

Vangelis Th. PASCHOS

Exceptional class Professor (since 2003), Université Paris-Dauphine
Senior member of the “Institut Universitaire de France”

Born in Karditsa (Greece) in 1959, married, a daughter, French and Greek citizen

ACADEMIC DEGREES

“Habilitation à diriger des recherches in Computer Science”, Université d’Orsay, 1992

PhD in Computer Science, National Technical University of Athens, 1988

Electronic Engineering degree, National Technical University of Athens, 1983

MAIN ACADEMIC APPOINTMENTS

Since 1992: Full Professor, University Paris-Dauphine

Second class (1992 – 1998)

First class (1998 – 2003)

Exceptional class (since 2003)

1990 – 1992: Maitre de Conférences (Associate Professor (tenure)), University Paris I – Panthéon – Sorbonne

1988 – 1990: Maitre de Conférences Associé (Assistant Professor), University of Orsay

1984 – 1988: PhD student and Teaching Assistant, National Technical University of Athens

DISTINCTIONS

– Senior member of the “Institut Universitaire de France”

– Award for Scientific Excellence from the French Ministry for Research

– Gold Medal of the Hellenic Operational Research Society

– National Award of the Hellenic Operational Research Society

– Lagrange fellow of the Italian Institute for Scientific Interchange

– Elected member (recommended by the outgoing technical committee) of the IFIP Technical Committee 1 “Foundations of Computer Science”

– Decoration for high services to education (“*Chevalier de l’ordre des Palmes Académiques*”)

LANGUAGES: French, English, Greek (mother tongue)

RESEARCH AREAS

Complexity theory, Exact computation with upper worst-case time-bounds (moderately exponential computation), Moderately exponential, Parameterized and Polynomial approximation of NP-hard problems, Combinatorial optimization, Dynamic combinatorial optimization (Probabilistic combinatorial optimization, On-line algorithms, Reoptimization)

EDITORIAL BOARDS

- Theoretical Computer Science
- European Journal of Operational Research
- RAIRO - Operations Research
- Operational Research: An International Journal
- Foundations of Computing and Decision Sciences

- Yugoslav Journal of Operations Research
- Journal of Multicriteria Decision Making in Economics & Finance
- Guest Editor of the “Theoretical Computer Science”
Special issue: “*Exact & Parameterized Computation – Moderately Exponential & Parameterized Approximation*”
- Guest co-editor of the “Theoretical Computer Science”
Special issue: “*Combinatorial Optimization: Theory of algorithms and complexity*”
- Guest co-editor of the “Journal of Mathematical Modeling and Algorithms”
Special Issue: “*Combinatorial Optimization*”
- Co-editor of the Proceedings of the “*International Symposium of Combinatorial Optimization*” (ISCO 2012), LNCS 7422

PHD AND “HABILITATIONS A DIRIGER DES RECHERCHES” THESES ADVISING

Holder, from 1993 to 2009, of an award for doctoral advising and research. Since 2010, holder (evaluated by A) of an award of scientific excellence (“prime d’excellence scientifique”).

Among my doctoral (PhD and/or “Habilitation à Diriger des Recherches” (HDR)) students:

- Marc Demange (PhD 1994, HDR 2000) is Professor at the ESSEC Business School
 - Bruno Escoffier (PhD 2005, HDR 1012) is Maître de Conférences at the Université Paris-Dauphine. He has received the bronze medal of the CNRS
 - Mhand Hifi (PhD 1994) is Professor at the Université d’Amiens
 - Cristina Bazgan (HDR 2003) is Professor at the Université Paris-Dauphine
 - Virginie Gabrel (PhD 1994, HDR 2005) is Maître de Conférences at the Université Paris-Dauphine
 - Cécile Murat (PhD 1997) is Maître de Conférences at the Université Paris-Dauphine. She has been awarded with the “Nathalie Demassieux” award of the “*Académie des Sciences*” for her PhD thesis
 - Sophie Toulouse (PhD 2001) is Maître de Conférences at the Université Paris XIII
 - Jérôme Monnot (PhD 1998, HDR 2003) is Research Director CNRS at the LAMSADE
 - Laurent Alfandari (PhD 1999) is Associate Professor at the ESSEC Business School
- In all, I have advised 21 PhD theses, 10 HDR and 31 Master dissertations since 1991.

