen, and M. Roos (2013) Unstructured bargaining over an endogenously produced surplus and fairness ideals—an experiment. *Ruhr University Bochum, Working Paper*.

Unstructured Bargaining:

Required Readings:

- Alberti, F., S. Fischer, W. Güth, and K. Tsutsui (forthcoming) Concession bargaining: An experimental comparison of protocols and time horizons. *Journal of Conflict Resolution*.
- Bolton, G. E. and E. Karagözoğlu (2016) On the influence of hard leverage in a soft leverage bargaining game: The importance of credible claims. *Games and Economic Behavior*, 99, 164-179.
- Camerer, C., Nave, G., and Smith, A. (forthcoming) Dynamic unstructured bargaining with private information and deadlines: Theory and experiment. *Management Science*.
- Gaechter, S. and A. Riedl (2005). Moral property rights in bargaining with infeasible claims. *Management Science*, 51(2), 249-263.
- Güth, W. (2012). Bargaining and Negotiations What should experimentalists explore more thoroughly? Chapter 17 in *Oxford Handbook of Economic Conflict Resolution* (eds. Gary E. Bolton and Rachel Croson), Oxford University Press, New York.
- Karagözoğlu, E. (2018) On “Going Unstructured” in Bargaining Experiments. In *Future of Economic Design*, Springer Series in Economic Design.
- Karagözoğlu, E. and A. Riedl (2015). Performance information, production uncertainty and subjective entitlements in bargaining. *Management Science*, 61(11), 2611-2626.

Optional Readings:

- Bolton, G., Chatterjee, K. and K. L. McGinn (2003). How communication links influence coalitional bargaining: A laboratory investigation. *Management Science*, 49(5), 583-598.
- Roth, A. E. and K. J. Murnighan (1982). The role of information in bargaining: An experimental study. *Econometrica*, 50(5), 1123–1142.



Online Video Material

Werner Güth's (Director of Strategic Interaction Group at Max Planck Institute at Jena) plenary speech at 2012 ESA World Meeting.

Link: <http://www.youtube.com/watch?v=-vtTKFDXQl0>

William Ury's (the co-author of the best-selling book *Getting to Yes: Negotiating Agreement without Giving In*) talk on sustainable negotiation agreements.

Link: <http://www.youtube.com/watch?v=e1NHqPDzqoU>

Time schedule

6 hours of teaching per day (a lecture hour lasts 45 minutes).

Daily schedule:

Morning: Lecture from 08.30 to 10.00, break from 10.00 to 10.20, and another lecture 10.20-11.50.

Lunch break: 12.00-13.15.

Afternoon: Lecture from 13.15 to 14.45.

Assessment

A written two-hour exam. There will be four questions and two must be answered.