

# PIETRO BATTISTON

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Date of birth: 07/29/1985, Pisa (Italy)

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I am a researcher in Economics with a background in Mathematics and a passion for programming. My main research interests are Network Theory (and in particular applications to economic and financial networks), Law & Economics, Experimental Economics, and Bibliometrics.

Since November 2019, I am a researcher at the Department of Economics and Management of University of Parma (Italy).

## Education

- PhD in Economics, University of Milan Bicocca, 2010-2014 (dissertation: “*Essays on networks and information dynamics*”, advisor: Luca Stanca).
- Laurea Magistralis in Economics, University of Bologna, 2008-2010.
- Laurea in Mathematics, University of Pisa, 2004-2008.

## Past positions

- November 2018 - November 2019: researcher at the Department of Economics, Management and Statistics (DEMS), University of Milan-Bicocca (Italy).
- June 2017 - May 2018: research fellow at the Department of Legal Systems of the University of Milan Bicocca (Italy).
- January 2014 - December 2016: research fellow at the Institute of Economics of the Sant’Anna School of Advanced Studies, Pisa.

## Visiting periods

- 2017, February: Weiss Visiting International Scholar, Barnard College, Columbia University.
- 2013, April-June: visiting PhD student at Central European University, Budapest.

## Publications

Refereed journal articles:

- Battiston, P., Gamba, S. (forthcoming) “When the two ends meet: an experiment on cooperation across the Italian North-South divide” *Economia Politica*

- Battiston, P., Duncan, D. R., Gamba, S., Santoro, A. (2020) “Audit publicity and tax compliance: a natural experiment” *Scandinavian Journal of Economics*, 122(1), 81-108
- Battiston, P. (2016) “Constrained network formation”: *Italian Economic Journal*, 2(3), 347-362
- Battiston, P., Gamba, S. (2016) “The Impact of Social Pressure on Tax Compliance: a Field Experiment”, *International Review of Law and Economics*, 46, 78-85
- Battiston, P., Stanca, L. (2015), “Boundedly Rational Opinion Dynamics in Directed Social Networks: Theory and Experimental Evidence”, *Journal of Economic Behavior and Organization*, 119, 400-421

Books:

- Battiston, P. (forthcoming), *Network responsibility*, Columbia University Press
- Battiston P., Battiston R., (2020), *La matematica del virus*, Castelvecchi

Book chapters:

- Battiston, P., Gamba, S., Rotondi V. (2019), “What does a young cheater look like? An innovative approach”. In Bucciol, A. and Montinari, N., editors, *Dishonesty in Behavioral Economics*, Elsevier

### Working papers

- “Trust in science and experts during the COVID-19 outbreak in Italy” (with Ridhi Hashyap, Valentina Rotondi), 2020
- “COVID-19:  $R_0$  is lower where outbreak is larger” (with Simona Gamba), *submitted, 2020*
- “Using Machine Learning to Predict Tax Behaviour” (with Simona Gamba, Alessandro Santoro), *submitted, 2020*
- “Lies have long legs. Cheating, public scrutiny and loyalty in teams” (with Simona Gamba, Matteo Rizzolli, Valentina Rotondi), *submitted, 2018*
- “Social Interaction and Technology Adoption: Experimental Evidence from Improved Cookstoves in Mali” (with Jacopo Bonan, Jamie Bleck, Philippe LeMay-Boucher, Stefano Pareglio, Bassirou A. Sarr, Massimo Tavoni), 2019
- “What exactly is public in a public good game? A lab-in-the-field experiment” (with Simona Gamba, Matteo Rizzolli, Valentina Rotondi), 2019
- “Cover Effects on Citations Uncovered: Evidence from *Nature*” (with Pierluigi Sacco, Luca Stanca), 2019
- “Believe it or not: Experimental Evidence on Sunspot Equilibria with Social Networks” (with Sharon Harrison), *submitted, 2020*

- “Growth and financial exposition in times of crisis” (with Mauro Napoletano), 2017
- “Citations are Forever: Modeling Constrained Network Formation”, 2014

### Work in progress

- “Topologies of target sets, and of layers of neural networks trained on them”
- “Measuring risk in repeated games of complete information”
- “Rational Bubbles in closed economies”

### Awards

- SIE (Italian Economic Association) award for the best PhD thesis in Economics in 2014: winner (ex-aequo)
- GSS Young Scholar Award 2015: finalist

### Invited talks

- Scientific:
  - June 2019: SOSE study center, Rome (presenting “Using machine learning to predict tax behavior”)
  - June 2018: *Data Science for Economics* Workshop, University of Turin (presenting “Using big data to predict tax behavior”)
  - April 2018: Scuola Superiore Sant’Anna, Pisa (presenting “Using big data to predict tax behavior”)
  - October 2017: University of Campinas, Brasil (workshop “The use and role of big data for enhancing agri-food chains and public policy”)
  - February 2017: Barnard College - Columbia University, New York (Weiss International Fellow Lectures in Literature and the Arts)
  - May 2014: Fondazione Eni Enrico Mattei, Milan (presenting “Boundedly Rational Opinion Dynamics in Directed Social Networks: Theory and Experimental Evidence”)
- Scientific computing:
  - PyConLT 2018, May, Kaunas.
  - PiterPy 2017, November, Saint Petersburg.