HDR defended since 2005

- Bruno Escoffier, LAMSADE, Université Paris-Dauphine, 2012
- Bruno Blanchet, LIENS, Ecole Normale Supérieure, 2008
- Leo Liberti, LIX, Ecole Polytechnique, 2007
- Laurent Mauborgne, LIENS, Ecole Normale Supérieure, 2007
- Matthieu Martel, CEA, 2006
- Virginie Gabrel, LAMSADE, Université Paris-Dauphine, 2005

PhD theses defended since 2005

- Nicolas Boria, 2011
- Nicolas Bourgeois, 2010
- Olivier Pottié, 2010
- Nicolas Pissard, 2008
- Bruno Escoffier, 2005
- Fabrice Serrière, 2005

PhD thesis in progress

- Edouard Bonnet
- Emeric Tourniaire

DIRECTIONS OF NATIONAL SCIENTIFIC INSTANCES AND WORKING GROUPS

- Chairman of the theme “Combinatorial Optimization” of the National Research Group (GDR) “Operational Research” (since 2008)
- Working group “Algorithms with performance guarantees” of the GDR “Operational Research” (since 2006)
- Working group “Algorithms with performance guarantees” of the GDR “Algorithms and Programming Languages” (2002-2006)

PROGRAMME COMMITTEES SINCE 2005 AND STEERING COMMITTEES

Steering Committees

- Workshop “Approximation, Parameterized and Exact algorithms” (APEX), Chair
- International Symposium on Combinatorial Optimization (ISCO)

Program Committees

- International Conference on Algorithms and Complexity (CIAC’13), 2013
- Workshop “Approximation, Parameterized and Exact algorithms” (APEX), 2013 (Chair)
- Conference of European Chapter on Combinatorial Optimization (ECCO), 2013 (also member of the Organizing Committee)
- International Conference on Operations Research and Enterprise Systems (ICORES), 2013
- International Symposium on Combinatorial Optimization (ISCO), 2012 (also member of the Organizing Committee and Proceedings Co-editor)
- International Symposium on Experimental Algorithms (SEA), 2012
- International Workshop on Approximation, Parameterized and Exact algorithms (APEX), 2012 (Chair)
- International Conference on Operations Research and Enterprise Systems (ICORES), 2012
- Graph Algorithms and Applications (GA), 2011
- International Symposium & Balkan Conference (BALCOR’11) on Operational Research, 2011
- International Symposium on Combinatorial Optimization (ISCO), 2010 (also member of the Organizing Committee)
- International Conference on Algorithms and Complexity (CIAC’10), 2010
- International Symposium on Combinatorial Optimization (ISCO), 2010
- Athens Colloquium on Algorithms and Complexity (ACAC’09), 2009
- International Conference on Computers & Industrial Engineering (CIE39), 2009
- Nonconvex Programming Local & Global Approaches, 2007
- International Conference Sciences of Electronic, Technologies of Information and Telecommunications (SETIT), 2005, 2006, 2009, 2010, 2011
- Annual Congress of the French Society for Operational Research and Decision Making (ROADEF), 2007, 2008, 2010, 2011, 2012, 2013

INVITED PLENARY TALKS SINCE 2006

- Workshop “Journées Franciliennes de Recherche Opérationnelle” (JFRO), 2012
- Athens Colloquium on Algorithms and Complexity, ACAC’12, 2012

- 1st International Symposium & 10th Balkan Conference (BALCOR'11) on Operational Research, 2011
- International Tbilisi Symposium on Language, Logic and Computation (TbiLLC'11), 2011
- Workshop “Polyhedra and Combinatorial Optimization”, 2008
- Workshop “Polyhedra and Combinatorial Optimization”, 2007
- Balkan Conference on Operational Research, BALCOR'07, 2007
- Annual Congress of the Hellenic Operational Research Society, 2007
- Yugoslav Symposium on Operational Research and Information Systems, SYMOPIS'06, 2006

