

Education

- **Princeton University** Princeton, NJ
Ph.D., Operations Research and Financial Engineering (ORFE) September 2015 - Present
 - Research interests: Polynomial Optimization, Applications of Optimization to Machine Learning, Relaxations of NP-hard Problems
- **Ecole Polytechnique** Paris, France
B.S. and M.S. in Applied Mathematics and Computer Science September 2012 - August 2015
 - Relevant courses: Stochastic Models in Finance, Statistical Learning and Non parametric Estimation, Mathematical Aspects and Applications of Operations Research

Work Experience

- **Susquehanna International Group** Philadelphia, PA
Quant. Research - Intern June 2016 - August 2016
 - Collaborated with the Options Team to automate corrections to short term volatility predictions
- **JPMorgan** London, UK
Quant. Research - Intern Mars 2015 - August 2015
 - Improved the accuracy of the Exotic Rates pricing system
 - Reduced the risk analysis software process time by a factor of **2.5**
- **Infosys** Hyderabad, India
Software Engineer - Intern June 2014 - August 2014
 - Developed a web security scanner that analyzes the content (DOM elements) of a web page and monitors HTTP traffic to enhance the security against XSS and CSRF attacks

Publications:

- On Algebraic Proofs of Stability for Homogeneous Vector Fields (joint work with A. Ahmadi)
- A Globally Asymptotically Stable Polynomial Vector Field with Rational Coefficients and no Local Polynomial Lyapunov Function (joint work with A. Ahmadi)

Finance Related Projects:

- Design of automated trading strategies using Genetic Algorithms
- Study of optimal market making policies using Hawkes processes to simulate the limit order book

Skills:

Programming: Python, C++, Matlab, R, SQL

Languages: English (Highly proficient), French (Bilingual), Arabic (Bilingual)

Extracurricular Activities:

- Head of IT staff of X-Projets (Junior enterprise of Ecole Polytechnique):
 - Optimized “Odelice”, a cooking App for iPhone: Used a cache system to make content download **3 times** faster
 - Implemented the web interface of the crowd funding platform “Galile360”
- Day trading on IG platform (CFD, Forex)
- Attended London Model United Nations conference and acted as a delegate from Turkey: Collaborated with a working group to create a comprehensive paper on Middle East crisis