



Prof. Pierfancesco La Mura, Ph.D.

Chairholder
Chair of Economics and Information
Systems

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Academic Education

- 1994-1999 Ph.D. in Economic Analysis and Policy, Graduate School of Business, Stanford University, California, USA
- 1992-1996 Doctorate in Economic Sciences, Bocconi University, Milan, Italy
- 1987-1992 Laurea in Discipline Economiche e Sociali, Bocconi University, Milan, Italy

Professional Experience

- since 2002 Professor at the Chair of Economics and Information Systems, HHL Leipzig Graduate School of Management, Leipzig, Germany
- 2001-2002 Postdoctoral Fellow at the Institute for Advanced Studies; Lecturer at the Economics Department, The Hebrew University of Jerusalem, Israel
- 1999-2000 Postdoctoral Fellow at the Computer Science Department, Graduate School of Business, Stanford University, California, USA
- 1997-1999 Research Assistant for Professor Yoav Shoham, Computer Science Department, Stanford University, USA
- 1997-1998 Lecturer in Applied Game Theory at the Summer School, Central European University, Budapest, Hungary
- 1992-1993 Co-lecturer in Microeconomics, History of Economic thought and Mathematical Economics, Bocconi University, Milan, Italy

Honors and Awards

- 1992 Top Thesis Award "Dignita' di stampa", Bocconi University, Milan, Italy



Research Interests

Market Design and Regulation

- Electronic markets
- Energy markets
- Mechanism design

Foundations of Game and Decision Theory

- Representations
- Solutions
- Algorithms

Information Theory

- Preference estimation
- Quantum information
- Artificial Intelligence

Publications

Research Monographs

- P. La Mura: Ph.D. Thesis "Foundations of Multi-Agent Systems" Stanford University, Graduate School of Business, 1999.
- "Linguaggio, comunicazione e potere", Bocconi University, 1996.

Book Chapter

- P. La Mura (2018), Contextual Mechanism Design. In Social Design: Essays in Memory of Leonid Hurwicz. W. Trockel (Ed.), Springer.

Peer Reviewed Journal Articles

- Adam Brandenburger, Pierfrancesco La Mura: Team decision problems with classical and quantum signals, in Philosophical Transactions of the Royal Society A, 2016, Volume 374, issue 2058.



- Pierfrancesco La Mura, Philipp Gmehling: A Bayesian inference model for the credit rating scale, in *The Journal of Risk Finance*, 2016, Vol. 17 Issue: 4, pp.390-404
- Pierfrancesco La Mura, A double-slit experiment for non-classical interference effects in decision making, In: *Topics in Cognitive Science*, 6 (2014), 58–62.
- P. La Mura, B. Schwetzler, A. Wilms, M. Rapp “The Certification Hypothesis of Fairness Opinions”, *International Review of Law and Economics*, 31 (2011) 4, 240-248, 2011.
- P. La Mura, “Il Canto dell’Odio”, *Journal of Italian Translation*, 2010.
- P. La Mura: Projective Expected Utility, *Journal of Mathematical Psychology*, Vol 53(3), 2009.
- P. La Mura: “Correlated Equilibria of Classical Strategic Games with Quantum Signals”, Special issue on the foundations of quantum information, *International Journal of Quantum Information*, 2 (2004) 4.

Peer Reviewed Proceedings

- P. La Mura and G. Scarpa: “Quantum-Assisted Interferometry in Space: Real-Time Coherence in Space Telescope Arrays with Shared Quantum States”. Proceedings of the 69th International Astronautical Congress, Bremen, Germany, October 1-5, 2018.
- P. La Mura: “Three Types of Robot Builder for the Unsupervised Construction of Mars Habitats”, in Proceedings of the 68th International Astronautical Congress, Adelaide, Australia, September 25-29, 2017.
- P. La Mura: “An Information-Theoretic Description of Quantum Mechanics” in Proceedings: TARK, Workshop “Quantum physics meets TARK”, Groningen, The Netherlands, July 15, 2011.
- P. La Mura and E. Demidova: “Group Bargaining with Incomplete Information” in Proceedings: The fourth international conference on Game Theory and Management, St. Petersburg, Russia, 28-30 June, 2010.
- P. La Mura: “Projective Expected Utility - A Subjective Formulation”, in Proceedings: Theoretical Aspects of Rationality and Knowledge (TARK) Conference, Stanford University, 6-8 July, 2009.