INVITED RESEARCH SEMINARS (OUTSIDE PARIS-DAUPHINE) SINCE 2006

- Seminar 13331: “Exponential Algorithms: Algorithms and Complexity Beyond Polynomial Time”, Dagstuhl, 2013
- Department of Informatics, University of Athens, 2011
- Dipartimento di Informatica e Sistemistica, Università di Roma “La Sapienza”, 2009
- Department of Informatics, Athens University of Economics and Business, 2008, 2009, 2010
- Department of Sciences, Université de Metz, 2010
- Laboratory LIRMM, Université de Montpellier, 2009
- Seminar 08431: “Moderately Exponential Time Algorithms”, Dagstuhl, 2008
- LIX, Ecole Polytechnique, 2008
- Dipartimento di Automatica e Informatica, Politecnico di Torino, 2008, 2010, 2012
- Theoretical Computer Science & Complexity Division, National Technical University of Athens, 2008
- IMA, Ecole Polytechnique Fédérale de Lausanne (EPFL), 2006, 2007
- Institute of Optimization and Discrete Mathematics, Technischen Universität Graz, 2007
- Faculty of Organizational Sciences, University of Belgrade, 2006
- Department of Methodology, History and Theory of Sciences, University of Athens, 2006
- Laboratory LIPN, Université Paris XIII, 2006
- Department of Informatics and Telecommunications, University of Athens, 2006, 2011

SCIENTIFIC BOARDS, REFEREEING, EVALUATIONS SINCE 2007

- Member of the scientific board of the GDR “Operational Research”
- Member of the scientific board of the “*Domaine d'Intérêt Majeur: Logiciels et Systèmes Complexes*”
- Referee for the French Agency for Evaluation of the Academic Research and Training
- Member and president of evaluation boards for the CNRS
- Referee for the Italian Ministry for Education University and Research (MIUR)
- Referee for the Hellenic Quality Assurance Agency for Higher Education

RECENT DIRECTIONS RESEARCH PROJECTS

- “Time versus Optimality in Discrete Optimization” (*TODO*). Project funded by the French Agency for Research (ANR) under the DEFIS call
- European project INTAS “Data flow systems: algorithms and complexity” (2004-2008)

OTHER ACADEMIC APPOINTMENTS SINCE 2006

- Hellenic Open University (since 2011)

- Università di Roma “La Sapienza”, Dipartimento di Informatica e Sistemistica (2009)
- Athens University of Economics and Business, Département of Informatics (2009, 2008, 2006)
- Politecnico di Torino, dipartimento di Automatica e Informatica (2012, 2010, 2008)
- Ecole Polytechnique Fédérale de Lausanne, Institut des Mathématiques Appliquées (2007)
- University of Athens, Department of Informatics and Telecommunications (2006)
- Agricultural University of Athens, Department of Operational Research (2006, 2010, 2011)
- Mediterranean Agronomic Institute of Chania (2012)

PUBLICATIONS

Books and book editing

1. V. Th. Paschos (ed.), *Combinatorial Optimization Volume 1, Concepts of Combinatorial Optimization*, Wiley – ISTE, 2010.
2. V. Th. Paschos (ed.), *Combinatorial Optimization Volume 2, Paradigmatic Problems and New Approaches*, Wiley – ISTE, 2010.
3. V. Th. Paschos (ed.), *Handbook of Combinatorial Optimization: Applications*, Wiley – ISTE, 2010.
4. V. Th. Paschos (ed.), *Combinatorial Optimization and Theoretical Computer Science: Interfaces and Perspectives*, Wiley - ISTE, 2008.
5. V. Th. Paschos (ed.), *Optimisation combinatoire : problèmes paradigmatiques*, Hermès Science, Paris, 2007.
6. V. Th. Paschos (ed.), *Optimisation combinatoire : problèmes paradigmatiques et nouvelles problématiques*, Hermès Science, Paris, 2007.
7. C. Murat, V. Th. Paschos, *Probabilistic Combinatorial Optimization on Graphs*, ISTE, London, 2006.
8. V. Th. Paschos (ed.), *Optimisation combinatoire : concepts fondamentaux*, Hermès Science, Paris, 2005.
9. V. Th. Paschos (ed.), *Optimisation combinatoire : concepts avancés*, Hermès Science, Paris, 2005.
10. V. Th. Paschos (ed.), *Optimisation combinatoire : applications*, Hermès Science, Paris, 2005.
11. V. Th. Paschos, *Complexité et approximation polynomiale*, Hermès Science, Paris, 2004.
12. J. Monnot, V. Th. Paschos, S. Toulouse, *Approximation polynomiale des problèmes NP-difficiles : optima locaux et rapport différentiel*, Hermès Science, Paris, 2003.

