

## Labex EcoDec

### Axis 3: Decision Making and Market Regulation

#### Activity report, October 2014

#### ***1 Main research areas***

To develop realistic decision-making models, using results from psychology, as well as experimental and statistical data, this research area intends to assess the performance of product market institutions. The team investigates how real-life decision-making processes affect economic efficiency and the sharing of the surplus between consumers and firms in market environments.

It involves strong cooperation between researchers from the three institutions with different specialties: behavioral economics, psychology, game theory, industrial organization, and applied econometrics.

Policy recommendations will be derived from the ensuing empirical and theoretical analyses of such market “imperfections” both for existing markets as well as for the creation of new markets.

#### ***2 Composition of the team***

The area “Product Market Regulation and Consumer Decision-Making” is directed by Evren Ors (Principal Investigator, HEC), Marie-Laure Allain (co-Principal Investigator, Ecole Polytechnique) and Philippé Choné (co-Principal Investigator, CREST-ENSAE).

Our team is composed of economists, applied mathematicians, and statisticians of Ecole Polytechnique, HEC and Ensae-ParisTech.

Researcher		Institution
ABDELLAOUI	Mohammed	HEC
AFLAKI	Sam	HEC
ALEMANNNO	Roberto	HEC
ALLAIN	Marie-Laure	ECOLE POLYTECHNIQUE
ANDRITSOS	Dimitrios	HEC
BOJLOV	Raicho	ECOLE POLYTECHNIQUE
CHONE	Philippe	CREST-ENSAE
CORCOS	Grégory	ECOLE POLYTECHNIQUE
CRIFO	Patricia	ECOLE POLYTECHNIQUE
DUSSAUGE	Pierre	HEC
GILBOA	Itzhak	HEC
GOSSNER	Olivier	ECOLE POLYTECHNIQUE
HAGENBACH	Jeanne	ECOLE POLYTECHNIQUE
HILL	Brian	HEC
HOLLARD	Guillaume	ECOLE POLYTECHNIQUE
IARIA	Alessandro	CREST-ENSAE
KORIYAMA	Yukio	ECOLE POLYTECHNIQUE
LARAKI	Rida	ECOLE POLYTECHNIQUE
LINNEMER	Laurent	CREST-ENSAE
LOPEZ	Jose Ignacio	HEC
MINARDI	Stefania	HEC
MONGIN	Philippe	HEC
OBLOJ	Tomasz	HEC
ÖRS	Evren	HEC
PEREZ	Eduardo	ECOLE POLYTECHNIQUE
PEYRACHE	Eloic-Anil	HEC
PONSSARD	Jean-Pierre	ECOLE POLYTECHNIQUE
RIBONI	Alessandro	ECOLE POLYTECHNIQUE
ROSENBERG	Dinah	HEC
RUIZ-ALISEDA	Francisco	ECOLE POLYTECHNIQUE
TOMALA	Tristan	HEC
VANHUELE	Marc	HEC
VERGE	Thibaud	CREST-ENSAE
VIEILLE	Nicolas	HEC
VISSER	Michael	CREST-ENSAE

### 3 Publications

*In Subsections 1 and 2 we display a selection of published papers and working papers produced by the team within the axis topics. The papers In Subsections 3 and 4 have been specifically funded by the Labex Ecodec.*

#### 1) Published and accepted papers

Anderlini, L., L. Felli, G. Immordino and A. Riboni (2012) "Legal Institutions, Innovation and Growth" forthcoming in *International Economic Review* (August 2013)

Balinski M., R. Laraki (2013). «Jugement Majoritaire vs Vote Majoritaire (via les Présidentielles de 2011-2012)», forthcoming in *Revue Française d'Economie*.

Koriyama, Y., J.-F. Laslier, A. Macé, and R. Treibich "Optimal Apportionment" forthcoming in *Journal of Political Economy*

Laraki R., J.-B. Lasserre (2012) «Semidefinite Programming for min-max problems and Games». *Mathematical Programming A*, vol 131, 305-332.

Cardaliaguet P., R. Laraki, S. Sorin (2012). «A Continuous Time Approach for the Asymptotic Value in Two-Person Zero-Sum Repeated Games». *SIAM Journal on Control and Optimization*, vol 50, 1573–1596.

Laraki R., P. Mertikopoulos (2013). «Higher Order Games Dynamics» *Journal of Economic Theory*, vol 148, 2666-2695).

Laraki R., E. Solan (2013) «Equilibrium in Two-Player Non-Zero-Sum Dynkin Games in Continuous Time». *Stochastics*.

Laraki R., A. Maitra, W. D. Sudderth (2013). «Two-person zero-sum stochastic games with semicontinuous payoff» forthcoming in *Dynamic Games and Applications*, special issue in honor of Shapley.

Meunier, G. and J.-P. Ponssard (2012) « A Sectoral Approach Balancing Global Efficiency and Equity » *Environmental and Resource Economics*, 53:533–552

Riboni, A. (2012) "Ideology and Endogenous Constitutions", *Economic Theory* 52(3): 885-913.

## 2) Working papers and papers in revision

Allain, M.-L., C. Chambolle and P. Rey (2012) « Vertical Integration, Product Imitation and Market Foreclosure », *R&R Review of Economic Studies*.

Allain, M.-L., E. Henry and M. Kyle (2012) « Inefficiencies in technology transfer: theory and empirics », *R&R Management Science*.

Allain, M.-L., M. Boyer, R. Kotchoni, J.-P. Ponssard (2013) « Are cartel fines optimal? Theory and Evidence for the European Union », *R&R International Review of Law and Economics*.

Koriyama, Y., and M. Nunez (2013) "Game simplification through iterated weak dominance".

Larmande, F, J.-P. Ponssard (2012) "Fishing for Excuses and Performance Evaluation".

Mantovani, A. and F. Ruiz Aliseda (2013) "Equilibrium Innovation Ecosystems: The Dark Side of Collaborating with Complementors".

Guy Meunier, Catherine Thomas J.-P. Ponssard "Capacity Investment under demand uncertainty: the role of imports in the US cement".

Riboni, A. (2012) "Doubts and Dogmatism in Conflict Behavior", *R&R Economic Journal*.

Ruiz Aliseda, F. "Knowing Your Customers: Does It Make Your Profitability Any Better? Perhaps Not".

Riboni Alessandro, Facundo Pigullem. Spending Biased Legislators, discipline through disagreement, under revision for the *Quarterly Journal of Economics* and will be resubmitted soon.

Riboni Alessandro, Facundo Pigullem. Dynamic Bargaining over Redistribution in Legislatures.

Frédéric Koessler and Eduardo Perez-Richet, "Evidence Based Mechanisms".

Rida Laraki, Panayotis Mertikopoulos, Inertial game dynamics and applications to constrained optimization.

### 3) Labex Ecodec published and accepted papers

Hagenbach, J., Koessler, F., Perez-Richet, E. (2014), "Certifiable preplay communication: full disclosure," *Econometrica*, 2014, 82, 3, 1093-1131.

