From July 28th until August 22nd 2008, the Max Planck Institute of Economics in Jena hosted the second International Max Planck Research School on Adapting Behavior in a Fundamentally Uncertain World. The PhD program, which is also known as “Uncertainty School”, spans three disciplines: law, economics and psychology. Its aim is to bring research approaches of the three disciplines together in order to find more adequate explanations for human decision-making behavior under uncertainty. The school offers brilliant and ambitious students from all over the world the possibility to work towards their Ph.D. degree in a structured program providing excellent research conditions and supervision.

The IMPRS Uncertainty is hosted by six partnering institutions:

- MPI of Economics, Jena
- MPI for Human Development, Berlin
- MPI for Research on Collective Goods, Bonn
- Friedrich Schiller University Jena – School of Economics and Business Administration and Friedrich Schiller University Jena – Department of Social Psychology
- Indiana University, Bloomington - Program in Cognitive Science and Workshop in Political Science and Policy Analysis
- Hebrew University, Jerusalem - Center for the Study of Rationality
The Max Planck Institute for Human Development, Berlin was founded in 1963, and is a multidisciplinary research institute dedicated to the study of human development and education, and their evolutionary, social, historical, and institutional contexts.

The Max Planck Institute for Research on Collective Goods, Bonn, was founded in 1997. Its mission is to study the law, economics, and politics of collective goods, defined to encompass all those goods whose provision and enjoyment are treated as community concerns.

The Department of Social Psychology of the Friedrich Schiller University Jena endeavors to understand and explain the development and change of the thoughts, emotions and behavior of individuals under the actual, imagined or assumed influence of others. The IMPRS program is integrated in the IGC. The Jena Graduate School Human Behavior in Social and Economic Change is a recently established university institution located at the Friedrich Schiller University Jena, Germany.

The School of Economics and Business Administration of the Friedrich Schiller University Jena values a wide, scientific-based, and practical education, which is also applicable in the business world. The Jena Graduate School The Economics of Innovative Change coordinates its summer school parallel to the IMPRS Uncertainty summer school. The program is funded by the German Science Foundation (DFG) and offers the opportunity to achieve a doctoral degree (PhD) in economics for outstanding candidates.

The Program in Cognitive Science of Indiana University brings together faculty from many departments to study cognition and information. The program is highly integrated and encourages interdisciplinary cooperation between all the participating disciplines. The Workshop in Political Theory and Policy Analysis at Indiana University combines teaching, research, and related activities where faculty, visiting scholars, and students participate in productive scholarship related to institutional analysis and design. Today, the Workshop is home to an extensive interdisciplinary research agenda and affiliated faculty.

The Center for the Study of Rationality at the Hebrew University, Jerusalem was founded in 1991 and since then, its members apply game-theoretic tools to examine the processes by which individuals seek the path of maximum benefit respond to real-world situations, where individuals with different goals interact.
Overview of Courses & Talks during the IMPRS Uncertainty Summer School 2008

Week 1
Lectures
Antitrust Law and Economics – Christoph Engel (MPI Bonn)
Law and Economics – Eberhard Feess (RWTH Aachen)
Network Structures – Robin Cowan (University Louis Pasteur and University of Maastricht) & Anthony Ziegelmeyer (MPI Jena)

Joint Seminar with the Graduate School – The Economics of Innovative Change
Dynamic Decision Making – John Hey (University of York)

Week 2
Lectures
Prospect Theory and Uncertainty – Peter Wakker (University of Rotterdam)
Experiments and Models of Collective Behavior – Robert Goldstone (Indiana University Bloomington)
Behavioral Labor Markets – Armin Falk (University of Bonn) & Oliver Kirchkamp (University of Jena)

Guest Lectures
Cognitive Science and normative decision-making – Matthias Mahlmann (University of Zurich)
Motivations for helping: The moderating role of group membership – Stefan Stürmer (FernUni Hagen)

Week 3
Lectures
Advanced Theory of Institutions (Andreas Nicklisch, MPI Bonn)
Cooperative Game Theory' (René Levinsky, MPI Jena)
Econometric Analysis of Experimental Data (Joachim Winter, University of Munich)

Guest Lectures
Introduction and Presentation of fMRI-Scanner – Wolfgang Miltner (University of Jena)
Intertemporal Decision Making – Luigi Mittone (University of Trento)
Week 4

Lectures

Advanced Innovation Economics (Uwe Cantner, University of Jena)
The Psychologists' Toolbox: Statistics and Methodology – Henry Brighton, Mirta Galesic, Gerd Gigerenzer (ABC Group MPI Berlin)

Intra and Intergroup Decision Making (Gary Bornstein, Hebrew University Jerusalem)

Guest Lecture

The Mathematics of fast and frugal heuristics: first steps (Laura Martignon, University of Education Ludwigsburg)

Detailed report

After the successful launch of the first IMPRS Uncertainty doctoral program with its first summer school in July 2007, the expectations for the sequel were high. The second IMPRS Uncertainty Summer School was held from July, 28 until August, 22, 2008 at the Max Planck Institute of Economics in Jena. Just like last year, the first two weeks of the Uncertainty summer school ran simultaneously and in cooperation with the DFG Graduate School Economics of Innovative Change of the University of Jena.