Book chapters

1. N. Bourgeois, B. Escoffier, V. Th. Paschos, *An introduction to exponential time exact algorithms for solving NP-hard problems*, in A. R. Mahjoub (ed.) *Progress in Combinatorial Optimization*, Wiley – ISTE, 2011.
2. N. Bourgeois, B. Escoffier, V. Th. Paschos, E. Tourniaire, *Moderately exponential approximation*, in A. R. Mahjoub (ed.) *Progress in Combinatorial Optimization*, Wiley – ISTE, 2011.

3. V. Th. Paschos, *Basic concepts in algorithms and complexity theory*, in V. Th. Paschos (ed.) *Combinatorial Optimization Volume 1, Concepts of Combinatorial Optimization*, Wiley – ISTE, 2010.
4. M. Demange, V. Th. Paschos, *Polynomial approximation*, in V. Th. Paschos (ed.), *Combinatorial Optimization Volume 2, Paradigmatic Problems and New Approaches*, Wiley – ISTE, 2010.
5. G. Ausiello, V. Th. Paschos, *Approximation preserving reductions*, in V. Th. Paschos (ed.), *Combinatorial Optimization Volume 2, Paradigmatic Problems and New Approaches*, Wiley – ISTE, 2010.
6. A. Giannakos, V. Th. Paschos, *Algorithmic games*, in V. Th. Paschos (ed.), *Combinatorial Optimization Volume 2, Paradigmatic Problems and New Approaches*, Wiley – ISTE, 2010.
7. C. Murat, V. Th. Paschos, *Probabilistic combinatorial optimization*, in V. Th. Paschos (ed.), *Combinatorial Optimization Volume 2, Paradigmatic Problems and New Approaches*, Wiley – ISTE, 2010.
8. M. Demange, C. Murat, V. Th. Paschos, S. Toulouse, *A model for the design of a minimum-cost telecommunications network*, in V. Th. Paschos (ed.), *Combinatorial Optimization Volume 3, Applications*, Wiley – ISTE, 2010.
9. V. Gabrel, C. Murat, V. Th. Paschos, *Missions planning of an earth observation satellite*, in G. Finke (ed.) *Operational research and networks*, Wiley - ISTE, London, 2008.
10. G. Ausiello, A. Giannakos, V. Th. Paschos, *Online models for set-covering: the flaw of greediness*, in V. Th. Paschos (ed.) *Combinatorial Optimization and Theoretical Computer Science: Interfaces and Perspectives*, Wiley – ISTE, London, 2008.
11. F. Della Croce, B. Escoffier, M. Kamiński, V. Th. Paschos, *Worst-case complexity of exact algorithms for NP-hard problems*, in V. Th. Paschos (ed.) *Combinatorial Optimization and Theoretical Computer Science: Interfaces and Perspectives*, Wiley - ISTE, London, 2008.
12. M. Demange, B. Escoffier, J. Monnot, V. Th. Paschos, D. de Werra, *Complexity and approximation results for the min weighted node coloring problem*, in V. Th. Paschos (ed.) *Combinatorial Optimization and Theoretical Computer Science: Interfaces and Perspectives*, Wiley - ISTE, London, 2008.
13. M. Demange, B. Escoffier, G. Lucarelli, I. Milis, J. Monnot, V. Th. Paschos, D. de Werra, *Weighted edge coloring*, in V. Th. Paschos (ed.) *Combinatorial Optimization and Theoretical Computer Science: Interfaces and Perspectives*, Wiley - ISTE, London, 2008.
14. A. Giannakos, V. Th. Paschos, O. Pottié, *Algorithmic games*, in V. Th. Paschos (ed.) *Combinatorial Optimization and Theoretical Computer Science: Interfaces and Perspectives*, Wiley - ISTE, London, 2008.
15. G. Ausiello, V. Th. Paschos, *Reductions that preserve approximability*, in T. F. Gonzalez (ed.) *Handbook of approximation algorithms and metaheuristics*, Chapman & Hall, Computer & Information Science Series, 2007.
16. G. Ausiello, V. Th. Paschos, *Differential ratio approximation*, in T. F. Gonzalez (ed.) *Handbook of approximation algorithms and metaheuristics*, Chapman & Hall, Computer & Information Science Series, 2007.
17. A. Giannakos, V. Th. Paschos, *Quand l'optimisation fait du beau jeu: une vision algorithmique de la théorie des jeux*, in V. Th. Paschos (ed.) *Optimisation combinatoire* :

problèmes paradigmatiques et problématiques nouvelles, Hermès Science, Paris, 2007.