Riboni, A., Ruge-Murcia F. (2014) "Dissent in Monetary Policy Decisions", *Journal of Monetary Economics*, 2014 Vol 66, pp 137-154.

Michel Balinski, Rida Laraki (2014). Judge don't Vote. *OPERATIONS RESEARCH*, Vol. 62, No. 3, May-June 2014, pp. 483-511.  
<http://pubsonline.informs.org/doi/abs/10.1287/opre.2014.1269>

Michel Balinski, Rida Laraki (2014). What Should "Majority Decision" Mean. Chapter in the book: Majority Decisions, Principles and Practice, edited by J. Elster and S. Novak, Cambridge University Press.  
<http://www.cambridge.org/us/academic/subjects/politics-international-relations/political-theory/majority-decisions-principles-and-practices>

### 4) Labex Ecodec working papers and papers in revision

Choné P., Coudin E., Pla A., Are physician fees responsive to competition?  
The article appears in the working paper series of the *Health Econometrics and Data Group (HEDG)*, WP 14/20, see  
<http://www.york.ac.uk/economics/postgrad/herc/hedg/wps/wp2014/>.

Cavaco, S., Crifo, P., Rebérioux, A., Roudaut. G. (2014). Independent directors: less informed, but better selected? New evidence from a two-way director-firm fixed effect model.

Roudaut, G. (2014). The Relationships between Managers, Shareholders and Stakeholders: Why do Boards Care about CSR?

Roudaut G. Corporate Governance and CSR in French Firms: New evidence from a national survey, work in progress.

Cavaco, S., Challe, E., Crifo, P., Rebérioux, A., Roudaut. G. (2014). Board independence and operating performance: Analysis on (French) company and individual data. Working paper (cahier 2014-01)

Koessler F. and Eduardo Perez E.-Richet, "Evidence Based Mechanism".

Laraki R., P. Mertikopoulos (2013), «Inertial Game Dynamics and Applications to Constrained Optimization».

Linnemer L., Visser M., Incentives and tournaments, exploring data from chess players.

Perez E.-Richet, "Robust Evidence Based Implementation".

Perez E-Richet and Tercieux O. "Evidence Based Matching".

## 4 Grants allocated to research projects

### *Year 2013*

Leader of the project		Project title
Coudin	Elise	Do French sector II (price setter) fee-for-service physicians respond to local competition?
Hagenbach	Jeanne	Bayesian Implementation with Evidence
Linnemer	Laurent	Incentives and tournaments, exploring data from chess players
Riboni	Alessandro	Dissent in Committee Decision Making: evidence from Monetary Policy Boards
Ruiz-Aliseda	Francisco	Environmental Policy and Competition Policy: complements of substitutes?
Ruiz-Aliseda	Francisco	Novelty Requirements and Information Disclosure in Optimal Patent Policy
Visser	Michael	Viager immobilier en France : effet de sélection et asymétrie d'information

## Year 2014

Leader of the project		Project title
Crifo	Patricia	Projet FORTERESSE : Finance, ORganisation du Travail et RESponsabilité Sociétale des Entreprises
Hagenbach	Jeanne	Search, Matching and Cheap Talk.
Hagenbach	Jeanne	Fatigue and Decision Making
Hagenbach	Jeanne	Communication with evidence in the lab
Laraki	Rida	Apprentissage et non regret : temps discret/temps continu/Approchabilité dans les jeux absorbants/Gambling games/vote
Linnemer	Laurent	Incentives and tournaments, exploring data from chess players
Perez	Eduardo	Revealed Surplus in Matching
Riboni	Alessandro	Analyse of dynamic Policy making through legislative bargaining
Vergé	Thibaud	Vertical Contracting and Interlocking Relationships

## Project descriptions

**Title of the project: Are physician fees responsive to competition?**

**Principal investigator: Philippe Choné (CREST-ENSAE),**

**Co-authors: Élise Coudin (CREST-INSEE), Anne Pla (Ministry of Health)**

We assess the extent to which specialist doctors respond to local competition when setting prices (including extra-billings) in a fee-for-service system. We use an exhaustive panel data set to estimate physician reaction functions, exploiting exogenous changes in medical density and labor supply to identify the effects of local market structure and competitors' prices. We find that fees are strategic complements and decrease with physician density. Our results are consistent with a static competition model where patient choice is based on distance, price and observable physician characteristics and doctors have standard consumption-leisure preferences. Finally, we examine how the presence of physicians subject to full price regulation affects strategic interactions.

The paper has been presented at the following conferences and seminars:

- "Journées des Economistes de la Santé Français" conference (Créteil, December, 2013)
- CREST-LMi seminar, Malakoff, January, 2014
- Beta seminar, Nancy University, February, 2014
- Journée de la Chaire Santé, Paris-Dauphine University, 18 mars 2014
- EEA conference, Toulouse, August 27, 2014
- EARIE annual conference, Milan, August 29, 2014
- Twenty third European workshop on econometrics and health economics, Munich, 3-6 September 2014

The article appears in the working paper series of the Health Econometrics and Data Group (HEDG), WP 14/20, see

<http://www.york.ac.uk/economics/postgrad/herc/hedg/wps/wp2014/>.

**Title of the project : FORTERESSE (Finance, ORganisation du Travail Et RESponsabilité Sociétale des Entreprises)**

**Principal investigator: Patricia Crifo (Ecole Polytechnique)**

**Co-authors: Jean-Pierre Ponssard, Edouard Challe (both Ecole Polytechnique) Gwenael Roudaut PhD student (supervised by P.Crifo)**

This project aims at examining financial, organizational and regulatory determinants and impacts of Corporate Social Responsibility (CSR). Being responsible means that, beyond legal constraints, firms take responsibility for their impacts on society. Hence CSR means firms go beyond the law and integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy. A pre-requisite is the existence of social preferences, whereby some stakeholders (consumers, employees, shareholders,



regulators, managers, suppliers, etc.) value and require firms to undertake CSR activities.

In 2014, we have more specifically focused on the theme of **CSR and governance**, that is when CSR strategies are adopted in response to internal pressure from shareholders or boards of directors due to incentives in the firm's agency relationships.

The link between corporate governance and CSR is an emerging and fast growing topic in the literature. In fact, boards of directors are now identified as a central mechanism in the implementation of any credible CSR investment (see Brown et al. 2006, Jo and Harjoto 2011, Ntim and Soobaroyen 2013). According to the 2010 UN Global Compact *report Moving Upwards: The Involvement of Boards of Directors in the UN Global compact* : 'If CEOs are determined to embed sustainability as a mainstream practice they will need the engagement of the board'. This means that the sensitivity, or the mind-set, of board members, is critical when it comes to develop CSR-oriented strategies (Knudsen, Geisler and Ege, 2013). Arguably, this sensitivity is related to observable individual or collective attributes, such as independence, expertise or diversity.

