

The Chairs' Update

Department of Economics

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The Collective Scientific Projects: Giving an Early Research Experience to Second-year Students

Collective Scientific Project (PSC) is part of the second-year students' curriculum. In collaboration with public or private institutions, they work in a 5 – 7 student team on a specific research question. The team is working under the supervision of a professor or Ph.D student, taking a disciplinary perspective for seven months. In fine, the best projects are rewarded.

Among the PSC that were organized over the past two years in the Department of Economics, the following can be highlighted: «Impact of Carbon Taxes on Fruit Market – The End of Traditional Agriculture?» supervised by Diane Laure Arjaliès (2010); «Study of Photovoltaics Public Policies» supervised by Jean-Pierre Ponsard (2011); and «Predictive Markets» supervised by Pierre Picard (2011).

“Searching for Indicators of Corporate Social Responsibility”

This PSC was conducted in 2010-2011 by five students (Pierre-Philippe de Drouin de Bouville, Lingjie Fei, Benjamin Pipat, Thibault Van der Cruisse de Waziers and Guangyang Wen) supervised by Patricia Crifo and aimed at scaling the CAC 40 companies along their Corporate Social Responsibility (CSR). To do so, the students first surveyed their peers to identify which environmental or social aspects they cared for as future employees, or as potential investors. Those results were used to weight public environment and social information to scale the companies and compare this Polytechnique reputation indicator with Vigeo's ratings, the leading European extra-financial rating agency. They highlighted discrepancies between individuals' firm perception and professional ratings.

Foreword

This Chairs' Update reviews the main interactions between our Chairs' Partners and Ecole Polytechnique's students. It follows the academic curriculum starting from undergraduate up to graduate studies. Each section contends a short description of the subject and illustrative examples. The Department of Economics is indebted to its sponsors for providing these opportunities. **The chairs' coordinators:** Dominique Bureau, Patricia Crifo, Pierre Picard and Jean-Pierre Ponsard.

Please note: this Chairs' Update has been realized by Jérôme Joaug (Third-year student), Vanina Forget (Ph.D student) and Claire Marie Bono (Ph.D student).

Students' Visits to Partner Companies

Second-year students are invited each year to visit companies. The visits are organized by Ecole Polytechnique in order to give students some insights for their future professional career. Master and doctoral students are invited to join (companies recruit 50% of the Ph.D graduates). In 2011, thirty-one companies have opened their doors, including Axa, BNP Paribas, EDF, GDF SUEZ, LAFARGE...

Discovering the Miracles of Science at DuPont

On April 28, 2011, a group of 13 students had the opportunity to visit DuPont de Nemours European Technical Centre in Geneva. They discovered the diversity of the firms' activities from Chemicals, Agriculture to Construction Materials. Research executives presented how the two-century-old company works on innovative solutions for its customers, for other firms and for other entities of the industrial group.



Internships as a Significant Part of Students' Curriculum

The third-year research project consists in a 3 to 5 month internship. Students benefit from a wide range of both subjects and host organizations worldwide thanks to the Chairs' partners and international relationships of the Department such as CIRANO (Montreal) and Alliance Program (Columbia University, NY). In 2010, a new opportunity focusing on Social Business has been offered in coordination with a HEC (Paris) partnership.

Every Year the Chairs Reward the Best Master Thesis!

In 2009, Jordan Cartier obtained the "Prix d'Option de la Chaire Business Economics" for his thesis carried on "Energy Policies and Energy Suppliers" at EDF-R&D. Jordan's work dealt with the competition policies accompanying the deregulation of electricity markets.

His thesis focused on issues such as the unbundling of transportation and distribution services, the introduction of NOME law and the setting of a carbon tax.

Also in 2009, Aude Philippi and Cécile Retaureau did their Master (Quantitative Economics and Finance) research internship at CIRANO (Montréal, Canada) supervised by Bernard Sinclair Desgagné. They investigated weather derivative structuring and applied it to the Maple Syrup Industry in Quebec. Indeed, climate change poses unique risks to maple syrup producers and weather derivatives represent a potentially promising approach to augment their risk management.

Ph.D and Post-Doctoral Students

The Department of Economics has its own Doctoral program within the Ecole Polytechnique Doctoral School. This program benefits from either by public or private Fellowships (such as CIFRE with private companies). A limited number of fellowships are also offered to Doctoral and Post-Doctoral students by the Chairs.

Within this Doctoral program, Claire-Marie Bono works on "Reducing GreenHouse Gas Emissions: Macroeconomic and Sectoral Effects of Tax Reform" (Advisors: Edouard Challe, Jean-Pierre Ponsard) in partnership with EDF. Samer Hobeika's Ph.D in partnership with Novethic deals with "Institutional Investors, Socially Responsible Investment and Green Growth" (Advisor: Jean-Pierre Ponsard). Also focusing on Socially Responsible Investment, Vanina Forget investigates "Corporate Social Responsibility, Private Equity and the Agro-Food Sector: Tools of Sustainable Growth?" (Advisor: Patricia Crifo) as part of the Corps des Ponts, des Eaux et des Forêts. Another example of Ph.D research is Damien Bosc who focuses on dependence between random variables and stochastic process within AXA-IM team (Advisor: Alfred Galichon).