18. V. Th. Paschos, *Concepts de base de l'algorithmique et de la théorie de la complexité*, in V. Th. Paschos (ed.) *Optimisation combinatoire : concepts fondamentaux*, Hermès Science, Paris, 2005.
19. M. Demange, V. Th. Paschos, *Approximation polynomiale*, in V. Th. Paschos (ed.) *Optimisation combinatoire : concepts avancés*, Hermès Science, Paris, 2005.
20. G. Ausiello, V. Th. Paschos, *Réductions préservant l'approximabilité*, in V. Th. Paschos (ed.) *Optimisation combinatoire : concepts avancés*, Hermès Science, Paris, 2005.
21. C. Murat, V. Th. Paschos, *L'optimisation combinatoire probabiliste*, in V. Th. Paschos (ed.) *Optimisation combinatoire : concepts avancés*, Hermès Science, Paris, 2005.
22. V. Gabrel, C. Murat, V. Th. Paschos, *Planification de prises de vue par satellite*, in G. Finke (ed.) *Recherche opérationnelle et réseaux*, Hermès Science, Paris, 2002.

Articles published or accepted for publication in refereed journals

1. N Bourgeois, F. Della Croce, B. Escoffier, V. Th. Paschos, *Fast algorithms for MIN INDEPENDENT DOMINATING SET*, Discrete Applied Mathematics, to appear.
2. N. Boria, J. Monnot, V. Th. Paschos, *Reoptimization of maximum weight induced hereditary subgraph problems*, Theoretical Computer Science, to appear.
3. N. Bourgeois, A. Giannakos, G. Lucarelli, I. Milis, V. Th. Paschos, O. Pottié, *The MAX QUASI-INDEPENDENT SET problem*, Journal of Combinatorial Optimization, to appear.
4. F. Della Croce, V. Th. Paschos, *Efficient algorithms for the MAX k-VERTEX COVER problem*, Journal of Combinatorial Optimization, to appear.
5. I. Kacem, V. Th. Paschos, *Weighted completion time minimization on a single-machine with a fixed non-availability interval: differential approximability*, Discrete Optimization, to appear.
6. B. Escoffier, V. Th. Paschos, E. Tourniaire, *Moderately exponential time and fixed parameter approximation algorithms*, Optimization, to appear
7. N. Bourgeois, B. Escoffier, V. Th. Paschos, J.M.M. van Rooij, *Fast algorithms for MAX INDEPENDENT SET*, Algorithmica 62, 2012.
8. G. Ausiello, N. Boria, A. Giannakos, G. Lucarelli, V. Th. Paschos, *Online maximum k-coverage*, Discrete Applied Mathematics 160, 2012.
9. N Bourgeois, F. Della Croce, B. Escoffier, V. Th. Paschos, *Algorithms for dominating clique problems*, Theoretical Computer Science 459, 2012.
10. N. Boria, C. Murat, V. Th. Paschos, *On the PROBABILISTIC MIN SPANNING TREE problem*, Journal of Mathematical Modeling and Algorithms 11, 2012.
11. N. Bourgeois, B. Escoffier, V. Th. Paschos, *Approximation of MAX INDEPENDENT SET, MIN VERTEX COVER and related problems by moderately exponential algorithms*, Discrete Applied Mathematics 159, 2011.
12. S. A. Paschos, V. Th. Paschos, *Reoptimization of the minimum spanning tree*, WIREs Computational Statistics, doi: 10.1002/wics.204, 2011 (invited paper).
13. N. Boria, V. Th. Paschos, *A survey on combinatorial optimization in dynamic environments*, RAIRO—Operations Research 45, 2011.
14. N. Bourgeois, G. Lucarelli, I. Milis, V. Th. Paschos, *Approximating the max-edge-coloring problem*, Theoretical Computer Science 411, 2010.

