

# Vasileios-Orestis Papadigenopoulos

## Curriculum Vitae

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## Research Interests

Main Topics: Combinatorial and continuous optimization, approximation and online algorithms, resource allocation and scheduling theory

## Education

- Aug 2016 – Present **Ph.D in Computer Science**,  
*Department of Computer Science, The University of Texas at Austin,*  
**Research Supervisor:** Constantine Caramanis  
**Graduate Courses:** Approximability, Sublinear Algorithms, Communication Complexity, Advanced Networking Protocols, Randomized Algorithms, Numerical Analysis: Linear Algebra, Large Scale and Convex Optimization, Probability and Stochastic Processes.
- Sep 2009 – Oct 2015 **Diploma (5-year B.Sc. with thesis) in Electrical and Computer Engineering,**  
*School of Electrical and Computer Engineering, National Technical University of Athens,*  
**GPA:** 9.08/10.  
**Thesis:** "Approximation Algorithms for Scheduling Map-Reduce Jobs", **Advisor:** Dimitris Fotakis
- Sep 2006 – Jun 2009 **Apolytirion, Lycée Léonin de Patissia, Athens, Final grade 19.5/20.**

## Publications

- Working Paper "On Low-rank and Quasi-Convex Combinatorial Optimization", together with S. Gupta and E. Nikolova
- Working Paper "Malleable Scheduling on Non-identical Machines", together with D. Fotakis and J. Matuschke
- 2016 "Scheduling MapReduce Jobs under Multi-Round Precedences.", together with D. Fotakis, I. Milis, V. Vassalos and G. Zois, Proceedings of the 22nd International Conference on Parallel and Distributed Computing, Grenoble, France (**Euro-Par 2015**), pp 209-222, 2016
- 2015 "Scheduling MapReduce Jobs and Data Shuffle on Unrelated Processors.", together with D. Fotakis, I. Milis, E. Zampetakis and G. Zois, Proceedings of the 14th International Symposium on Experimental Algorithms, Paris, France (**SEA 2015**), pp 137-150, 2015

## Teaching Experience

- Spring 2019 "Data Science Laboratory", undergraduate course, Instructors: Constantine Caramanis, Alex Dimakis
- Fall 2018 "Artificial Intelligence", undergraduate course, Instructor: Risto Miikkulainen
- Fall 2016 "Computability and Complexity", undergraduate course, Instructors: S. Zachos
- Fall 2015 "Algorithms and Complexity", undergraduate course. Instructors: S. Zachos and D. Fotakis.
- Fall 2012 - 2015 "Introduction to Computer Programming", undergraduate course. Instructors: S. Zachos, N. Papaspyrou and D. Fotakis.

## Significant Talks and Projects

- 2018 "On Low-rank (quasi-convex) Minimization for a Wide Class of Combinatorial Problems", INFORMS Annual Meeting 2018, Phoenix, AZ.
- 2018 "Generalized Malleable Scheduling on Uniform and Unrelated machines", 13th Athens Colloquium on Algorithms and Complexity, ACAC 2018.
- 2015 "Scheduling MapReduce Jobs and Data-Shuffle on Unrelated Machines", diploma thesis presentation at the Computation and Reasoning Laboratory (NTUA).

- 2013 *"Matrix Multiplication Algorithm Parallelization using Intel Threading Building Blocks"*, within "Parallel Processing Systems" undergraduate course.
- 2013 *"Encryption device VirtIO for QEMU-KVM"*, within "Operating Systems Laboratory" undergraduate course.

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## Professional Experience

### Reviewing

- 2016 – 2018 **MFCS 2018** - 43rd International Symposium on Mathematical Foundations of Computer Science, **EC 2018** - 19th ACM conference on Economics and Computation, **ESA 2017** - 25th Annual European Symposium on Algorithms, **ICPP 2017** - 46th International Conference on Parallel Processing (Track: Algorithms), **SWAT 2016** - 15th Scandinavian Symposium and Workshops on Algorithm Theory, **ISCO 2016** - 4th International Symposium on Combinatorial Optimization

### Audited Graduate Courses

- Spring 2016 *"Algorithmic Game Theory"*, Graduate Program in Logic, Algorithms and Computation (MPLA).  
Fall 2015 *"Computational Complexity"*, Graduate Program in Logic, Algorithms and Computation (MPLA).  
Fall 2015 *"Computability (Recursion Theory)"*, Graduate Program in Logic, Algorithms and Computation (MPLA).  
Spring 2015 *"Algorithmic Issues of Social Networks"*, Graduate Program in Logic, Algorithms and Computation (MPLA).  
Spring 2015 *"Network Algorithms and Complexity"*, Graduate Program in Logic, Algorithms and Computation (MPLA).  
Fall 2014 *"Theory of Linear Programming"*, Graduate Program in Logic, Algorithms and Computation (MPLA).

### Seminars - Study Groups

- Fall 2016 *"Approximation Algorithms"*, Computation and Reasoning Laboratory.  
Fall 2014 *"Markov Chain Monte Carlo Method"*, Computation and Reasoning Laboratory.

### Conferences Attended

- 2013 - 2015 *"8th/9th/10th Athens Colloquium on Algorithms and Complexity"*, *"3rd Athens Probability Colloquium 2015"*, *"1st Algorithmic Game Theory Athens"*, *"4th Crypto.Sec Day"*

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## Awards

- 2016-2020 *Provost's Graduate Excellence Fellowship*, by The University of Texas at Austin.  
2015 *Thomaideo Award for Excellent Undergraduate Research*, by the National Technical University of Athens.

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## Computer Skills

- Coding/ DBs C, C++, Python, Java, Matlab, Pascal, Prolog, ML, Haskell, Javascript, PHP, HTML/CSS, MySQL  
OS GNU/Linux, MacOS, Windows  
Miscellaneous  $\LaTeX$ , Microsoft Office, Libre Office, Mathematica, GNUplot

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## Languages

- English Fluent  
French Excellent Command  
Spanish Basic Communication  
Greek Native Speaker

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## Interests - Hobbies

- Music Piano and guitar. Composed the soundtrack of a short film called "Great Rivals".  
Writing Former member of the Greek free-press student magazine "Kaleidoscope".  
Sports Basketball and Kick-Boxing.