Regarding this year’s schedule, one inevitably notes that the 2008 summer school particularly focused on research into neuroeconomics. This emphasis is marked by an introduction and presentation of a fMRI-Scanner, by the topic of the keynote lecture and several classes.

The curriculum comprised 12 courses, such that three courses per week took place, which were given by members of the partnering institutions. The courses were complemented by guest lectures held by invited speakers. Furthermore, students had the opportunity to work on interdisciplinary research projects in small interdisciplinary teams under the supervision of researchers of the MPI Jena. Each group conducted an experiment and presented the status quo of their projects, once per week. In addition, during the first two weeks, joint seminars on various related topics were held by guest speakers of the DFG Graduate School.

Courses took place at the MPI seminar rooms as well as at the university. The overall aim of the Summer School was to stimulate the scientific discourse on decision making under uncertainty between economists, psychologists and legal scholars.

The first week started with courses in Antitrust Law and Economics (Christoph Engel, MPI Bonn), Law and Economics (Eberhard Feess, RWTH Aachen), and Network Structures (Robin Cowan, University Louis Pasteur and University of
Maastricht & Anthony Ziegelmeyer, MPI Jena). Furthermore, a joint seminar on *Dynamic Decision Making* was held by John Hey (University of York).

During **week two** participants profited from courses in *Prospect Theory and Uncertainty* (Peter Wakker, University of Rotterdam), *Experiments and Models of Collective Behavior* (Robert Goldstone, Indiana University Bloomington) and *Behavioral Labor Markets* (Armin Falk, University of Bonn & Oliver Kirchkamp, University of Jena).

Guest Lectures were given by Matthias Mahlmann (University of Zurich) on: *Cognitive Science and normative decision-making* as well as by Stefan Stürmer (FernUni Hagen) on: *Motivations for helping: The moderating role of group membership*.

The second week was highlighted by a guided tour through the Ernst-Haeckel museum and by the GK farewell event in the botanical garden on August 09. Introductory talks were given by Prof. Uwe Cantner as well as Prof. Werner Güth. This event marked the end of the DFG’s Summer School.

**Week three** comprised courses in *Advanced Theory of Institutions* (Andreas Nicklisch, MPI Bonn), *Cooperative Game Theory* (René Levinsky, MPI Jena) and *Econometric Analysis of Experimental Data* (Joachim Winter, University of Munich). A Guest Lecture on the topic *Intertemporal Decision Making* was given by Luigi Mittone (University of Trento) and participants were exclusively introduced to a fMRI-Scanner by Wolfgang Miltner (University of Jena).

Moreover, throughout the third week, students were given the opportunity to conduct experiments related to the topic of their group projects in the experimental laboratory of the MPI of Economics.

The highlight of the 2nd summer school was the **Keynote Lecture** by Ariel Rubinstein (University of Tel Aviv, School of Economics) on: *An Economic Theorist Thinks About Neuroeconomics*, followed by a Conference Dinner at *Forum Seebach* in Weimar on August 16, 2008.

The **fourth week** offered courses on *Advanced Innovation Economics* (Uwe Cantner, University of Jena), *The Psychologists’ Toolbox: Statistics and Methodology* (Henry Brighton, Mirta Galesic, Gerd Gigerenzer, ABC Group MPI Berlin) and *Intra- and Intergroup Decision Making* (Gary Bornstein, Hebrew University Jerusalem). The last guest lecture was given by Laura Martignon, (University of Education Ludwigsburg) on: *The Mathematics of fast and frugal heuristics*, which marked the end of a demanding and inspiring 4-weeks program.
Throughout the whole four weeks, the program of the summer school gave participants the chance to take part in various “non-academic” events. Students had the opportunity to meet again or to get to know each other, to engage in scientific and non-scientific conversations and to relax from the tight schedule. Leisure activities included a guided tour around Jena - the official “city of science 2008”; various sports events, such as a rafting tour on the River Saale and a sports tournament as well as cultural highlights, such as a trip to Eisenach – the city of Martin Luther and composer Johann Sebastian Bach. Moreover, participants had the possibility to expand their scientific and social network with attending a number of external dinners and events, such as the GK farewell event in the Botanical Garden and the IMPRS farewell event in the Ricarda-Huch-Haus. During the breaks there was the possibility to do research or course work in the library or in the MPI garden, which offered shady places to escape the heat of the summer.

The 2nd IMPRS Uncertainty summer school was completed by a small Graduation Ceremony in the garden of the institute. With the last day being warm and sunny, we had the opportunity to celebrate the successful ending of the summer school outside, where all participants received their certificates. The main organizers were also thanked for all their efforts and for making the second summer school held at the MPI of Economics in Jena a success. Once more, the IMPRS Uncertainty Summer School created a stimulating work and research environment and gave students and lecturers the opportunity to discuss topics of interest in a pleasant environment. The third summer school will take place from July 26 – August 21, 2009 at the Max Planck Institute of Economics in Jena.