
Education

Ph.D student, ORFE, Princeton University Advisor: Prof. Amir Ali Ahmadi. Expected Completion Date: May 2018 Passed Ph.D general examinations in May 2013. <i>Research interests:</i> Polynomial optimization, applications of optimization to social sciences, relaxations of NP-hard problems.	Sep. 2012 – current
M.S. in General Engineering, Ecole Centrale Paris Obtained as part of a double degree program.	June 2014
B.S. in General Engineering, Ecole Centrale Paris Ranked 1 st out of 500 students.	Sep. 2010 – June 2012
Classes préparatoires aux Grandes Ecoles, Lycée Masséna, Nice Preparation for the nationwide Grandes Ecoles competitive examinations. <i>Major:</i> Mathematics and Physics, <i>Minor:</i> Engineering.	Sep. 2008 – June 2010

Honors and Awards

Selected for the Rising Stars program in EE/CS at Stanford Career workshop for top female graduate students and postdocs in EE and CS.	November 2017
School of Engineering and Applied Science Award for Excellence Award given by Princeton University for scholarly and research excellence.	October 2017
Selected for the Young Researchers Workshop at Cornell	October 2017
SIAM Student Travel Award	August 2017
IISE Award for Excellence in Teaching of Operations Research.	May 2017
INFORMS Computing Society Award for Best Student Paper For “DC Decomposition of Nonconvex Polynomials using Algebraic Techniques”.	October 2016
Graduate School Teaching Award	March 2016
McGraw Graduate Teaching Fellow	June 2015 – Current
Engineering Council Teaching Award, Princeton University Assistant instructor in Probability and Stochastic Systems (Fall 2014).	Feb. 2014
Médaille de l’Ecole Centrale, Académie des Sciences Awarded to the valedictorian of Ecole Centrale Paris.	Nov. 2013
Gordon Wu fellowship, Princeton University	Sep. 2012 – Aug. 2016
Semi-finalist for BCG Strategy Cup, BCG National case study competition in teams.	April 2012
Semi-finalist for best junior project, Ecole Centrale Paris Project title: “ <i>Detecting falls in the elderly using video surveillance</i> ” In partnership with Keeneo, now Digital Barriers.	May 2011
Sébastienne Guyot fellowship, Bouygues Construction Awarded to a promising female scholar in Ecole Centrale Paris.	Nov. 2010

Papers and Publications

On the construction of converging hierarchies for polynomial optimization based on certificates of global positivity, 2017
Joint work with Amir Ali Ahmadi. Submitted.

Improving efficiency and scalability of sum of squares optimization: recent advances and limitations, 2017
Joint work with A. A. Ahmadi, A. Papachristodoulou, J. Saunderson, and Y. Zheng. Accepted for CDC 2017.

Polynomial norms, 2017.
Joint work with Amir Ali Ahmadi and Etienne de Klerk, under review.
Available at <https://arxiv.org/abs/1704.07462>.

Geometry of 3D Environments and Sum of Squares Polynomials, 2016.
Joint work with Amir Ali Ahmadi, Ameet Makadia and Vikas Sindhwani, Accepted for RSS 2017.
Available at <https://arxiv.org/abs/1611.07369>.

DC Decomposition of Nonconvex Polynomials with Algebraic Techniques, 2015.
Joint work with Amir Ali Ahmadi, Forthcoming in Mathematical Programming, Series B.
Available at <http://arxiv.org/abs/1510.01518>.

Sum of Squares Basis Pursuit with Linear and Second Order Cone Programming, 2015.
Joint work with Amir Ali Ahmadi.
Forthcoming in Contemporary Mathematics, 2016. Available at <http://arxiv.org/abs/1510.01597>

Optimization over Structured Subsets of Positive Semidefinite Matrices via Column Generation, 2015.
Joint work with Amir Ali Ahmadi and Sanjeeb Dash.
Forthcoming in Discrete Optimization, 2016. Available at <http://arxiv.org/pdf/1512.05402v1.pdf>.

Exact Recovery in the Stochastic Block Model, 2014.
Joint work with Emmanuel Abbe and Afonso S. Bandeira.
In IEEE: Transactions on Information Theory, vol. 62, no. 1, 2016.
Available at <http://arxiv.org/abs/1405.3267>

Selected Invited Talks

Simons Institute Workshop, Berkeley (upcoming)	November 2017
LIDS seminar, MIT, Cambridge	September 2017
SIAM Conference on Applied Algebraic Geometry, Atlanta, USA	July 2017
Seminar, Oxford University, Oxford, UK	May 2017
INFORMS Computing Society Conference, Austin, USA	January 2017
Ecole Polytechnique Federale de Lausanne, MTEI seminar	October 2016
International Conference on Continuous Optimization, Tokyo, Japan	August 2016
DIMACS workshop "Distance Geometry: Theory and Applications"	July 2016
Polytechnique, Paris, France	June 2016
LAAS-CNRS Workshop, Toulouse, France	June 2016
INFORMS international, Hawaii	June 2016
IBM Research, White Plains, New York	May 2016
Mixed Integer Programming Workshop, Miami	May 2016
INFORMS Optimization Society, Princeton	March 2016
INFORMS, Philadelphia	October 2015
International Symposium on Mathematical Programming, Pittsburgh	July 2015

Professional Activities

Co-coordinator of the Princeton Optimization Seminar	Feb. 2016 – June 2017
Session Organizer, INFORMS 2016	Oct. 2016
Workshop Organizer, 55th IEEE Conference on Decision and Control “Solving large-scale semidefinite programs for controls, robotics, and machine learning.”	December 2016
Volunteer Math Expert in the Julia Robinson Math Festival Festival held at Princeton University.	April 2016 & April 2017
Assistant in Instruction, Princeton University	Sept. 2012 – Current
<ul style="list-style-type: none">• Instructed a graduate level course in Advanced Optimization	Current & Spring 2015
<ul style="list-style-type: none">• Instructed a junior level course in Computing and Optimization for the Physical and Social Sciences and a junior level course in Probability and Stochastic systems.	Fall 2015 & Fall 2014
<ul style="list-style-type: none">• Helped in the course development of Computing and Optimization for the Physical and Social Sciences. <i>With the support of the Keller Center.</i>	August 2014
<ul style="list-style-type: none">• Instructed a sophomore level course in Fundamentals of Statistics.	Spring 2014
<ul style="list-style-type: none">• Instructed a junior level course in Probability and Stochastic systems.	Fall 2014 & Fall 2013

Miscellaneous activities

Other work experience

Member of the Graduate College House Committee (Facilities Officer) from Feb. 2013 to Feb. 2015.

Hobbies and Interests

Rowing (Women’s eight), skiing and Victorian literature.