

NICOLAS BORIA

Researcher and Lecturer specialized in Optimization, Graph Theory and Machine Learning

PERSONAL INFORMATION

Born in France, 20 March 1984

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EDUCATION

2007–2011 Phd Thesis in computer science

Phd Thesis Title: Combinatorial optimization and dynamic environments, Advisor : Vangelis Th. Paschos, President of Jury : Giorgio Ausiello, Jury : C. Laforest, D. Trystram, C. Murat, P. Widmayer. Defended in June 2011. LAMSADE, Université Paris Dauphine.

2006–2007 Master (M2) in computer science

Master (M2) Master MODO (Modélisation, Optimisation, Décision et Organisation), with honors. LAMSADE, Université Paris Dauphine.

2005–2006 Agrégation in Economics and Management

Agrégation Agrégation (highest French competitive exam for teachers) in Economy and Management, option D (informatics). Successful, ranked 5th at national level. ENS Cachan.

2004–2005 Master (M1) in Management Science

Master (M1) with honors, Université Paris XII.

2004–2005 Economy Certificate (M1)

ENS Cachan.

2003–2004 Licence (L3) in Management Science

Licence (L3) Université Paris XII, ENS Cachan.

2003–2004 Licence (L3) in Economics

Université Paris I La Sorbonne, ENS Cachan.

2001–2003 Classe préparatoire HEC

CPGE HEC Lycée Saint-Just, Lyon.

WORK EXPERIENCE

International Scientific Journals

Université Paris Dauphine - PSL ESIGMA ANR Project : Efficiency and Structure in Graph Mining Applications. Machine Learning group at LAMSADE Laboratory, Université Paris Dauphine - PSL, Paris, France. Reference: Florian Yger.

<i>Ensicaen</i>	<i>2018–2019</i>	Post-doctorate and Lecturer, ENSICAEN Projet RIN AGAC : "Graph Analysis applied to Chemoinformatics Groupe Image at GREYC Laboratory, Ensicaen, Caen, France. Reference: Luc Brun
<i>Freelance</i>	<i>2016–2018</i>	Art photographer and portraitist Freelance activity, specialized in antique photographic techniques. Cooperation with international Art festivals and Italian National Museums.
<i>Politecnico di Torino</i>	<i>2015–2016</i>	Post-doctorate, POLITECNICO DI TORINO Theoretical aspects of model checking methods. Dipartimento di Automatica e Informatica, Politecnico di Torino, Turin, Italy. Reference: Gianpiero Cabodi
<i>Supsi</i>	<i>2013–2014</i>	Post-doctorate, SUPSI Approximation Algorithms for Machine Scheduling Through Theory and Experiments. Istituto Dalle Molle di studi sull'intelligenza artificiale (IDSIA), Lugano, Switzerland. Reference: Monaldo Mastrolilli
<i>Politecnico di Torino</i>	<i>2012–2013</i>	Post-doctorate, POLITECNICO DI TORINO Exact and approximation algorithms for combinatorial optimization problems Dipartimento di Automatica e Informatica, Politecnico di Torino, Turin, Italy. Reference: Federico Della Croce
<i>Università di Torino</i>	<i>2011</i>	Post-doctorate, UNIVERSITÀ DI TORINO Optimization problem on graphs and applications to filogenetic tree inference. Università di Torino, Turin, Italy. Reference: Andrea Grossi
<i>Université Paris Dauphine</i>	<i>2010–2011</i>	ATER, UNIVERSITÉ PARIS DAUPHINE ATER: 'Attaché temporaire à l'enseignement et à la recherche' in computer science. Teaching duties : 192 hrs. LMSADE Laboratory, Université Paris Dauphine, Paris, France. Reference: Vangelis Paschos
<i>Université Paris Dauphine</i>	<i>2007–2010</i>	Graduate Lecturer, UNIVERSITÉ PARIS DAUPHINE ATER: 64 hrs teaching duties. LMSADE Laboratory, Université Paris Dauphine, Paris, France. Reference: Vangelis Paschos
<i>ENS Cachan</i>	<i>2003–2007</i>	Student and trainee ENS CACHAN Student and trainee in Section D2: Economics and Management.

VOLUNTARY EXPERIENCE

<i>Educational Tutoring</i>	<i>2007–2011</i>	Voluntary Tutor ACCUEIL LAGHOUAT Homework, cultural activities, and initiation to photography. In the committee of the association from 2009 to 2011. Association Accueil Laghouat, Paris 18ème.
	<i>2006–2007</i>	Voluntary Tutor FLEUR DE BITUME
	<i>2003–2005</i>	Voluntary Tutor CENTRE SOCIAL LA PLAINE
	<i>2009</i>	Exchange Director ACCUEIL LAGHOUAT Director of French-German exchange programme. Exchange between Accueil Laghouat (Paris) and OutReach (Berlin), funded by OFAJ.