15. N. Boria, V. Th. Paschos, *Fast reoptimization for the minimum spanning tree problem*, Journal of Discrete Algorithms 8, 2010.
16. V. Th. Paschos, O. A. Telelis, V. Zissimopoulos, *Probabilistic models for the STEINER TREE problem*, Networks 56, 2010.
17. G. Lucarelli, I. Milis, V. Th. Paschos, *On the max-weight edge coloring problem*, Journal of Combinatorial Optimization 20, 2010.
18. B. Escoffier, V. Th. Paschos, *A survey on the structure of approximation classes*, Computer Science Review 4, 2010.
19. C. Murat, V. Th. Paschos, *Probabilistic optimization in graph-problems*, Algorithmic Operations Research 5, 2010.
20. F. Della Croce, V. Th. Paschos, R. Wolfler Calvo, *Approximating the metric 2-peripatetic salesman problem*, Algorithmic Operations Research 5, 2010.
21. G. Ausiello, B. Escoffier, J. Monnot, V. Th. Paschos, *Reoptimization of minimum and maximum traveling salesman's tours*, Journal of Discrete Algorithms 7, 2009.
22. G. Ausiello, N. Bourgeois, A. Giannakos, V. Th. Paschos, *Greedy algorithms for on-line set-covering*, Algorithmic Operations Research 4, 2009.
23. B. Escoffier, M. Milanič, V. Th. Paschos, *Simple and fast reoptimizations for the Steiner tree problem*, Algorithmic Operations Research 4, 2009.
24. A. E. Baburin, F. Della Croce, E. K. Gimadi, Y. V. Glazkov, V. Th. Paschos, *Approximation algorithms for the 2-peripatetic salesman problem with edge weights 1 and 2*, Discrete Applied Mathematics 157, 2009.
25. N. Bourgeois, B. Escoffier, V. Th. Paschos, *Efficient approximation of MIN COLORING by moderately exponential algorithms*, Information Processing Letters 109, 2009.
26. N. Bourgeois, F. Della Croce, B. Escoffier, C. Murat, V. Th. Paschos, *Probabilistic coloring of bipartite and split graphs*, Journal of Combinatorial Optimization 17, 2009.
27. D. De Werra, M. Demange, B. Escoffier, J. Monnot, V. Th. Paschos, *Weighted coloring on planar, bipartite and split graphs: complexity and improved approximation*, Discrete Applied Mathematics 157, 2009.
28. V. Th. Paschos, *An overview on polynomial approximation of NP-hard problems*, Yugoslav Journal of Operations Research 19, 2009 (invited paper).
29. N. Bourgeois, B. Escoffier, V. Th. Paschos, *Efficient approximation of MIN SET COVER by moderately exponential algorithms*, Theoretical Computer Science 410, 2009.
30. F. Della Croce, V. Th. Paschos, *Exploiting dominance conditions for computing worst-case time upper bounds in bounded combinatorial optimization problems*, Operational Research: an International Journal 8, 2008.
31. F. Della Croce, B. Escoffier, V. Th. Paschos, *Improved worst-case complexity for the MIN 3-SET COVERING problem*, Operations Research Letters 35(2), 2007.
32. F. Della Croce, M. J. Kamiński, V. Th. Paschos, *An exact algorithm for MAX CUT in sparse graphs*, Operations Research Letters 35(3), 2007.
33. M. Demange, D. De Werra, J. Monnot, V. Th. Paschos, *Time slot scheduling of compatible jobs*, Journal of Scheduling 10, 2007.
34. B. Escoffier, V. Th. Paschos, *Differential approximation of MIN SAT, MAX SAT and related problems*, European Journal of Operational Research 181, 2007.
35. C. Murat, V. Th. Paschos, *On the probabilistic minimum coloring and minimum k-coloring*, Discrete Applied Mathematics 154, 2006.

