Georgios Piliouras

School of Electrical and Computer Engineering
Georgia Institute of Technology
GA, 30332

georgios@gatech.edu
www.ece.gatech.edu/~georgios
607-342-5318

EDUCATION

2010 **Cornell University**
PhD in Computer Science (Advisor: Eva Tardos)
Minor Concentration in Cognitive Science

2008 **Cornell University**
Master of Science in Computer Science

2005 **National University of Athens, Greece**
Master of Science in Mathematical Logic and Computation

2004 **National Technical University of Athens, Greece**
Diploma of Electrical Engineering and Computer Science (highest honors)

RESEARCH KEYWORDS

Algorithmic Game Theory, Multi-Agent Learning, Optimization, Risk, Information Theory, Decision Theory, Complex Networks, Autonomous Systems

ACADEMIC/RESEARCH POSITIONS

2010 - Present **Georgia Institute of Technology**
Research Scientist (Electrical Engineering)

2010 - 2011 **Johns Hopkins University - University of Oxford**
Visiting Scholar (Economics)

2008 (Jun-Aug) **C.W.I. Center for Mathematics and Computer Science, Netherlands**

GRANT WRITING EXPERIENCE

January 2014	``The Internet as a Coevolutionary Multi-Agent System in Disequilibrium'' NSF grant proposal with C. Dovrolis and J.S. Shamma, submitted.

TEACHING EXPERIENCE

Spring 2013	GaTech Graduate Course ``Advanced Topics in Algorithmic Game Theory''
Spring 2012	GaTech Graduate Course ``Discrete Fourier Analysis and Applications''
Spring 2010	Co-designed Cornell Course ``Topics in Computational Sustainability''

ACADEMIC SERVICE

Program Committees	ACM Conference on Electronic Commerce (EC) 2011, 2012, 2013, 2014 Workshop Conference on Internet & Network Economics (WINE) 2013 Workshop on Complex Networks (CompleNet) 2013, 2014
Referee	Conferences & journals in theoretical computer science, control theory, and complex systems, e.g., STOC, FOCS, SODA, EC, WINE, SAGT, ICALP, ESA, PODC, CDC, ACC, COMPLENET, Algorithmica, IEEE Transactions on Automatic Control, Distributed Computing a.o.

RESEARCH

Working Papers

Read me First: An Introduction to the Theory of Attention Markets

w. Maria-Florina Balcan, Steven Ehrlich, and Jeff S. Shamma

A bottom-up approach on the emergence of self-organization in societal systems

w. Ibrahim Al-Shyouk and Jeff S. Shamma

Algorithmic Pattern Design: Long-Range Correlations via Poly-time Computable Local Rules

In submission

Near Optimality in Covering and Packing Games by Exposing Global Information

w. Maria-Florina Balcan, Sara Krehbiel, and Jinwoo Shin

(submitted for journal publication, 2012)

LP-based covering games with Low Price of Anarchy

w. Tomas Valla and Laszlo A. Vegh

(submitted for journal publication, February 2013)

Game Couplings: Learning Dynamics and Applications

w. Maria-Florina Balcan, Florin Constantin, and Jeff S. Shamma

(submitted for journal publication, August 2013)

Published/To Appear

Persistent Patterns: Multi-Agent Learning beyond Equilibrium and Utility

w. Henrik I. Christensen, Carlos Nieto-Granda, and Jeff S. Shamma

International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), 2014.

Optimization despite Chaos:

Convex Relaxations to Complex Limit Sets via Poincare Recurrence

w. *Jeff S. Shamma*

ACM-SIAM Symposium on Discrete Algorithms (SODA), 2014.

Risk Sensitivity of Price of Anarchy under Uncertainty

w. Evdokia Nikolova and Jeff S. Shamma

ACM Conference on Electronic Commerce (EC), 2013.

LP-based covering games with low Price of Anarchy

w. Tomas Valla and Laszlo A. Vegh

Workshop on Internet & Network Economics (WINE), 2012.

Near Optimality in Covering and Packing Games by Exposing Global Information

w. Maria-Florina Balcan, Sara Krehbiel, and Jinwoo Shin

IEEE Conference on Decision and Control (CDC), 2012.

Medium and Long-Run Properties of Linguistic Community Evolution
w. Michael J. Fox and Jeff S. Shamma
International Conference on the Evolution of Language (Evolang IX), 2012.