In this research we explore deeply the role of the board of directors, and especially its composition, in CSR decisions. Using a unique and novel database on the French biggest listed firms (SBF250 and SBF120) over the 2003-2011 and 2006-2011 period, we show that there is a significant negative relationship between accounting performance and the independence status, suggesting that independent board members experience an informational gap compared to other affiliated members. However, we also show that industry-specific expertise as well as informal connections inside the boardroom may help to bridge this gap. Finally, we provide evidence that independent directors have higher intrinsic ability as compared to affiliated board members, consistent with a reputation-based selection process.

A second project investigate the representation of various stakeholders (customers and suppliers, employees and bankers) inside the boardroom and its impact on corporate social and environmental performance. We show that representatives of business and social stakeholders inside the boardroom is positively correlated with social performance, but not environmental performance.

Finally, we have started to exploit the INSEE Endd survey (entreprises et développement durable), in particular to examine the link between the legal governance structure of the firm (SIRENE data set, expected in December 2014), reflecting the bargaining power distribution between shareholders, board of directors and executives, and CSR firm commitments in Environment, social and societal dimensions.

Presentations in conference and seminars in 2014:

- **Principles for responsible investment annual academic network conference 2014**, Montreal (accepted, September 22-24th)
- Paper accepted: Cavaco, S., Crifo, P., Rebérioux, A., Roudaut, G. (2014). Independent directors: less informed, but better selected? New evidence from a two-way director-firm fixed effect model. Working paper
- **Brown Bag Seminar**, Department of Banking and Finance, Australian School of Business, University of New South Wales, Sydney (August, 22<sup>nd</sup>)
- Paper presented: Cavaco, S., Crifo, P., Rebérioux, A., Roudaut, G. (2014). Independent directors: less informed, but better selected? New evidence from a two-way director-firm fixed effect model. Working paper
- **The 25<sup>th</sup> IABS conference (International Association for Business and Society)**, Sydney (June, 19<sup>th</sup> -22<sup>nd</sup>)
- Paper Presented: Roudaut, G. (2014). The Relationships between Managers, Shareholders and Stakeholders: Why do Boards Care about CSR?
- **The 10<sup>th</sup> Corporate Governance workshop, IABS**, Sydney (June 22<sup>nd</sup>)
- Paper Presented: Roudaut, G. (2014). Corporate Governance and CSR in French Firms: New evidence from a national survey, work in progress.
- **The 2014 CSR Research Seminar & Doctoral Summer School**, University of Louvain and Audencia, Nantes (June 10<sup>th</sup> -13<sup>th</sup>)
- Paper Presented: Roudaut, G. (2014). The Relationships between Managers, Shareholders and Stakeholders: Why do Boards Care about CSR?
- **Principles for responsible investment annual academic network conference 2013**, Paris (November, 13-15<sup>th</sup>)
- Paper Presented: Roudaut, G. (2014). The Relationships between Managers, Shareholders and Stakeholders: Why do Boards Care about CSR?

**Title of the project:** Bayesian Implementation with Evidence

**Principal investigator:** Jeanne Hagenbach (CNRS, Ecole Polytechnique)

**Co-authors:** Frédéric Koessler (CNRS, PSE) and Eduardo Perez (Ecole Polytechnique).

When trying to make choices that affect multiple individuals, a social planner generally does not have all the information necessary to make that choice. Indeed, much of this information is typically spread among different agents that have a stake in the choice to be made. But then the social planner has to make sure that the way she plans to use information is compatible with the incentives of these agents, for otherwise she cannot trust the information they provide. The mechanism design and implementation has studied the problem of what can be achieved by a social planner when taking incentives seriously.

Most of this literature assumes that the agents can disguise their true information in any way possible. That is whenever they know  $x$  they can always claim  $y$ , regardless of what  $x$  and  $y$  are. Hence an agent who knows  $x$  cannot prove  $x$ , or at least prove that  $y$  is false. This makes the life of the social planner much harder. Indeed, suppose that an agent who knows  $x$  always agrees with the choice of a social planner who believes that  $x$  is true, while an agent who knows  $y$  also likes a choice of the social planner who believes  $x$ , but dislikes the choice of a social planner who believes  $y$ . When evidences are not available, the mechanism designer can never believe an agent who claims  $x$  since such a claim may have come from an agent who knows  $x$  as well as from an agent who knows  $y$ . With evidence, however, the agent who knows  $x$  can prove his claim to the social planner. Hence, it is intuitive that when evidence is available the social planner will be less constrained. In real life, evidence is often available: a diploma, a CV or a credit rating, for example, are most of the time reliable. Therefore it seems quite important to revisit the mechanism design and implementation literature under the assumption that some evidence is available.

We start by noticing that if evidence increases the scope of what a social planner can do, it may also introduce additional difficulties. Suppose for example that the social planner receives a proof that " $x$  or  $y$ " is true but implements an action that is incompatible with that fact (for example she acts as if  $z$  were true). This may be good for the decision maker if she wants to discourage a vague statement like " $x$  or  $y$ ", but then the agent could sue the social planner on the ground that she acted against evidence. We recognize this problem, and therefore try to design evidence proof mechanisms.

The project is to develop the theory of evidence proof mechanisms and obtain positive results about social choice functions that can be implemented by the social planner. We already have some theoretical results in the form of sufficient conditions for: (1) bayesian implementation, (2) full bayesian implementation with private values and independent types, (3) ex post implementation, (4) full implementation in rationalizable strategies with private values. The conditions we obtained are relatively tractable, and in addition

of developing the theory we plan to develop many examples with applications to matching, trading, and information revelation by experts.

**Existing Literature.** The existing literature has focused on implementation in the sense of Maskin, which is rather impractical, as it assumes that all agents have the same information. Our approach is to study the problem of Bayesian implementation, that includes the possibility of different agents having different information. Another part of the literature develops conditions on the evidence structure under which all mechanisms can be restricted to a cheap talk phase followed by random verification by the designer. Our approach is quite different since we start from the notion of evidence proof mechanisms to find easy to verify sufficient conditions for implementability. The mechanisms we build in our theoretical results are not overly complicated, and we are confident that many examples will satisfy our sufficient conditions.

This project resulted in one publication, one working paper, and two works in progress:  
 "Certifiable preplay communication: full disclosure," Jeanne Hagenbach, Frédéric Koessler and Eduardo Perez-Richet, *Econometrica*, 2014, 82, 3, 1093-1131.  
 "Evidence Based Mechanisms," Frédéric Koessler and Eduardo Perez-Richet, working paper.  
 "Robust Evidence Based Implementation," Eduardo Perez-Richet, in preparation.  
 "Evidence Based Matching" Eduardo Perez-Richet and Olivier Tercieux, in preparation.

The work has been presented at: Columbia University, University of Montreal, Mannheim University, Toulouse School of Economics, Transatlantic Theory Workshop in Paris, Chicago Booth, Yale University, University of Warwick, Humboldt University, University of Bonn, NYU, EUI Florence, IESE Business School, Stony Brook Game Theory Conference, Sciences Po, University of Bern, UPF Barcelona, Toulouse School of Economics.

