

Julían García

August-Thienemann-Str 2 – 24306 Plön – Germany

☎ +49 174 339 1142 • ☎ +49 45 227 63224 • ✉ garcia@evolbio.mpg.de
🌐 garciajulian.com

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Education

Faculty of Economics, Vrije Universiteit

Amsterdam

Doctor (PhD),

2006–2010

Computational and mathematical models in evolutionary game theory.

National University of Colombia

Bogotá

Computer and Systems Engineering – with Honours, (5 year degree)

1998–2004

“Tesis meritoria” – Distinguished dissertation.

Professional appointments

Academic.....

Max Planck Institute for Evolutionary Biology

Plön, Germany

Postdoctoral fellow

2010–Present

- Developing computational and mathematical models of social evolution.
- Lecturer/tutor for Evolutionary Dynamics (2011 – 2012).

Vrije Universiteit

Amsterdam

Research assistant

2006–2010

- Doing research on game theory and social evolution.
- Guest research position at the Center for Research in Experimental Economics and Political Decision Making, University of Amsterdam.

National University of Colombia

Bogotá

Auxiliary Lecturer

2004

- Teaching numerical methods for engineering (undergraduate level).
- Teaching computer programming for computer science and engineering (undergraduate level).
- Adjunct researcher at the Laboratory for Intelligent Systems.

Industry.....

Unión Soluciones

Bogotá

Lead developer

2005–2006

Designing and implementing large-scale Java Enterprise applications

Computing Centre, National University of Colombia

Bogotá

Computer Programmer

2002–2004

Developing and maintaining web applications for the University administration.

Selected Publications

Full list and citations via **google scholar** at: http://bit.ly/garcia_scholar.

Journal publications.....

- van Veelen M., **García J.**, ¹ Rand D.G., and Nowak M.A. Direct reciprocity in structured populations (2012). PNAS 109 9929-9934.
- **García J** and Traulsen A. Leaving the loners alone: evolution of cooperation in the presence of antisocial punishment (2012) Journal of Theoretical Biology 307 168–173.
- **García J** and Traulsen A. The structure of mutations and the evolution of cooperation (2012) PLoS ONE 7(4): e35287.
- van Veelen M., **García J.**, Egas M and Sabellis M. Group selection and inclusive fitness are not equivalent; the Price equation vs. models and statistics (2012). Journal of Theoretical Biology 299 64–80.
- **García J** and van den Bergh, J. Evolution of parochialism by multi-level selection (2011). Evolution and Human Behavior 32 (4) 277-87.
- van Veelen M. **García J.** Egas M and Sabellis M. Call for a return to rigour in models (2010). Letter to the Editors. Nature 467, 661.

Conference proceedings.....

- **García J.**, Hernandez, G., and Galeano, J. C. Cooperation, Solution Concepts and Long-term Dynamics in the Iterated Prisoner's Dilemma. Proceedings of the Congress on Evolutionary Computation 2006. IEEE Press, Vancouver, Canada.
- Hernandez G. Nino F. Wilder K. and **García J.** Towards a self-stopping evolutionary algorithm using coupling from the past. In Proceedings of the Genetic and Evolutionary Computation Conference 2005. ACM, Washington, DC.
- Hernandez G., Nino F., **García J.**, and Dasgupta D. On geometric and statistical properties of the attractors of a generic evolutionary algorithm. Congress on Evolutionary Computation 2004. IEEE Press, Portland, OR.
- **García J** and Nino F. Co-evolutionary Learning in the Tragedy of the Commons. In Proceedings of the Congress on Evolutionary Computation 2003. IEEE Press, Canberra, Australia.

Invited talks

- Evolution in repeated games. Department of Zoology, Vancouver, Canada (2009).
- Evolution in repeated games. Social Science Research Center, Berlin, Germany (2009).
- A primer on evolutionary dynamics, game theory and the problem of cooperation. National University of Colombia. Bogotá, Colombia (2011).
- Social decision making: bridging economics and biology. Monte Verità, Switzerland (2011).
- Evolution of cooperation in socio-ecological systems. Bremen, Germany (2011).
- NIMBioS-NESCent Investigative Workshop: Modeling Social Complexity. Knoxville, USA (2012).
- Cooperation in multi-partner settings: biological markets and social dilemmas. Lorentz Center, The Netherlands (2012).

¹Joint first authorship.

Research stays

- Institute for advanced study, Berlin. Visiting fellow L. Avilés. July, 2007.
- Institute for Environmental Science and Technology, Autonomous University of Barcelona. Visiting Prof. J van den Bergh. February, 2009
- Biodiversity Research Center, University of British Columbia, Vancouver. Visiting Prof. L Avilés. October–November, 2009
- Social Science Research Center, Berlin, Germany. Visiting Prof. Ruud Koopmans. December, 2009.
- Guest researcher at the Program for Evolutionary Dynamics, Harvard Univeristy. February, 2013.

Teaching

Courses taught.....

- *Computer Programming*. Computer Science and Engineering, National University of Colombia, 2004.
- *Numerical methods*. Engineering, National University of Colombia, 2004.
- *Evolutionary Dynamics*. MSc Mathematics in the Life Sciences, University of Lubeck, 2011.

Reviewing commitments

Journal of Theoretical Biology, Games and Economic Behavior, Journal of Artificial Societies and Social Simulation, Journal of Economic Behavior and Organization, Proceedings of the Royal Society B, Evolution and Human Behavior, BMC Evolutionary Biology, PLoS ONE, Adaptive Behavior.

Software

- Software from my PhD dissertation as well as related tutorials can be found at:
<http://evolutionandgames.com>
- My GitHub repository includes open-source software to study (and teach) evolutionary dynamics and game theory: <http://github.com/juliangarcia/>

Languages

- **Natural languages:** Fluent English, Native Spanish
- **Computer languages:** Fluent Python and Java, Proficient C++, Matlab/Octave and Julia.

Research in the media

- *Does cooperation require both reciprocity and alike neighbors?*. The Science Daily (June 8th, 2012).
http://j.mp/sci_daily_report
- *When Paths to Cooperation Converge*. Science (September 14th, 2012).
http://j.mp/science_perspective
- *Can computers teach us about evolution of cooperation?*. I, Science. (July 11th, 2012).
http://j.mp/i_science_interview

References

○ **Prof. Arne Traulsen**

Research Group for Evolutionary Theory.

Max Planck Institute for Evolutionary Biology, 24306 Plön, DE

Tel: +49 4522 763 239. Email: traulsen@evolbio.mpg.de

○ **Dr. Matthijs van Veelen**

Center for research in experimental economics and political decision making.

University of Amsterdam

Roetersstraat 11, Amsterdam, NL

Tel: +31-20-525 5293. Email: c.m.vanveelen@uva.nl

○ **Prof. Fabio A Gonzalez**

MindLab. Systems and Computer Engineering Department.

National University of Colombia, Bogotá, COL

Tel: +57 1 3165000 ext 14077. Email: fagonzalezo@unal.edu.co