36. B. Escoffier, V. Th. Paschos, *Completeness in approximation classes beyond APX*, Theoretical Computer Science 359, 2006.
37. B. Escoffier, J. Monnot, V. Th. Paschos, *Weighted coloring: further complexity and approximability results*, Information Processing Letters 97, 2006.
38. G. Ausiello, V. Th. Paschos, *Reductions, completeness and the hardness of approximability*, European Journal of Operational Research 172, 2006. (invited review).
39. B. Escoffier, V. Th. Paschos, *On-line models and algorithms for MAX INDEPENDENT SET*, RAIRO—Operations Research 40, 2006.
40. M. Demange, V. Th. Paschos, *Improved approximations for weighted and unweighted graph problems*, Theory of Computing Systems 38, 2005.
41. G. Ausiello, C. Bazgan, M. Demange, V. Th. Paschos, *Completeness in differential approximation classes*, International Journal of Foundations of Computer Science 16, 2005.
42. M. Demange, V. Th. Paschos, *On-line vertex-covering*, Theoretical Computer Science 332, 2005.
43. C. Bazgan, J. Monnot, V. Th. Paschos, F. Serrière, *On the differential approximation of MIN SET COVER*, Theoretical Computer Science 332, 2005.
44. C. Bazgan, B. Escoffier, V. Th. Paschos, *Completeness in standard and differential approximation classes: Poly-(D)APX- and (D)PTAS-completeness*, Theoretical Computer Science 339, 2005.
45. D. De Werra, M. Demange, J. Monnot, V. Th. Paschos, *A hypocoloring model for batch scheduling*, Discrete Applied Mathematics 146, 2005.
46. M. Demange, V. Th. Paschos, *Polynomial approximation algorithms with performance guarantees: an introduction-by-example*, European Journal of Operational Research 165, 2005 (invited tutorial).
47. M. Demange, X. Paradon, V. Th. Paschos, *On-line maximum-order induced hereditary subgraph problems*, International Transactions on Operational Research 12, 2005.
48. B. Escoffier, V. Th. Paschos, *Proving completeness by logic*, International Journal of Computer Mathematics 82, 2005.
49. G. Ausiello, M. Demange, L. Laura, V. Th. Paschos, *Algorithms for the on-line quota travelling salesman problem*, Information Processing Letters 92, 2004.
50. M. Hifi, V. Th. Paschos, V. Zissimopoulos, *A simulated annealing approach for the circular cutting problem*, European Journal of Operational Research 159, 2004.
51. S. A. Paschos, V. Th. Paschos, V. Zissimopoulos, *The antennas pre-assignment problem*, Chaos, Solitons and Fractals 22, 2004.
52. T. Ekim, V. Th. Paschos, *Approximation preserving reductions for set covering, vertex covering and independent set hierarchies under differential approximation*, International Journal of Computer Mathematics 81, 2004.
53. J. Monnot, V. Th. Paschos, S. Toulouse, *Local approximations for maximum partial subgraph problem*, Operations Research Letters 32, 2004.
54. F. Della Croce, A. Grosso, V. Th. Paschos, *Lower bounds on the approximation ratios of leading heuristics for the single machine total tardiness problem*, Journal of Scheduling 7, 2004.
55. M. Demange, J. Monnot, V. Th. Paschos, *Differential approximation results for the Steiner tree problem*, Applied Mathematics Letters 16, 2003.