**Title of the project:** Communication with Evidence in the Lab

**Principal investigator:** Jeanne Hagenbach (CNRS, Ecole Polytechnique),

**Co-author:** Eduardo Perez (Ecole Polytechnique)

**Participants and Location.** This project is a joint project by Jeanne Hagenbach (CNRS, Ecole Polytechnique) and Eduardo Perez (Ecole Polytechnique), both members of LABEX ECODEC. The experiments described below will be run in the experimental lab of Ecole Polytechnique.

Before most individual or collective decisions, the concerned parties can communicate with each other and exchange information. Clearly, how much information is transmitted depends both on the information that available statements can convey, and on the strategic interaction about to take place. Our project is to investigate experimentally the role of these two aspects on strategic communication of verifiable information.

Our plan to study communication with evidence in the lab is based on a recent theoretical paper entitled “Certifiable Pre-play Communication” and written by J.Hagenbach, F. Koessler and E.Perez-Richet (currently revise and resubmit at Econometrica). In this work, we ask when preplay communication leads to complete disclosure of private information. We consider general Bayesian Games augmented by a communication phase in which agents can use verifiable messages. By using these, every statement made by a player actually certifies a subset of types that this player could be. In such a framework, information is fully revealed if, for instance, every player sends a message certifying a single type.

To understand when information can be fully revealed, we propose to think about incomplete information games in terms of a graph representing which type of an agent would like to be believed as which other type of his: the masquerading graph. This graph mainly sheds light on two features crucial for a game to exhibit pre-play full disclosure.

First, if the masquerade graph is acyclical, every message can be associated to a worst case type, a type that no potential sender of this message would like to be. Worst case types are key to exercise skepticism: when a player hears a vague message, he can skeptically view it as coming from its worst case type. Such beliefs discourage the use of vague messages and lead to complete information revelation. Depending on the masquerading graph, it is more or less easy to identify worst case types and our experimental treatments will test agents’ ability to exercise skepticism in different strategic situations. We will also be able to distinguish whether failure of full disclosure comes from the cyclical structure of the masquerade - a case where being skeptical is more subtle - or from the fact that agents do not anticipate this skepticism properly. It will even be possible to observe whether subjects sometimes sacrifice money to appear skeptical and therefore induce honesty.

Second, full disclosure requires that every agent’s language be rich enough to convey a different information for each possible type. Interestingly, the masquerading graph shows that this can be done even when messages available are less precise than the ones certifying single types. We want to examine the ability of experimental subject to strategically use and interpret messages when facing different sets of available evidences.

Existing Literature. A significant amount of experiments test the predictions of models of strategic communication via cheap-talk, but very few study how verifiable statements are used and interpreted. Only very recently, a paper has investigated the experimental relevance of the unravelling argument in sender-receiver games: “Failures of Unraveling in Disclosure Experiments: A Level-K Analysis” by Jin, Luca, Martin. Our experimental project departs from this work for two main reasons. First, this paper focuses on preferences of the sender which are independent of his true type and monotone with the type he masquerades as. The exercise of skepticism is therefore relatively straightforward as it suffices to believe the lowest type among the ones which have been certified. We will consider a much broader range of games to see whether agents manage to exercise skepticism in more complex (and, we believe, more relevant) strategic situations. Second, certifiable statements that subjects could make in this existing experiment were somehow

limited: for every true type, the sender could either prove it precisely or stay silent. Our design of the communication phase will allow to investigate agents' ability to use precise versus vague statements in a much finer way. Our experiments will also involve sender-receiver games but extend to revelation of hard information in deliberating phases preceding votes.

We have ran all the lab experiments linked to the project "Communication with Evidence in the Lab". The experiments have been ran from April 2014 to September 2014 in the Polytechnique experimental lab. We had about 300 subjects.

The project will be presented four times in the Fall 2014: internal seminar at Ecole Polytechnique, Microeconomics seminar at University Pompeu Fabra (Barcelona, Spain), Microeconomics seminar at University Autònoma (Barcelona, Spain), Microeconomics seminar at CORE (Louvain La Neuve, Belgium).

The project will have the form of a working paper before the end of the year 2014.

**Title of the project:** Learning discrete and continuous time

**Principal investigator:** Rida Laraki (Ecole Polytechnique)

**Co-authors:** Panayotis Mertikopoulos (CNRS)

I invited Panayotis Mertikopoulos to Paris twice to work on the project. We are working on a revised version of our paper « inertial games dynamics ». It is part of a big project where we aim to define second order dynamics in game theory.

In a paper already published in JET (Laraki R., P. Mertikopoulos (2013). «Higher Order Games Dynamics» Journal of Economic Theory, vol 148, 2666-2695), and financed by GIS science de la décision, we followed a « Learning » approach to construct the second order replicator dynamics and prove its good convergence properties.

In this second paper (inertial games dynamics), financed in part by the labex Ecodec, we follow a geometric/Newtonian approach. We find a dynamics that looks similar to the one in the JET paper but the properties are very different. The paper is under revision for SIAM journal on control and optimization. We hope it will be accepted.

**Title of the project:** Approachability in absorbing games

**Principal investigator:** Rida Laraki (Ecole Polytechnique)

**Co-authors:** Vianney Perchet (Université Paris VII)

I invited this year (2013) Janos Flesch from Maastricht University to work on the project (in collaboration with Vianney Perchet). We have now all the results to start writing the paper. We proved a nice sufficient condition for repeated game with vector payoff and absorbing states that extends Blackwell famous condition that guarantees that a player can weakly



approach a convex set. We show that this condition is not necessary for weak approachability nor is it sufficient for strong approachability. This is quite surprising...

**Title of the project:** Gambling Games

**Principal investigator:** Rida Laraki (Ecole Polytechnique)

**Co-authors:** Jérôme Renault (TSE)

I visited Toulouse once last year and I invited Jérôme to Paris this year (next November). We advanced a lot in our paper that extends Gambling Houses from one to two players and we hope start writing the paper soon.

**Title of the project:** Voting

**Principal investigator:** Rida Laraki (Ecole Polytechnique)

**Co-authors:** Vianney Perchet (Université Paris VII)

We have two papers that just appeared and where the labex is explicitly mentioned in the « Acknowledgments » :

Michel Balinski and Rida Laraki (2014). Judge don't Vote. OPERATIONS RESEARCH, Vol. 62, No. 3, May–June 2014, pp. 483–511.

<http://pubsonline.informs.org/doi/abs/10.1287/opre.2014.1269>

Michel Balinski and Rida Laraki (2014). What Should “Majority Decision” Mean. Chapter in the book: Majority Decisions, Principles and Practice, edited by J. Elster and S. Novak, Cambridge University Press.

<http://www.cambridge.org/us/academic/subjects/politics-international-relations/political-theory/majority-decisions-principles-and-practices>

Both paper concern Majority Judgment, our voting method. The first provide a summary of theoretical and experimental results. The second paper is more philosophical and aims to define the meaning of Majority Decision.