PUBLICATIONS

Scientific Journals

- VLDBJ* David B. Blumenthal, Nicolas Boria, Sébastien Bougleux, Luc Brun, Johann Gamper and Benoit Gaüzère *Scalable generalized median graph estimation and applications in clustering, classification, and indexing.* submitted to VLDB Journal
- PRL* Nicolas Boria, David B. Blumenthal, Sébastien Bougleux and Luc Brun *Improved Local Search for Graph Edit Distance.* Pattern Recognition Letters 129: 19-25 (2020)
- VLDBJ* David B. Blumenthal, Sébastien Bougleux, Nicolas Boria, and Luc Brun *Comparing heuristics for graph edit distance computation.* VLDB J. 29(1): 419-458 (2020)
- DAM* Nicolas Boria, Cécile Murat, Vangelis Th. Paschos *The probabilistic minimum dominating set Problem.* Discrete Applied Mathematics, 2018, 234: 93-113
- DAM* Nicolas Boria, Federico Della Croce, Vangelis Th. Paschos *On the Max Min Vertex Cover Problem.* Discrete Applied Mathematics, 2015, 196-C: 62-71
- TCS* Nicolas Boria, Federico Della Croce *Reoptimization in machine scheduling.* Theoretical computer Science, 2014, 540: 13-26
- JDA* Nicolas Boria, Nicolas Bourgeois, Bruno Escoffier, Vangelis Th. Paschos *Exponential approximation schemata for some network design problems* Journal of Discrete Algorithms, 2013, 22: 43-52
- DMAA* Nicolas Boria, Jérôme Monnot, Vangelis Th. Paschos *Reoptimization under vertex insertion: max P_k -free subgraph and max planar subgraph* Discrete Mathematics, Algorithms and Applications, 2013, 5(2)
- TCS* Nicolas Boria, Jérôme Monnot, Vangelis Th. Paschos *Reoptimization of maximum weight induced hereditary subgraph problems.* Theoretical computer Science, 2013, 514: 61-74
- DAM* Giorgio Ausiello, Nicolas Boria, Aristotelis Giannakos, Giorgio Lucarelli, Vangelis Th. Paschos. *Online maximum k -coverage.* Discrete Applied Mathematics, 2012, 160(13-14): 1901-1913
- JMMA* Nicolas Boria, Cécile Murat, Vangelis Th. Paschos. *On the Probabilistic min spanning tree problem.* Journal of Mathematical Modelling and Algorithms, 2012, 11(1): 45-76
- RAIRO-OR* Nicolas Boria, Vangelis Th. Paschos. *A Survey on Combinatorial Optimization in Dynamic Environments.* RAIRO-Operations Research, 2011, 45(3): 241-294
- JDA* Nicolas Boria, Vangelis Th. Paschos. *Fast reoptimization for the minimum spanning tree problem.* J. Discrete Algorithms, 2010, 8(3): 296-310

International Conferences

- ESANN 2020* Nicolas Boria, Florian Yger and Benjamin Negrevergne *Fréchet Mean Computation in Graph Space through Projected Block Gradient Descent* accepted at ESANN 2020, Bruges, Belgium
- GbR 2019* Nicolas Boria, Sébastien Bougleux, Benoit Gauzère and Luc Brun *Generalized Median Graph via Iterative Alternate Minimizations.* GbRPR 2019: 99-109, Tours, France
- S+SSPR 2018* Nicolas Boria, Sébastien Bougleux, Luc Brun *Approximating GED using a Stochastic Generator and Multistart IPFP* S+SSPR 2018, Beijing, China
- CMP 2016* Nicolas Boria, Gianpiero Cabodi, Paolo Camurati, Marco Palena, Paolo Pasini and Stefano Quer *A $7/2$ -approximation algorithm for the Maximum Duo-Preservation String Mapping Problem* CPM 2016, Tel-Aviv, Israel

<i>WABI 2014</i>	Nicolas Boria, Adam Kurpisz, Samuli Leppänen, Monaldo Mastrolilli <i>Improved Approximation for the Maximum Duo-preservation String Mapping Problem</i> WABI 2014, Wroclaw, Poland
<i>WAOA 2013</i>	Nicolas Boria, Federico Della Croce, Vangelis Th. Paschos <i>On the Max Min Vertex Cover Problem</i> . WAOA 2013, Sophia Antipolis, France
<i>CSR 2013</i>	Nicolas Boria, Cécile Murat, Vangelis Th. Paschos <i>The probabilistic Min Dominating Set Problem</i> . CSR 2013, Ekaterinburg, Russia.
<i>LATIN 2012</i>	Nicolas Boria, Jérôme Monnot, Vangelis Th. Paschos <i>Reoptimization of Maximum Induced Hereditary Subgraph Problem</i> . LATIN 2012, Arequipa, Peru.
<i>WALCOM 2012</i>	Nicolas Boria, Vangelis Th. Paschos, Jérôme Monnot <i>Reoptimization of the Maximum Weighted P_k-Free Subgraph Problem under Vertex Insertion</i> . WALCOM 2012, Dhaka, Bangladesh.
<i>FCT 2011</i>	Giorgio Ausiello, Nicolas Boria, Aristotelis Giannakos, Giorgio Lucarelli, Vangelis Th. Paschos <i>Online k-coverage</i> . FCT 2011, Oslo, Norway.
<i>IMCSIT 2010</i>	Nicolas Boria, Cécile Murat, Vangelis Th. Paschos <i>On the Probabilistic min spanning tree problem</i> . IMCSIT 2010: 893-900, Wisla, Poland.

COMPUTER SKILLS

<i>Systems</i>	Linux, Mac OSX, Windows
<i>Languages</i>	Python, C++, Java, VBA, HTML/CSS, L ^A T _E X, SQL.
<i>Applications</i>	Matlab, Gurobi, Maple, Word, Excel/VBA, Access, MySQL.

OTHER INFORMATION

<i>Languages</i>	FRENCH · Mothertongue
	ENGLISH · Fluent
	ITALIAN · Fluent
	GERMAN · Basic
<i>Interests</i>	Literature · Guitar · Drums · Cooking · Photography · Board Games · Carpentry

March 3, 2020