56. V. Th. Paschos, *Polynomial approximation and graph-coloring*, Computing 70, 2003.
57. C. Bazgan, V. Th. Paschos, *Differential approximation for satisfiability and related problems*, European Journal of Operational Research 147, 2003.
58. J. Monnot, V. Th. Paschos, S. Toulouse, *Differential approximation results for the traveling salesman problem with distances 1 and 2*, European Journal of Operational Research 145, 2003.
59. J. Monnot, V. Th. Paschos, S. Toulouse, *Approximation algorithms for the traveling salesman problem*, Mathematical Methods of Operational Research 56, 2002.
60. C. Murat, V. Th. Paschos, *The probabilistic maximum independent set problem*, Theoretical Computer Science 270, 2002.
61. C. Murat, V. Th. Paschos, *The probabilistic minimum vertex covering problem*, International Transactions on Operational Research 9, 2002.
62. A. Likas, V. Th. Paschos, *An efficient heuristic for the travelling salesman problem based upon a new solution representation*, Chaos Solitons and Fractals 13, 2002.
63. M. Demange, V. Th. Paschos, *Autour de nouvelles notions pour l'analyse des algorithmes d'approximation : formalisme unifié et classes d'approximation*, RAIRO—Operations Research 36, 2002.
64. M. Demange, V. Th. Paschos, *Autour de nouvelles notions pour l'analyse des algorithmes d'approximation : de la structure de NPO à la structure des instances*, RAIRO—Operations Research 36, 2002.
65. V. Th. Paschos, *On-line independent set by coloring vertices*, Operational Research: an International Journal 2, 2002 (invited paper).
66. V. Th. Paschos, *A note on the approximation ratio of graph-coloring*, Foundations of Computing and Decision Sciences 26, 2001.
67. M. Demange, J. Monnot, V. Th. Paschos, *Maximizing the number of unused bins by first-fit-decreasing*, Foundations of Computing and Decision Sciences 26, 2001.
68. L. Alfandari, V. Th. Paschos, *Master – slave strategies and polynomial approximation*, Computational Optimization and Applications 16, 2000.
69. M. Hifi, V. Th. Paschos, V. Zissimopoulos, *A neural network for minimum set covering problem*, Chaos Solitons and Fractals 11, 2000.
70. V. Th. Paschos, *Studying graph-stability to apprehend relative hardness of constructive – non-constructive approximation*, Bulletin of the Greek Mathematical Society 43, 2000.
71. L. Alfandari, V. Th. Paschos, *Approximating the minimum rooted spanning tree with radius 2*, International Transactions on Operational Research 6, 1999.
72. C. Murat, V. Th. Paschos, *The probabilistic longest path problem*, Networks 33, 1999.
73. F. Della Croce, V. Th. Paschos, A. Tsoukias, *An improved general procedure for lexicographic bottleneck problems*, Operations Research Letters 24, 1999.
74. M. Demange, J. Monnot, V. Th. Paschos, *Bridging gap between standard and differential polynomial approximation: the case of bin-packing*, Applied Mathematics Letters 12, 1999.
75. M. Demange, V. Th. Paschos, *Asymptotic differential approximation ratio: definitions, motivations and an application to bin-packing*, RAIRO—Operations Research 33, 1999.

76. M. Demange, P. Grisoni, V. Th. Paschos, *Differential approximation algorithms for some combinatorial optimization problems*, Theoretical Computer Science 209, 1998.
77. W. Fernandez de la Vega, V. Th. Paschos, A. N. Stafylopatis, *Average case complexity for the execution of recursive definitions on relational databases*, Acta Informatica 34, 1998.
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TEACHING

Doctoral courses:

Approximation preserving reductions, Differential approximation theory, On-line algorithms, Exact and parameterized algorithms for NP-hard problems

Post-graduate (MSc) courses:

Complexity theory, Advanced topics of combinatorial optimization, Polynomial approximation of NP-hard problems, Deductive databases, Databases and complexity

Undergraduate courses:

Linear programming, Discrete optimization, Operations research, Graph theory, Discrete mathematics, Design and analysis of algorithms, Algorithms and data structures, Mathematics for computer science, Algorithms and complexity, Performance evaluation, Probability theory, Mathematical logic, Operating systems, Artificial intelligence, Databases, Programming languages, Information theory, Theory of computation, Compilers, Computer architecture

Co-ordination of training projects

Co-ordinator of several ERASMUS projects (including student and academic staff exchanges as well as curricula developments) with Greece, Belgium, Italy, Portugal, Holland, Spain and Germany

MAIN ADMINISTRATIVE DUTIES

National

- Elected member of the National Council of the French Universities¹⁵ from 1996 to 2003
- Vice-president of the Operations Research chapter of the French Association for the Economic and Technical Cybernetics (AFCET) from 1995 to 1997

Local

- Member of the Research Board of the new Research University “Paris Sciences et Lettres” that includes (the Université Paris-Dauphine, the “Ecole Normale Supérieure”, the “Ecole des Mines de Paris”, the “Collège de France”, and other Universities, Research Institutes and Schools of Engineers
- Elected vice-president for research of the University Paris-Dauphine from 2001 to 2005
- Chairman of the LAMSADE from 1999 to 2011. The LAMSADE is a leading French research laboratory in Operational Research and Decisional Informatics affiliated to the CNRS
- Elected member of Senate of the University Paris-Dauphine since 1997
- Elected member of the administration board of the Department of Mathematics and Computer Science of the University Paris-Dauphine from 2006 to 2010