Follow-up of some Recent Doctoral Students

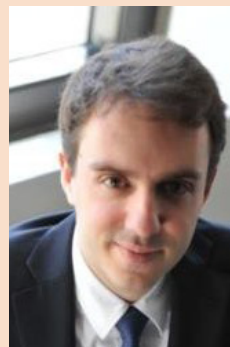


Diane Laure Arjaliès: *Institutional Change in the Making. The Case of Socially Responsible Investment*

Diane-Laure graduated from ESSEC Business School and built her Ph.D (University Paris West Nanterre) on her SRI analyst experience at MACIF Gestion. She was a research fellow at Ecole Polytechnique for her last year of Ph.D and defended her thesis in June 2010. Her research examines the introduction of non-financial performance measures in asset management. She is now Assistant Professor in Accounting and Management Control at HEC Paris. She recently published "A Social Movement Perspective on Finance: How Socially Responsible Investment Mattered" in the Journal of Business Ethics (2010).

Sabine Lemoyne-de-Forges: *Four Essays on Insurance and Prevention of Natural Disasters*

Sabine is an Ecole Polytechnique and ENGREF graduate. She defended her Ph.D thesis on Risk and Insurance Economics (Advisor: Pierre Picard) in January 2011. Among her papers, her co-work with Julien Hardelin was particularly rewarded by the SCOR-EGRIE Young Economist Best Paper Award 2009. She now works as a state-employee for the Ministry of Finance on third-party insurance for professionals.



François Perrot: *Multinational Corporations at the Base of the Economic Pyramid in Emerging Countries: A Strategic Framework*

After graduating from ESSEC Business School and SciencesPo (Paris), François is doing his Ph.D in partnership with Lafarge on corporate strategies targeting low income people in developing countries, known as the Base of the Pyramid strategies (Advisors: Patricia Crifo and Jean-Pierre Ponsard). He also teaches in several institutions such as ENA, ESC Pau and ESSEC among others. He will defend his Ph.D thesis on September 23, 2011.

And more ...

Lectures on Risk and Insurance Economics



Pierre-André Chiappori, Columbia University

The Chair on Large Risks in Insurance-AXA-Research Fund-Ecole Polytechnique has organized on May 31, 2011, the "Lectures on Risk and Insurance Economics". These Lectures geared towards a public of International and European Ph.D and Post-Doctoral fellows provided the opportunity to interact with world renowned experts. The topics presented were: New Approaches to the Regulation of Financial Activities by Guillaume Plantin, Toulouse School of Economics; Analysis of Fraudulent Behavior in Insurance and Accounting by Keith Crocker, Penn State University; and Quantitative Analysis of Insurance Markets under Asymmetric Information by Pierre-André Chiappori, Columbia University.

Is CSR a Communication Tool?



Ingénieurs sans Frontières Conference
From left to right: P. T. d'Argenlieu (X2009), J-P. Ponsard (Professor), T. Zniber (X2009), M-A. Dalle (X2009).

On June 16, 2011, Jean-Pierre Ponsard invited by *Ingénieurs sans Frontières* gave a conference on Green Washing, and the book **CSR: From Compliance to Opportunity** edited with Patricia Crifo published in February 2010 (<http://www.amazon.fr>).

Based on his field experience with Chairs' Partners, Jean-Pierre Ponsard highlighted key elements of Corporate Social Responsibility at work. The presentation engaged students in a lively debate on multinationals and their sustainable development policies.



Ingénieurs sans Frontières Communication

Conferences in Courses

Jean-Pierre Ponsard regularly invites speakers from Partner companies in his course Business Strategy (ECO 559). For instance Jean-Pierre Princen (DuPont) lectured on "R&D and Business Sustainability in the Chemical Industry" ; Jacques Sarrazin (Lafarge) on "The International Strategies of the Cement Industry in China"; and Arnaud Erbin (GDF SUEZ) on "The interactions of business firms with institutional investors". Case studies and gaming experiments also indirectly benefit from the interaction with Partners.

A Gaming Experiment: Combining Financial and Ethical Criteria in Portfolio Decision

Since 2004, Pierre Picard has been including an experiment within his microeconomics course (300 second-year students are enrolled in ECO 431). This experiment, built by André de Palma and Nathalie Picard (Cergy Pontoise University), evaluates risk aversion thanks to an online survey. This experiment has both teaching and research targets.

In 2010, it was redesigned to include SRI in portfolio selection. This online experiment was improved by Sri Srikandan to allow 280 students of the Ecole Polytechnique to participate, as well as 389 students from the University of Laval (Montreal, Canada), HEC Geneve (Switzerland), Cergy Pontoise University, ENS Cachan and ENASS. It also figures as one among several gaming exercises to be part of our future Laboratory for Economics and Decision Science.

The Chairs' Update

Chair's Partners

Chair for Business Economics:



The miracles of science™

GDF SUEZ



Unilever

Chair for Sustainable Development:



Chair on Large Risks in Insurance:



Chair Large Risks in Insurance

Chair for Sustainable Finance and Responsible Investment:



UpNext

Forthcoming Events

Ph.D Defense

September 23, 2011: François Perrot *Multinational Corporations at the Base of the Economic Pyramid in Emerging Countries:*

A Strategic Framework (Advisors: Patricia Crifo and Jean-Pierre Ponsard).

Workshops

October 17-18, 2011: *Low Carbon Economy and Technology Innovation Mechanism*. First Joint Franco-Chinese Workshop Ecole Polytechnique – HIT (Location: Harbin Institute of Technology, Harbin, China).

Fall 2011: *The Global Impact of Climate Change- Dealing with Natural Disasters* (Location: Paris, TBA).

Ph.D Day of the Department of Economics

Seminars

Our seminar series will come back in September: *Environment and CSR, PEEES, IDDRI Sustainable Development, Industrial Economics Seminar, etc.*

Have a relaxing summer!!!