- P. La Mura: “Game Theory without Decision-Theoretic Paradoxes.” in Proceedings: 1International Conference on Algorithmic Decision Theory, Venice, Italy, 21-23 October, 2009.
- P. La Mura: “Negotiation-Range Mechanisms: Exploring the Limits of Truthful Efficient Markets, Yair Bartal; Rica Gonen” in: Proceedings of the 5th ACM Conference on Electronic Commerce, New York, NY, USA, May 17-20, 2004, ed. by J. Breese, J. Feigenbaum and M. Seltzer, New York, NY: ACM Press, 2004.- pp. 1-8.
- P. La Mura: “Decision-Theoretic Entropy”, in: Proceedings of the 9th Conference on Theoretical Aspects of Rationality and Knowledge (TARK-2003), Bloomington, Indiana, USA, June 20-22, 2003, ed. by J. Y. Halpern and M. Tennenholtz, New York, NY: ACM Press, 2003. pp. 35-44.
- P. La Mura: “Game Networks”, in: Proceedings of the 16th Conference in Uncertainty in Artificial Intelligence (UAI) , Stanford University, Stanford, California, USA, June 30 - July 3, 2000, ed. by C. Boutilier and M. Goldszmidt, San Francisco, CA: Morgan Kaufmann, 2000. pp. 335-342.
- P. La Mura and Y. Shoham: “Expected Utility Networks”, in: Proceedings of the 15th conference on Uncertainty in Artificial Intelligence (UAI '99), Stockholm, Sweden, July 30 - August 1, 1999, ed. by K. Laskey and H. Prade, San Francisco, CA: Morgan Kaufmann, 1999. pp. 366-373.
- P. La Mura and Y. Shoham: “Conditional, Hierarchical, Multi-Agent Preferences”, in: Proceedings of the 7th Conference on Theoretical Aspects of Rationality and Knowledge (TARK-98), Evanston, IL, USA, July 22-24, 1998, ed. by I. Gilboa, San Francisco, CA: Morgan Kaufmann, 1998. pp.215-224.

Working Papers

- A. Brandenburger, P. La Mura, K. Steverson: Concurrency and Common Knowledge in a Neural Network, January 22, 2017.
- A. Brandenburger, P. La Mura: “Deriving the Qubit from Entropy Principles”, Cornell University, New York, 2015.
- P. La Mura and A. Brandenburger: “Quantum Decision Theory”, Cornell University, New York, 2011.
- P. La Mura and L. Swiateczak: “The Centipede Game in the Framework of Projective Expected Utility”, 2010.



- P. La Mura: Expected Utility of Final Wealth and the Rabin Anomaly, HHL Working Paper 91. Leipzig: HHL Leipzig Graduate School of Management, 2009.
- P. La Mura, B. Schwetzler, M. Rapp, A. Wilms: The Certification Hypothesis of Fairness Opinions , HHL Working Paper 92, 2009 published on Social Science Research Network, <http://papers.ssrn.com/sol3/papers.cfm?>, 2009.
- P. La Mura and L. Swiatczak: “Markovian entanglement networks”, HHL Working Paper 77. Leipzig: HHL Leipzig Graduate School of Management, 2007.
- P. La Mura and G. Olschewski: “Non-dictatorial social choice through delegation”, HHL Working Paper 72. Leipzig: HHL Leipzig Graduate School of Management, 2007.
- P. La Mura: “Decision theory in the presence of uncertainty and risk”, HHL Working Paper 68. Leipzig: HHL Leipzig Graduate School of Management, 2005.
- P. La Mura and M. Herfert: “Estimation of Consumer Preferences via Ordinal Decision-Theoretic Entropy”, HHL Working Paper 64. Leipzig: HHL Leipzig Graduate School of Management, 2004.
- P. La Mura: “Correlated Equilibria of Classical Strategic Games with Quantum Signals”, HHL Working Paper 61. Leipzig: HHL Leipzig Graduate School of Management, 2003.

Peer Reviewed Conference Papers / Conference Presentations

- P. La Mura: “Quantum-Assisted Interferometry in Space: Real-Time Coherence in Space Telescope Arrays with Shared Quantum States”, 69th International Astronautical Congress, Bremen, Germany, October 4, 2018.
- La Mura, Pierfrancesco: “Entangled economic behavior: 'hard' and 'soft' quantum effects in decisions and games”, Workshop, University of Pécs, Pécs, Hungary, January 3, 2018.
- La Mura, Pierfrancesco: “Three Types of Robot Builder for the Unsupervised Construction of Mars Habitats”, 68th International Astronautical Congress, Adelaide, Australia, September 25-29, 2017.