Load Balancing Without Regret in the Bulletin Board Model
w. Eva Tardos and Robert Kleinberg
Distributed Computing Journal 24, 2011.

Game Couplings: Learning Dynamics and Applications
w. Maria-Florina Balcan, Florin Constantin, and Jeff S. Shamma
IEEE Conference on Decision and Control & European Control Conference (CDC-ECC), 2011.

Beating the Best Nash without Regret
w. Katrina Ligett
SIGecom Exchanges 10(1), 2011.

Beyond the Nash Equilibrium Barrier
w. Robert Kleinberg, Katrina Ligett, and Eva Tardos
Symposium on Innovations in Computer Science (ICS), 2011.

Dynamic Coalition Formation and Price of Anarchy in Cournot Oligopolies
w. Nicole Immorlica and Vangelis Markakis
Workshop on Internet, Network and Economics (WINE), 2010.

No-Regret Learning in Oligopolies: Bertrand vs Cournot
w. Uri Nadav
Symposium on Algorithmic Game Theory (SAGT), 2010.

Load Balancing Without Regret in the Bulletin Board Model
w. Eva Tardos and Robert Kleinberg
Symposium on Principles of Distributed Computing (PODC), 2009.

Multiplicative Updates Outperform Generic No-Regret Learning in Congestion Games
w. Eva Tardos and Robert Kleinberg
Symposium on Theory of Computing (STOC), 2009.

SELECTED TALKS

2014	ACM-SIAM Symposium on Discrete Algorithms (SODA)
2013	Office of Naval Research, Arlington Virginia / ACM Conference on Electronic Commerce (EC) / GaTech Theory Seminar
2012	GaTech CS Theory Seminar / Northwestern University Theory Seminar / Texas A&M Theory Seminar / Summer School in Game Theory (Samos, Greece) / University of Maryland / GaTech Aerospace Engineering Seminar
2011	IEEE Conference on Decision and Control and European Control Conference / GaTech, Department of ECE **/** International Conference on Game Theory (Stonybrook) **/** Oxford University, Department of Economics **/** Physical Intelligence DARPA-UCLA **/** GaTech, Department of CS / Symposium on Innovations in Computer Science (ICS)
2010	Workshop on Internet, Network and Economics (WINE) / Physical Intelligence DARPA-SRI / Symposium on Algorithmic Game Theory (SAGT) / Thesis Defense Cornell
2009	2nd Eastern Great Lakes Theory Workshop / Symposium on Principles of Distributed Computing (PODC) / Symposium on Theory of Computing (STOC) / Cornell Theory Seminar

THESES

2010	**A Learning Theoretic Approach to Algorithmic Game Theory** PhD Thesis Cornell
2005	**Information Networks and Game Theory** Master Thesis, U.O.A.
2004	**Game Theory and Complexity** Thesis, N.T.U.A.

DISTINCTIONS

Fellowships

2005	Olin Fellowship (Cornell)
2000 – 2005	Fellowships by National Fellowship Foundation (I.E.K.) & National Society of Engineers (T.E.E.)
2002	Research Fellowship by I.L.S.P

Awards / Achievements

2012	Invited speaker, International Summer School on Algorithmic Game Theory, Samos Greece.
2011	Invited scholar, Oxford University, Department of Economics, U.K.
2011	Invited scholar, Institute of Advanced Studies, Hebrew University of Jerusalem, Israel.
2008	Outstanding Teaching Assistant Award
2005	Award for top academic performance in C.S. and Logic Program
2000 – 2005	Several distinctions as best 1% of the E.E./C.S. Department
2004	1st place in national robotics competition
1999	Honorary admission to the Electrical Engineering and Computer Science Dept. of N.T.U.A as international mathematics champion
1994 – 1999	Several medals in national & international mathematics competitions

REFEREES

Advisors/ Committee Members	Eva Tardos, eva@cs.cornell.edu Jeff S. Shamma, shamma@gatech.edu Robert Kleinberg, rdk@cs.cornell.edu
Co-Authors	Nina Balcan, denton@cc.gatech.edu Evdokia Nikolova, nikolova@tamu.edu
DARPA ``Physical Intelligence'' Project	Yong Chen, yongchen@seas.ucla.edu Richard Rohwer, richard.rohwer@sri.com
NSF Proposal	Constantine Dovrolis, dovrolis@cc.gatech.edu