Javier Garcia-Bernardo

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Education

The University of Amsterdam	**The Netherlands**
Ph.D. in Political Science	*2015–present*
Santa Fe Institute	**United States**
Complex System Summer School	*2018*
The University of Vermont	**United States**
M.Sc. in Computer Science, GPA – 4.0/4.0	*2013–2015*
Certificate in Complex Systems, *GPA – 4.0/4.0*	
The University of Leon	**Spain**
B.Ss. in Biotechnology, GPA – 8.9/10	*2007–2012*

Languages: Spanish (Mother tongue), English (Fluent), Dutch (Intermediate).

GRE scores – standardized test for US graduate admissions: Quantitative (98%), Verbal (84%).

Research Interests: Data Science; Network Science; Computational Social Science; Computational Biology; Political Economy

Research Experience

2015–present: **PhD Candidate**. University of Amsterdam, The Netherlands

Advisor: Dr. Eelke Heemskerk

I model transnational corporate networks to reveal how multinationals exploit differences in legislation across countries to avoid tax payments, and to understand why some large Western countries facilitate it – e.g. 23% of all transnational corporate structures go through the Netherlands. I am also interested in the dimension and effects of the current re-concentration of corporate ownership in the hands of passive investors – the largest shareholders in 434 companies of the S&P500 (as in Jan. 2018). *See next section for the list of publications*

2012–2015: **Graduate Research Assistant**. The University of Vermont, USA

○ M.Sc. in Computer Science (2013-2015) and FARO Global scholarship (2012).

Advisor: Dr. Mary Dunlop

During my time with Dr. Dunlop I transitioned from experimental to computational science, developing stochastic models of genetic networks to study the role of noise in gene expression. We found that living organisms do not always try to reduce noise (variation), but sometimes exploit it to coordinate genetic networks and hedge against the sudden appearance of stressors. *See next section for the list of publications*

○ Certificate in Complex Systems (2013-2015).

Advisors: Drs. Peter Dodds, Neil Johnson and Maggie Eppstein

As part of my certificate in complex systems I became involved in several data science projects, using web scrapping, visualizations, high performance computing, social network analysis and generative models to understand the dynamics underlying human conflict. *See next section for the list of publications*

2009-2012: **Undergraduate Research**

Scholarships in four top Spanish and US laboratories to study the role of several oncogenes in cancer. I became familiar with the scientific method and experimental techniques.

List of journal publications

○ PhD

▪ A. Reurink,**J. Garcia-Bernardo**. *"Competing with whom? For what? And how? The great fragmentation of the firm, FDI attraction profiles, and the race for foreign investment". Under review*

▪ **J. Garcia-Bernardo**, J. Janský, T. Tørsløv. *"Effective tax rates of multinational enterprises: is there a level playing field?". In preparation*

▪ M. Babic **J. Garcia-Bernardo**, E. Heemskerk. *"The Rise of Transnational State Capital: State Ownership, Strategy and Power in the Global Economy". In preparation*

▪ **J. Garcia-Bernardo**,E. M. Heemskerk, N. Pisani. *"Does it pay off to be a multinational?". Under review*

▪ E. M. Heemskerk, K. Young, F. W. Takes, B. Cronin, **J. Garcia-Bernardo**, et al.. *"The Promise and Perils of Using Big Data in the Study of Corporate Networks: Problems, Diagnostics and Fixes ". Global Networks, 2018*

▪ **J. Garcia-Bernardo**, J. Fichtner, F. W. Takes, E. M. Heemskerk. *"Uncovering Offshore Financial Centers: Conduits and Sinks in the Global Corporate Ownership Network". Scientific Reports, 2017.*

▪ **J. Garcia-Bernardo**, F. W. Takes. *"The Effects of Data Quality on the Analysis of Corporate Board Interlock Networks". Information systems, 2017*

▪ J. Fichtner, E. M. Heemskerk, **J. Garcia-Bernardo**. *"Hidden Power of the Big Three? Passive Index Funds, Re-Concentration of Corporate Ownership, and New Financial Risk". Business and Politics, 2017*