- La Mura, Pierfrancesco: The Conditional Shapley Value. Axiomatizations in Game Theory Workshop, University of Pécs. Pécs, Hungary, September 1, 2017.
- Pierfrancesco La Mura: “An Information-Theoretic Description of Quantum Mechanics”; Workshop “Quantum physics meets TARK”, University Groningen, The Netherlands, July 15, 2011.
- Pierfrancesco La Mura, Adam Brandenburger: Quantum decision theory, 13th Conference on Theoretical Aspects of Rationality and Knowledge, Groningen, Netherlands, July 11-14, 2011
- Pierfrancesco La Mura: “Game theory without decision-theoretic paradoxes”, 2nd. Brazilian Workshop of the Game Theory Society, Sao Paulo, Brazil, July 29 – August 4, 2010.
- Pierfrancesco La Mura: “Game theory without decision-theoretic paradoxes”, 32nd. Bosphorus Workshop on Economic Design, Bodrum, Turkey, July 3-10, 2010.
- Pierfrancesco La Mura: “Game Theory without Decision-Theoretic Paradoxes”, 1st International Conference on Algorithmic Decision Theory, Venice, Italy, October 21-23, 2009.
- Pierfrancesco La Mura: “The Certification Hypothesis of Fairness Opinions”, XXVI Annual Conference: European Association of Law and Economics, Rome, Italy, September 16-19, 2009.
- Pierfrancesco La Mura: “Group Bargaining with Incomplete Information”, Logic, Game Theory and Social Choice (LGS 6) Conference, University of Tsukuba, Japan, August 26 - 29, 2009.
- Pierfrancesco La Mura: “Projective Expected Utility - A Subjective Formulation”, Theoretical Aspects of Rationality and Knowledge (TARK) Conference, Stanford University, July 6-8, 2009.
- Pierfrancesco La Mura: “Optimal decentralization of multi-agent decisions”, Economic Design Conference, Maastricht, The Netherlands, June 22-24, 2009.
- Pierfrancesco La Mura: “Projective expected utility”, Quantum Interaction Conference (QI-2008), Oxford, UK, March 26- 28, 2008.



- Pierfranceso La Mura: “Decision theory in the presence of quantum uncertainty”, Economic Theory Workshop, Institute for Advanced Studies, Hebrew University of Jerusalem, Israel, March 2005.
- Pierfranceso La Mura: “Decision theory in the presence of quantum uncertainty”, Workshop on Quantum entanglement in physical and information sciences, Pisa, Italy, December 14-18, 2004.
- Pierfranceso La Mura and Carmel Domshlak: “Game-theoretic entropy”, Sixth Conference on Logic and the Foundations of Game and Decision Theory (LOFT 6), Leipzig, Germany, July 16-18, 2004.
- Pierfrancesco La Mura and Mark R. Pearson: “Simulated Annealing of Game Equilibria: A Simple Adaptive Procedure Leading to Nash Equilibrium”, International Workshop on The Logic and Strategy of Distributed Agents, Trento, Italy, December 14-19, 2000

Invited Talks

- La Mura, Pierfrancesco
Team decision Problems with classical and quantum Signals
5th Workshop on Cooperative Game Theory in Business Practice
HHL Leipzig Graduate School of Management
Leipzig, Germany, June 15, 2018
- La Mura, Pierfrancesco
Entangled economic behavior: 'hard' and 'soft' quantum effects in decisions and games, University of Bielefeld,
Bielefeld, Germany, October 10, 2017
- La Mura, Pierfrancesco
The Conditional Shapley Value
4th Workshop on Cooperative Game Theory in Business Practice
HHL Leipzig Graduate School of Management
Leipzig, Germany, June 16, 2017
- La Mura, Pierfrancesco
Games with quantum signals | The Conditional Shapley Value
Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig
Leipzig, Germany, June 29, 2016



- La Mura, Pierfrancesco
Team Decision Problems with Classical and quantum signals
3th Workshop on Cooperative Game Theory in Business Practice
HHL Leipzig Graduate School of Management
Leipzig, Germany, June 25, 2015
- La Mura, Pierfrancesco
Entangled Preferences
Amsterdam Quantum Logic Workshop
Amsterdam, The Netherlands, May 7-8, 2015
- La Mura, Pierfrancesco
Team Decision Problems with Classical and quantum signals
Amsterdam Quantum Logic Workshop
Amsterdam, The Netherlands, November 24-26, 2014
- La Mura, Pierfrancesco
Assessing chronological data from textual information
NYU Stern School of Business
New York, USA, October 24, 2014
- La Mura, Pierfrancesco
Deriving the qubit from the principles
Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig
Leipzig, Germany, May 27, 2014
- La Mura, Pierfrancesco
“Dependence Logic: Theory and Applications”
Dagstuhl, Germany 11-15 February, 2013
- Pierfrancesco La Mura
“Quantum vs. Classical Memory”
City University of New York, November 12, 2010
- Pierfrancesco La Mura
“Decision theory in Hilbert spaces”
Dagstuhl Seminar on “The Semantics of Information”
Dagstuhl, Germany 6-11 June, 2010
- Pierfrancesco La Mura
“Non-Dictatorial Social Choice through Delegation”
Research Seminar for the doctoral program "The Economics of Innovative Change" (organized by Friedrich Schiller University of Jena and International



Max-Planck Research School on Adapting Behavior in a Fundamentally Uncertain World), Jena, Germany, November 18, 2009

- Pierfrancesco La Mura
“Game Theory without Decision-Theoretic Paradoxes”
Theory Seminar of the Paris School of Economics, Paris School of Economics, Paris, France, October 30, 2009

Other Publications

- A. Brandenburger and P. La Mura, "Quantum-Assisted Load Balancing in Communication-Constrained Wide-Area Physical Networks". U.S. Patent No. 10,056,983, August 21, 2018.
- Pierfrancesco La Mura: Wenn die Lichtgeschwindigkeit nicht mehr ausreicht, in Frankfurter Allgemeine Zeitung, Nr. 153, p. 18, July 4, 2016.