### Other contributions to scientific conferences and workshops

- **2020:** Fifth Meeting of the Behavioral and Experimental Economics Network (BEEN), Verona.
- **2019:** European Association of Law and Economics (EALE) conference, Tel Aviv; 1st CeFES International Conference on European Studies, Milan.
- **2018:** ZEW Public Finance Conference, Mannheim.
- **2017:** 58th Annual Scientific Conference of the Italian Economic Association, University of Calabria; Workshop on the Law and Economics of Migration and Mobility, Bern; 3rd Maastricht Behavioral Economic Policy Symposium, Maastricht.
- **2016:** European Association of Law and Economics (EALE) conference, Bologna.
- **2015:** 30th Annual Congress of the European Economic Association (EEA), Mannheim; WEHIA '15, Sophia Antipolis; ARS '15, Capri.
- **2014:** ECCS Warm-up, Lucca.
- **2013:** 2nd Annual CIRANO-CIREQ Workshop on Networks in Trade and Finance, Montreal; European Conference on Complex Systems (ECCS), Barcelona; World Meeting of Economic Science Association (ESA), Zurich; ARS '13, Roma; NEXT Workshop on Networks and Externalities, Budapest; International Conference on Evolutionary Patterns, Lisbon.
- **2012:** European Association of Law and Economics (EALE) conference, Stockholm; Economic Science Association (ESA) European conference, Köln; 5th Italian Doctoral Workshop in Economics and Policy Analysis, Torino.

### Refereeing activity

- Journals: *Journal of Economic Behavior & Organization*, *Journal of Complex Networks*, *PLOS ONE*, *International Review of Economics*, *Journal of Sustainable Tourism*, *Journal of Economic Interaction and Coordination*
- Conferences: *International Conference on Behavioral, Economic, and Socio-Cultural Computing* (2014-2018)

### Research groups

- At Sant'Anna: member of Horizon 2020-financed project DOLFINS; collaborator of Horizon 2020-financed project ISIGrowth
- At Milan Bicocca: member of SIR (financed by the Italian Ministry for Research and Education) project on "Estimated tax assessments and presumptive taxation: a comparative analysis", PI: Nicola Sartori

## Teaching activity

- Academic:
  - Fundamentals of Economics, University of Parma, Spring 2020
  - Introduction to Python Programming for PhD students, University of Milan-Bicocca, Spring 2020
  - Macroeconomics, University of Milan-Bicocca, Fall 2019
  - Winter School in Social Network Analysis, University of Campinas, July 2019
  - Microeconomics, University of Milan-Bicocca, Spring 2019
  - Advanced Mathematics, Sant’Anna School of Advanced Studies (Ph.D. Program in Economics), Pisa, Fall 2018
  - Advanced Calculus I (Teaching Assistant), Sant’Anna School of Advanced Studies, Pisa, Fall 2018, Fall 2019
  - Mathematics (Teaching Assistant), University of Pisa, Fall 2018
  - Advanced Calculus II (Teaching Assistant), Sant’Anna School of Advanced Studies, Pisa, Fall 2017
  - Political Economics I (Teaching Assistant), Catholic University of Milan, Spring 2012, Spring 2013.
- Non-academic:
  - Python for Data Science (for THUX s.r.l.), Milan, Fall 2019.
  - Introductory course on Python programming for scientific applications, Pisa, Spring 2015.
  - Introduction to Economics for high school students, Pisa, Spring 2016, Fall 2016.

## Language knowledge

- Italian: mother tongue
- French: excellent fluency in speaking and writing
- English: very good fluency, (IBT) TOEFL test passed with score 112/120
- German: very basic reading and listening skills
- Spanish: very basic reading and listening skills

## Other work experience

- 2019, November: Teacher of Python for Data Science (for THUX, Milan)
- 2017, May: Consultant of Python for data analysis (for Thunder Systems s.r.l., Milan)
- 2008: Part-time programmer in Python, employed in the development of a graphical user interface for databases management.
- 2006, 2007, 2008: Mathematics tutor for workshops aimed at middle- and high school students (projects PORTA and “Pianeta Galileo”).

### **Other activities and skills**

- Strong programming experience, in particular with the Python programming language and scientific libraries;
- Core developer of pandas (reference library for data manipulation in Python), occasional contributor of other open source softwares related to scientific computing;
- For my research activity I also used R, Matlab, Stata, C, GRETL, z-Tree, among others.
- Creator of unicerca.it, a website devoted to fostering mobility in the Italian academic job market.
- Passioned by music, I have taken part in several concerts both as choir member and as solo singer.

*Last update: June 15, 2020.*