▪ E. M. Heemskerk, F. W. Takes, **J. Garcia-Bernardo**, M. J. Huijzer *"Where is the global corporate elite? A large-scale network study of local and nonlocal interlocking directorates". Sociologica, 2016*

○ MSc

▪ **J. Garcia-Bernardo**, P. S. Dodds, N. F. Johnson, et al.. *"Social media affects the timing, location, and severity of school shootings." In submission.*

▪ **J. Garcia-Bernardo**, M. J. Dunlop. *"Phenotypic diversity using bimodal and unimodal expression of stress response proteins in fluctuating environments". Biophysical Journal, 2016*

▪ **J. Garcia-Bernardo**, P. S. Dodds, N. F. Johnson. *"Quantitative patterns in drone wars." Physica A, 2016.*

▪ **J. Garcia-Bernardo**, M. J. Dunlop. *"Extrinsic Noise and Low-Level Dynamics Coordinate Multicomponent Bet Hedging Mechanisms." Biophysical Journal, 2015.*

▪ **J. Garcia-Bernardo**, M. J. Eppstein. *"Evolving Modular Genetic Regulatory Networks with a Recursive, Top-Down Approach." Syst. Synth. Biol, 2015.*

▪ **J. Garcia-Bernardo**, M. J. Dunlop. *"Tunable Stochastic Pulsing in the Escherichia coli Multiple Antibiotic Resistance Network from Interlinked Positive and Negative Feedback Loops." PlOS Comp. Biology, 2013.*

Recent awards and Scholarships

2018: David P. Baron Award for the best article published in the *Business and Politics* journal

2015: Computer Science Graduate Award for Outstanding Performance and Greatest Promise of Success.

2012: FARO Global Scholarship.

2012: Star Award for Academic Achievement at the University of Vermont.

2012: Honorable Mention for Academic Performance at the University of Leon.

2010: Spanish National Research Council Scholarship.

Teaching experience

2018: Co-supervision of Computer Science M.Sc. student J.P. Uylings. Thesis title: "Opinion Dynamics on Corporate Boards"

2018: Graduate course: Working with Data. github.com/jgarciab/wwd2018

2017: Graduate course: Working with Data. github.com/jgarciab/wwd2017

2016: Flying circus workshop: Automated text analysis. github.com/jgarciab/text_analysis_python

Events (co)organized

2018: 4th Winter Workshop on Complex Systems

2017: Movie screening and panel discussion: The Spider's Web

2016: Panel discussion: The role of the Netherlands in offshore finance

Workshops, Presentations and Posters

Workshops:
- 2018: Winter Workshop on Complex Systems
- 2018: A New Map of Offshore Foreign Direct Investment: From Data to Impact
- 2017: Winter Workshop on Complex Systems

Invited talks:
- 2018: Staat van Nederland
- 2018: Belastingdienst bestuursdag.
- 2017: OffshoreAlert conference.
- 2017: Illicit financial flows and underground economy.

Other talks:
- 2018: International Studies Associations Conference
- 2017: European Conference on Social Networks
- 2017: International Conference on Computational Social Science
- 2017: Global tax justice at a crossroads
- 2017: Society for the Advancement of Socio-Economics
- 2017: Think Tank on Financial Complexity
- 2016: Conference on Complex Systems
- 2016: Sunbelt Social Networks Conference
- 2014: UVM Student Research Conference
- 2013, 2014: UVM Computer Science Research Day

Posters:
- 2017: ICT.OPEN
- 2014: Synthetic Biology: Engineering, Evolution & Design (SEED) conference
- 2014: The Genetic and Evolutionary Computation Conference (GECCO)
- 2013, 2014: UVM Computer Science Fair
- 2013: Macmillan Symposium

Youth in action projects:
- 2013: Integration through food, *Poland.* Employability and leadership, *Portugal.*
- 2012: Self-development, *Hungary.* The role of sport for people with disabilities, *Turkey.*

Computer Skills

Advanced: (C)Python, UNIX, Gephi, Machine Learning, Evolutionary Algorithms, LATEX, Inkscape.

Intermediate: HTML, MySQL, MATLAB.

Basic: JAVA, Javascript, C, R, Neo4J.