**Title of the proposal 1:** Incentives and tournaments, exploring data from chess players

**Title of the proposal 2:** Incentives and self-selection into tournaments, exploring data from chess players

**Principal Investigators:** Laurent Linnemer (CREST-ENSAE)

**Co-author :** Michael Visser (CREST-ENSAE)

Thanks to the first ECODEC grant (2012), we completed a large database with detailed (chess related only) information about US players and about the World Chess Open a large tournament organized in Philadelphia (USA). With the second grand (2013) we have been able to gather a similar database for French players. The second dataset is about a large tournament organized every year in Paris. The structure on the tournament is slightly different from the one in Philadelphia and more importantly the prizes are much lower.

We have now a working paper where we develop a model of self selection into a tournament

and we use the US data to test the model. The abstract of the paper is:

We consider a simple tournament model in which individuals auto-select into the contest on the basis of their commonly known strength levels, and privately observed strengthshocks (reflecting temporary deviations from observed levels). The model predicts that the participation rate should increase with the player's observed strength, and the prize budget. Furthermore, for participants with high observed strength levels, the expected shock is on average smaller than for those with low levels. Consequently, the latter should play better than predicted and the former worse (given their observed strength). These predictions are confronted with data from a large chess tournament held in the USA. This tournament is divided into different sections, with players being able to play in the section to which their current chess rating (observed strength) belongs. As predicted, we find that within each section the participation probability increases with chess rating and prize amounts, and players with a relatively low (resp. high) rating are indeed the ones who have a better (resp. worse) relative performance.

The comparison of the US and French data is still in progress.

**Title of the project: Revealed Surplus in Matching**

**Principal investigator: Eduardo Perez (Ecole Polytechnique)**

**Co-author: Alfred Galichon (Sciences Po)**

This project plans to develop a revealed preference approach to matching data. Suppose that a matching is observed with characteristics of the matched individuals (typically marriage data). Under the transferable utility model à la Shapley and Shubik a matching is stable if and only if it is optimal (and if and only if it is in the core). It is also generically unique. Recognizing that stability is likely to be a property of real matchings, one can ask what preferences of the individuals can make the observed matching stable. If stability is indeed a necessary property of "real" matchings, this identifies the preferences that could have generated the matching data.

More precisely, our model is the usual transferable utility model à la Shapley and Shubik (1972). It assumes unconstrained utility transfers between partners and frictionless matching. We do not allow for unmatched individuals.

We consider a population of  $n$  men and  $n$  women. Each individual is endowed with a real vector of  $K$  characteristics which we denote by  $x_i$  for man  $i$ , and  $y_j$  for woman  $j$ . A matching is a matrix  $\mu$  such that  $\mu_{ij} = \mu_{ji} = 1$  if man  $i$  and woman  $j$  are matched, and 0 otherwise. Because we do not allow for unmatched individuals, a matching is feasible if  $\sum_j \mu_{ij} = \sum_i \mu_{ij} = 1$ , that is if  $\mu$  is a bistochastic matrix.

When man  $i$  and woman  $j$  are matched together, they can split among themselves a surplus  $\Phi_{ij}$  that we will assume to depend only on their characteristics, that is  $\Phi_{ij} = \Phi(x_i, y_j)$ . We recall that a feasible matching  $\mu$  is stable if there is no unmatched pair of a man and a woman who



could achieve a higher individual splitting the surplus they would generate by pairing together.

It is well known since Shapley and Shubik (1972) that the set of stable matchings, the set of matchings that form a competitive equilibrium and the set of optimal matchings coincide.

We assume that we can observe data that consists of a matching and the characteristics of the matched individuals, and we ask whether this matching is optimal (or stable) for some bilinear surplus function  $\Phi(x, y) = x' A y$  where  $A \in \mathbb{R}^{K \times K}$ . In this case we will say that the data is rationalized by  $A$ . If the observed matching is the unique optimal matching under  $A$ , we say that the data is uniquely rationalized by  $A$ . It is easy to see that the null matrix rationalizes any data, but this is both an uninteresting and unrealistic surplus function. Therefore, we will say that the data is rationalizable if there exists a non null matrix  $A$  that rationalizes the data. We will say that the data is uniquely rationalizable if there exists a non null matrix  $A$  that uniquely rationalizes the data.

**Existing Literature.** There are two papers we know of on revealed preferences and matching: Echenique (2008) and Echenique et al. (2013). These papers are mostly interested in matching with non transferrable utility (although Echenique et al. 2013 considers both). They do not try to apply their findings on actual data, and the modeling approach is different since they consider that the populations on each side of the market are distributed over a finite number of types (their characteristics). Therefore the data that they try to rationalize is of a different nature. This project is also strongly connected to the burgeoning empirical literature on matching which was initiated by Choo and Siow (2006) and is reviewed in the recent contribution Galichon and Salanié (2012)

**Expected Outcome.** We expect this research to result in one or more publications in top journals. The goal of the project is theoretical, algorithmic and empirical. On the theory side, the revealed preference approach has proved useful in many areas as it allow to understand the restrictions imposed by a given theory, here the theory of stable matchings with transferrable utility. On the algorithmic side, understanding the structure of the space of matrices that rationalize a given matching data will allow us to use existing algorithms or develop new ones that can find these matrices. Finally on the empirical side, we plan to test our algorithms on marriage data that we have access too. This will not only illustrate the theory and the tools we develop, but could also help understanding this type of data and complement the quickly developing empirical literature on this topic.

This work is still in progress, with a working paper in preparation entitled "Revealed Surplus in Matching," by Alfred Galichon and Eduardo Perez-Richet. The work on matching also overflowed with another project, and a working paper in preparation entitled "Evidence Based Matching," by Eduardo Perez-Richet and Olivier Tercieux.

**Title of the project:** Analysis of dynamic Policy making through legislative bargaining

**Principal investigator:** Alessandro Riboni, Ecole Polytechnique

**Co-author:** Francisco Ruge-Murcia, University of Montreal

The project “Analys of dynamic Policy making through legislative bargaining” resulted so far in two papers. The first one is titled “Spending Biased Legislators, discipline through disagreement” is currently under revision for the Quarterly Journal of Economics and will be resubmitted soon. The second paper is titled “Dynamic Bargaining over Redistribution in Legislatures” and is under revision. In order to understand the determinants of redistribution and spending decisions, these two papers study legislative bargaining in legislatures. The two papers have been presented by one of the two coauthors in Mannheim, UPF, UCL, Amsterdam University, Warthon School, SAET meetings in Paris, SED Meetings in Seoul.

**Title of the project:** Dissent in Committee Decision Making: Evidence from Monetary Policy Boards

**Principal investigator:** Alessandro Riboni (Ecole Polytechnique)

**Co-author:** Francisco Ruge-Murcia (University of Montreal)

In this research project, I plan to study dissenting behavior in monetary policy committees (MPCs) and its implications for policy decisions. The subject matter is potentially important because dissents are a key feature of the minutes and voting records of monetary committees. For instance, at the Bank of England, the Riksbank, and the Federal Reserve at least one member dissents in 63, 38, and 34 percent of meetings, respectively.

In previous work (Riboni and Ruge-Murcia, 2012, unpublished) I obtained empirical evidence that a current dissent by a committee member is helpful in forecasting the future votes of other members. Thus, for instance, a current dissent in favor of an interest rate cut is a predictor of votes for an interest rate cut by other members in the next meeting. In this research project I intend to investigate the mechanism underlying the reported predictability.

I plan to consider a two-period model where committee members have reputational concerns. In the model, committee members receive private signals which are informative about the optimal policy. Members care about making the correct decision, but they are also motivated by career concerns (each member tries to enhance his own reputation). To my knowledge this question has not yet been studied by the literature. Visser and Swank (2007, QJE), Levy (2007, AER), and Meade and Stasavage (2008, EJ) study reputational concerns in committees but they focus on static settings.

Conversely, Prendergast and Stole (1996, JPE) and Li (2007, RESTUD) analyze sequential decision making but consider a single agent. In such a model, I expect that the occurrence of dissenting votes in the current meeting will alter the voting strategies in the future meeting. In other words, reputational considerations may provide a channel to explain why dissents affect future decisions. There is no clear presumption, however, which way the theoretical effect would go. After solving the model, we plan to bring it to the data (by using information

on voting decisions and members' characteristics, which are available for several central banks).

The work is joint with Francisco Ruge-Murcia (full professor at the University of Montreal). I have several publications with Francisco on MPCs (among other journals, on the QJE and the JMCB) and I am quite confident that this project will also be published in an international journal. The output of this research project will be disseminated in the form of one academic article and presentations in university seminars and conferences. The research budget will cover presentations to a conference (possibly, the AEA meeting in 2014 in Philadelphia, whose application deadline is in the spring) and travel expenses to meet/receive Francisco. The participation of research assistants would also be desirable to code some information available in the minutes of the meetings.

This project resulted in a publication in the Journal of Monetary Economics, 2014 Vol 66, pp 137-154 (joint with Francisco Ruge Murcia). In the published paper, titled Dissent in Monetary Policy Decisions, we show that voting records in monetary committees indicate that dissents at the meetings are frequent and predictability regressions show that they help forecast future policy decisions. This paper develops a model of consensual collective decision-making and dissent, and estimates it using individual voting data from the Bank of England and the Riksbank. The paper was presented by one of the two coauthors at McGill University, HEC Montreal, EEA meeting in Malaga, Keynote Lecture, Workshop on Central Bank Communication and Decision Making, Halle Institute for and State of the Art Lecture, 48th Meeting of the Canadian Economic Association, Vancouver (May 2014).

**Title of the project: Analys of dynamic Policy making through legislative bargaining**

**Principal investigator: Alessandro Riboni (Ecole Polytechnique)**

**Co-author: Facundo Piguillem (EIEF)**

In all democracies, decisions concerning, public spending, taxation, regulation, and debt are usually made through legislative bargaining. The intense negotiation over the US and EU budget that we have recently witnessed is a clear demonstration of the importance of post-election bargaining and of the key role played by the status quo.

Over the last three decades, the macro-economic literature has studied a wide range of political-economy issues, usually focusing on median-voter equilibria. The assumption is that the implemented policy coincides with the policy preferred by the median voter. While the median-voter approach has substantially deepened our understanding of how politics affects economic outcomes, this approach suffers from a few limitations. First, this approach abstracts from negotiation. Moreover, in the median voter theorem, the status quo plays no role.

Our goal is to analyze dynamic policy making through legislative bargaining and to analyze the role of the status quo (that is, the default in case of disagreement). A model of bargaining appears to be a promising avenue to explain the observed policy persistence in policy

decisions, the importance of political institutions, and the fact that policy outcomes often are not centrist.

The main coauthor for this project is Facundo Pigullem (assistant professor in Rome, EIEF). We have a paper that we are revising for resubmission at the QJE on similar topics. Another paper of ours has been submitted to RESTUD. A possible coauthor for empirical applications is Hector Galindo, a student of mine at the University of Montreal.

The project "Analysis of dynamic Policy making through legislative bargaining" resulted so far in two papers. The first one is titled "Spending Biased Legislators, discipline through disagreement" is currently under revision for the Quarterly Journal of Economics and will be resubmitted soon. The second paper is titled "Dynamic Bargaining over Redistribution in Legislatures" and is under revision. In order to understand the determinants of redistribution and spending decisions, these two papers study legislative bargaining in legislatures. The two papers have been presented by one of the two coauthors in Mannheim, UPF, UCL, Amsterdam University, Warthon School, SAET meetings in Paris, SED Meetings in Seoul.

**Title of the project: Environmental Policy and Competition Policy: complements or substitutes?**

**Principal investigator: Francisco Ruiz-Aliseda (Ecole Polytechnique)**

**Co-authors: Anna Creti, Guy Meunier, Jean-Pierre Ponssard, (all Ecole Polytechnique), Marcel Boyer (Université de Montreal) and Catherine Thomas (LSE)**

Most of the literature on environmental policy has neglected some distinguishing features of the industries that pollute the most, such as the aluminum, steel, cement or chemical industries. Rather than fitting into the (perfectly) competitive paradigm, these industries can be better characterized as oligopolies in which sunk investments, endogenously formed capacity constraints, and uncertainty borne by (possibly heterogeneous) firms are aspects worthwhile highlighting. Given the oligopolistic character of the industries in which pollution is a longstanding policy concern, it is not surprising that market power issues are also relevant in all of them. The functioning of these industries must not only conform to environmental policy but also to competition/antitrust policy constraints.

The purpose of the present project is to better examine the interaction of both types of policies in dynamic settings and analyze the possible tradeoffs that can arise because of their independent formulation. To give a simple example, higher carbon taxes when the market structure is endogenous can lead to fewer firms operating in the market and hence easier collusion, which in turn can result in easier adoption of new technologies that mitigate pollution by the fewer firms active in the market. Forbidding collusion may then depress incentives to adopt pollution-reducing technologies. Industrial organization models that explain an industry's evolution in dynamic settings have not been used so far to shed light on this kind of trade-offs.

Overall, our project aims at developing a better understanding of how different microeconomic policies interact with each other. This has already happened recently for

innovation policies and antitrust ones, sparking out an interesting debate that we think will also happen for other policies such as environmental ones. Our objective is to be at the forefront of this debate that will surely emerge.

#### Expected outcomes

In terms of deliverables, we expect to have a working paper ready for circulation in eight or nine months, and be able to organize a dedicated research workshop in which leaders in the field of environmental industrial organization can participate. All the funding that we would obtain for this project would be used for travel expenses to related conferences and to organize our own academic workshop, which we would aim at developing at a high profile.

**Title of the project: Novelty requirements and information disclosure in optimal patent policy**

**Principal investigator: Francisco Ruiz-Aliseda (Ecole Polytechnique)**

**Co-authors: Emeric Heny (Sciences Po)**

Conditional upon government intervention indeed being optimal, patents seem to constitute the most powerful means to promote innovation. The four policy levers relevant for patents are their length, the novel requirements they must meet to be granted, the technical information that needs to be disclosed about the innovations when filing for them, and their breadth. There has been significant work on the optimal trade-off between patent length and patent breadth, as exemplified by for example Gilbert and Shapiro 1990, Klemperer 1990 and Gallini 1992, where patent breadth is to be understood as how different an imitation needs to be from a patented innovation in order not to infringe it.

Although patent length and breadth are certainly relevant, it is unclear why they are more important than the other ones. In fact, the other defining features of patents that are under the control of the governments, such as for instance the stringency of the novelty requirements, have been completely understudied. This important gap in the optimal innovation policy literature constitutes the starting point for this project.

In particular, I study situations in which an innovator can obtain a patent after performing R&D activities with a stochastic outcome. An imitator can then develop a noninfringing (but nonpatentable) imitation after following a costly, time-consuming and deterministic imitation process whose speed is under its control. Given this environment, I aim at analyzing optimal patent policy when the policy levers are novelty requirements that must be met for patenting the initial innovation and the breadth of the patent conferred to the innovator. The interest of the model is to contrast the novelty requirement on innovations (an ex ante policy variable) with patent breadth (an ex post policy variable), and analyze how a social planner must trade them off in order to maximize social welfare. Both of these policy levers (partially) substitute each other when an imitator has the option of reducing its imitation costs before innovation occurs by investing in developing so-called “absorptive capabilities” (that is, by investing in enhancing absorption of the knowledge embedded in the innovation in order to facilitate imitation, as defined by Cohen and Levinthal 1989). Preliminary investigations show that

broader patents stimulate innovation, as was to be expected. Perhaps more surprisingly, more stringent novelty requirements can also stimulate innovation, and hence it is a priori unclear what the optimal patent policy is, since imitation is also desirable at some point because of greater competition. The reason why more stringent requirements spur innovation is that the imitator can choose to invest less in compressing the imitation process that should be undertaken if an innovation occurs. This may be overly beneficial for the innovator despite it finds it harder to obtain a patent out of its R&D activities.

In an important extension of the model, I intend to modify it in order to include the other policy lever that has been completely neglected: the level of information disclosed when obtaining the patent. To do so, I will assume that a patented innovation is characterized by some probability that the information disclosed is valuable, where this probability is a choice variable for the social planner. Because choosing probability one facilitates imitation, it is likely that the optimal patent policy is characterized by a probability strictly smaller than one, which is not what happens right now. Overall, then, I aim at improving our understanding of why the current patent policy may not be optimal under previously unexplored dimensions.

**Title of the project: Viager Immobilier en France : effet de sélection et asymétrie d'information**

**Principal Investigators : Michael Visser (CREST-ENSAE), Laurent Linnemer (CREST-ENSAE)**

This summer we supervised the internship of Giang Thu HOANG (second-year student of ENSAE). Using new data that we obtained via a Paris-based agency specialized in viager sales, Giang Thu has first applied the methods developed by Février, Linnemer and Visser (Journal of Public Economics, 2012). One problem with the new data set is that for many observations the price of the apartment or house is missing. The solution that we propose is to estimate a hedonic price equation (model relating price to characteristics of the good) based on observations where prices are known, and then impute prices for the observations where they are missing. The results are overall quite similar to those obtained in the 2012 article. Next, the distribution of lifetimes of viager sellers has been compared with the distribution among representative individuals of the French population. More precisely, for each seller in the data base, we defined his or her “clone”, i.e., a person randomly drawn from deceased French individuals (using the “Base nationale des décès” of INSEE) of the same gender and same region and year of birth as the seller. Contrasting the two distributions, we find that viager sellers live approximately 600 days longer than representative individuals from the total population (at the moment the house or apartment is sold, viager seller are on average aged 75). Thanks to the help of Giang Thu, we have written a preliminary draft of the paper. Between now and February/March 2015 we plan to finalize and rewrite the paper, to submit it to the usual conferences (ESEM/EEA, EARIE, etc.) which will be held in the Summer of 2015.



**Title of the project: Vertical Contracting and Interlocking Relationships**

**Principal investigator: Thibaud Vergé (CREST-ENSAE)**

**Co-author: Facundo Piguillem (EIEF)**

**Title:** Vertical Contracting and Interlocking Relationships (with Patrick Rey, Toulouse School of Economics)

**Current evolution of the project**

We are currently in the process of writing up the paper on secret contracting with interlocking relationships. In this paper, we develop a model of secret contracting using the concept of contract equilibria. We show that, for a relatively general class of contracts, equilibrium tariffs must be cost-based in that equilibrium retail prices are those that would be set assuming that retailers can acquire the product at cost. In that sense, the equilibrium - in the absence of any additional vertical restraint - is relatively competitive. We then try to endogenize the market structure by introducing a pre-negotiation stage in which each firm decides with which other firm it is willing to deal. In that setting, we show that there is always a unique coalition-proof equilibrium: when retailers are sufficiently differentiated, all products are sold in equilibrium, whereas exclusive dealing occurs (i.e., each retailer exclusively supplies on brand so that only two products are actually sold in equilibrium) when retailers are close substitutes.

We then move on to analyse the effect of some vertical restraints and especially Resale Price Maintenance (RPM). In this case, multiple equilibria exists, including some with higher price than in the absence of RPM. The precise type of RPM that is require to achieve these less competitive outcomes however depends on the relative degree of substitution between brands and between stores. Minimum RPM (i.e., price floors) may harm consumers - and thus be anticompetitive - only when there is more substitution among brands than among retailers (i.e., when consumers are more loyal to retailers than to brands), whereas in the opposite scenario, firms would need to use maximum RPM (i.e., price ceiling) to achieve a less competitive outcome. This result should be contrasted with the current legal framework under which minimum RPM is considered to be extremely harmful whereas maximum RPM is seen as being rather pro-competitive.

Once we will have completed the first full draft of this paper (we hope to have it done soon enough), we plan to start looking at possible extensions (looking for instance at agency contracts and price parity clauses – currently under investigation by many competition authorities in the context of digital platforms), and also by considering public contracting.

Conferences: Given that we have been slower than planned to write up the first full draft of the paper, it has not been submitted to the EARIE and EEA-ESEM conference in 2014 (although Patrick Rey discussed our results in his presidential address at the EARIE annual conference in Milan in August). I presented our work at the ANR-DFG Vertical Workshop (Rennes, June 18-19), at the 2014 CRESSE conference (Corfu, July 4-6) and at the ECODEC

Antitrust conference that we organized in Paris in September. I expect to submit it for next year's conference (possibly EEA in Mannheim (August 2015) and/or IIOC in Boston (April 2015) but it will also depend on funding possibilities).

## ***5 Invited professors***

Year	Invited professor	University	Purpose of the visit
2013	Marcin Peski	University of Toronto	
2013	Riordan Michael	Columbia University	X-CREST Microeconomic Seminar
2013	Kartal Melis	University of Vienna	X-CREST Microeconomic Seminar
2013	Gromb Denis	Insead	X-CREST Microeconomic Seminar
2013	Hari Govindam	University of Rochester	
2013	Guadalupe Maria	Insead	X-CREST Microeconomic Seminar
2013	Fleckinger Pierre	Paris 1	X-CREST Microeconomic Seminar
2013	Courty Pascal	University of Victoria, Canada	One or two presentations of his work and possibly also an advanced mini-course.



Year	Invited professor	University	Purpose of the visit
2013	Vollker Nocke	Mannheim University	X-CREST Microeconomic Seminar
2013	Pietro Ortoleva	California University of Technology	
2013	Martimort David	PSE	X-CREST Microeconomic Seminar
2013	Jeon Doh-Shin	TSE	X-CREST Microeconomic Seminar
2013	Lefouilli Yassine	TSE	X-CREST Microeconomic Seminar
2013	Janos Flesch	Maastricht University	Janos Flesch will be based in Economics Dept at Ecole Polytechnique. Based on demand, we will organize meetings at HEC
2013	Adams Renee	University of New South Wales	Development of research with P. Crifo, E. Challe, Forget, G. Roudault, T. André and other interested members of the dept.
2013	Valletti Tommaso	U. Roma "Tor Vergata"	X-CREST Microeconomic Seminar
2013	Cantillon Estelle	ECARES, U.L.B.	X-CREST Microeconomic Seminar
2013	Kirchsteiger Georg	ECARES, U.L.B.	X-CREST Microeconomic Seminar
2013	Scholtens Bert	University of Groningen	Development of research wiath P. Crifo, E. Challe, Forget, G. Roudault, T. André and other interested members of the dept.

Year	Invited professor	University	Purpose of the visit
2014	Schutz Nicolas	Mannheim University	X-CREST Microeconomic Seminar
2014	Schmidt-Dengler Philip	Mannheim University	X-CREST Microeconomic Seminar
2014	Menicucci Domenico	Universita degli Studi di Firenze	X-CREST Microeconomic Seminar
2014	Smith Howard	Oxford University	X-CREST Microeconomic Seminar
2014	Montero Juan-Pablo	Universidad Catolica de Chile	X-CREST Microeconomic Seminar
2014	Schmutzler Armin	Zurich University	X-CREST Microeconomic Seminar
2014	Duso Tomaso	DIW Berlin	X-CREST Microeconomic Seminar
2014	Bourreau Marc	Telecom ParisTech	X-CREST Microeconomic Seminar
2014	Lamy Laurent	PSE	X-CREST Microeconomic Seminar
2014	Siciliani Luigi	University of York	X-CREST Microeconomic Seminar
2014	Sorgard Lars	Norwegian School of Economy	X-CREST Microeconomic Seminar
2014	Dubois Pierre	TSE	X-CREST Microeconomic Seminar

Year	Invited professor	University	Purpose of the visit
2014	Shcherbakov Alex	Mannheim University	X-CREST Microeconomic Seminar
2014	Moeller Marc	Mannheim University	X-CREST Microeconomic Seminar
2014	Gomes Renato	TSE	X-CREST Microeconomic Seminar
2014	Tarantino Emanuele	Mannheim University	X-CREST Microeconomic Seminar

## 6 PhD and postdoc grants

Name	Surname	Contract typ	PhD Subject/Research subjects
ELI	Vincent	PhD	Testing and justifying normative theories of decision making: an experimental approach to rationality
GUTTIERREZ	Cédric	PhD	Three Essays in entrepreneurial decision making and intertemporal choices
HOVSEPIAN	Margot	PhD	Technological change and sustainable development: beyond national borders
ISPANO	Alessandro	Post doctoral fellow	Information economics, behavioral industrial organization and experimental economics, intellectual property
LASIO	Laura	PhD	The Economics of the pharmaceutical sector
MACE	Antonin	PhD	Essais sur les processus de décision collective
PEJSACHOVICZ	Leonardo	Post doctoral fellow	Decision Theory, microeconomic Theory, Behavioral Economics
SHCHEPETOVA	Anastasiia	PhD	Consumer Economics, Competition Policy, Behavioral and Experimental Economics, Industrial Organization

## 7 Conferences

### 1st CREST-ECODEC Conference on the Advances in the Economics of Antitrust and Consumer Protection Paris, September 18-19, 2014

The first ECODEC Antitrust conference took place on September 18<sup>th</sup> and 19<sup>th</sup> in the premises of INRA in Paris (Rue de l'Université). Around 40 participants attended the conference which hosted 11 speakers.

Aleksandra Boutin (Université Libre de Bruxelles) and Patrick Rey (Toulouse School of Economics) discussed mechanisms that can be used to limit the license prices for new technologies without removing incentives to create “good patent pools.”

Roman Inderst (University of Frankfurt) discussed the pro-competitive effects of Resale Price Maintenance insisting on the potential to improve brand image. In a related session, David Martimort (EHESS and Paris School Economics), Volker Nocke (University of Mannheim) and Thibaud Vergé (CREST/ENSAE, ECODEC) presented their work on the competitive effects of vertical contracts and vertical integration.

Peter Schwardmann (University of Munich) explained how competitive financial markets are more likely to give rise to borrower's overoptimism and collateralized loans to risky borrowers, especially when the risk-free interest rate is low and potential entrepreneurial profits are high.

Gautam Gowrisankaran (University of Arizona) and Philippe Choné (ENSAE/CREST, ECODEC) looked at the impact of competition in the hospital market. Gautam focused on the effects of mergers on negotiated prices, while Philippe looked at how different types of payments to hospitals affect non-price competition between hospitals.

Frank Verboven (KU Leuven) tested the accuracy of merger simulation models comparing the simulated (i.e., anticipated) effects of a merger between two pharmaceutical firms in Sweden with the actual effects, concluding that the model predicted pretty well the actual outcome. Finally, Alessandro Iaria (CREST/ENSAE, ECODEC) and Marie-Laure Allain (Ecole Polytechnique, ECODEC) talked about competition between supermarkets. Alessandro develop a technical point on the importance to consider the different alternatives actually offered to consumers (when choosing where to shop) to better estimated demand functions, while Marie-Laure evaluated the effects of a past merger between two big supermarket chains on food prices.

Participants all agreed that the papers presented at the conference where of high quality and hoped that this conference will continue to be organized in the future.

**Dynamic and Repeated Games, 20th Conference of the International Federation of Operational Research Societies, IFORS 2014, July 13-18, Barcelona.**

Rida Laraki was Stream organizer of five sessions on Dynamic and Repeated Games, 20th Conference of the International Federation of Operational Research Societies, IFORS 2014, July 13-18, Barcelona.

**International Conference Mathematical Aspects of Game Theory and Applications, June 30 to July 4 2014, Roscoff, France**

This conference was organized with R. Buckdahn, P. Cardaliaguet, M. Quincampoix, C. Rainer, J. Renault, T. Tomala, N.Vieille).