Curriculum Vitae

Claire Mathieu

RESEARCH AREA: Algorithms

CURRENT POSITION. Since 2012: 1st class research director (DR1) in Computer Science at *Centre National de la Recherche Scientifique* (CNRS).
Since November 2017: in addition, *Chargée de mission Parcoursup* at the Ministry of Higher Education (MESRI).

CONTACT INFORMATION and social networks:
Email: `claire.m.mathieu@gmail.com`
Linkedin: `linkedin.com/in/claire-mathieu-06b723109`
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Snailmail: Claire Mathieu, IRIF, Universit Paris-Diderot, Case 7014, 75205 Paris CEDEX 13, France.
Web page: `https://www.irif.fr/~claire/`

PERSONAL INFORMATION. Family name: Mathieu[1]
First name: Claire
Nationality: France and US
Date of birth: March 9, 1965

EDUCATION. 1996: *Habilitation* in Computer Science at Lyon I University.
1988: PhD (*thèse*) in Computer Science at Paris XI Orsay University. Advisor: Claude Puech.
1985: Master's (*DEA*) in Computer Science at Paris XI Orsay University. 1983-88: Student at Ecole Normale Supérieure (ENSJF "Sèvres" until 1986).

AWARDS. Collège de France Annual Chair (2017). INFORMS Computing Society ICS Prize for Research Excellence in the Interface Between Operations Research and Computer Science (2007). Junior member of Institut Universitaire de France (2002). Prix IBM Jeune Chercheur (1991).

PREVIOUS POSITIONS. Professor at Collège de France, annual Chair "Informatique et Sciences Numériques", 2017-18.
Professeur associé at the Computer Science department of Ecole Normale Supérieure, 2014-16.
Professor at Brown University (USA), 2004-12 (full time), 2012-14 (two months per year).
Professor at Ecole Polytechnique, 2002-04.
Professor at Université Paris-Sud, 1997-2002.
Researcher at CNRS, Ecole Normale Supérieure of Lyon, 1991-97.
Researcher at CNRS, Ecole Normale Supérieure, 1990-91.
Post-doctoral researcher at DIMACS, 1989-90.
INRIA Post-doctoral researcher at Princeton, 1988-89.

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[1]Also known under the name of Kenyon until 2006.

Visiting faculty at Princeton (2003), Cornell (1997), and Berkeley (1996, 1994, 1992). Visiting researcher at Microsoft Research (2007) and ICSI (1992). Consultant for NEC (1992), AT& T (19972001), Microsoft (19982012).

SUPERVISION OF GRADUATE STUDENTS. Nicolas Schabanel (PhD 2000), currently CNRS research director.
Jérémy Barbay (PhD 2002), currently associate professor at the University of Chile.
Aparna Das (PhD 2010), currently assistant professor at Le Moyne College.
Warren Schudy (PhD 2010), currently at Google.
David Eisenstat (PhD 2014), co-advised with Philip Klein, currently at Google.
Hang Zhou (PhD 2015), currently assistant professor at Ecole Polytechnique.
Vincent Cohen-Addad (PhD 2016), co-advised with Zhentao Li, currently CNRS researcher.
Frederick Mallmann-Trenn (PhD 2017), co-advised with Petra Berenbrink, currently postdoc at MIT.
Victor Verdugo (PhD 2018), co-advised with Jose Correa, currently postdoctoral fellow at LSE (London School of Economics) .
Mathieu Mari (PhD student since 2017), co-advised with Chien-Chung Huang.
Simon Mauras (PhD student since 2018), co-advised with Hugo Gimbert.
(All co-advised students are advised by me for at least 50% except Mathieu Mari.)

Various interns or visiting graduate students for three months or more: V. Unger (ENS-Lyon, 1993), S. Roman (ENS-Lyon, 1996), L. Rempe (Paris-Sud, 2002), A. Broutin (Polytechnique, 2003, 50%), J. Correa (summer intern from MIT, 2003), Ocan Sankur (ENS, 2009); Adrian Vladu (Brown, 2010 and 2011), T. Avitabile (Brown, 2011), Q. Teng (ENS, 2011), N. Gaya (Brown, 2013), S. Mauras (ENS, 2018).

TEACHING ACTIVITY. *Highlights.*
Collège de France course on Algorithms, 2017-18.
Sequence of two online courses: MOOCs (partnership Coursera-ENS) on Approximation algorithms, 2014-15.

Teaching experience in France.
Various graduate courses on: complexity, randomized algorithms, random graphs, algorithmic game theory, and planar graphs. Upper-level undergraduate courses on: algorithms and data structures, advanced algorithms, automata and formal languages, complexity, programming in C, and programming in Java. Lower-level undergraduate courses on: introduction to computer science, mathematics for computer science, and programming in CAML.

Teaching experience in the US (Berkeley, Cornell, Brown). Group theory and computer science; Algorithms; Graph Theory; Approximation Algorithms; Computer Science, Algorithms and Economics; Online Algorithms; Design and Analysis of Algorithms; CS: an Integrated Introduction; Planar graph algorithms.

CO-ORGANISATION OF SCIENTIFIC MEETINGS. Fête de Claude Puech, 2017. Dagstuhl workshop *Probabilistic Methods in the Design and Analysis of Algorithms*, 2017. Dagstuhl workshop *Algorithms for Optimization Problems in Planar Graphs*, 2016. Highlights of Algorithms (HALG), 2016. ICERM semester on Computation on Graphs and Networks, 2014. Dagstuhl workshop *Algorithms for Optimization Problems in Planar Graphs*, 2013. Institut Henri Poincaré trimester on *Metric geometry, algorithms and groups*, 2011. Dagstuhl seminar 11091 on *Packing and Scheduling Algorithms for Information and Communication,* 2011. IEEE FOCS 2007. France-Berkeley workshop on Phase transitions and complexity, Orsay, 1999. Session on approximation algorithms for scheduling, at the 17th *International Symposium on Mathematical Programming*, Atlanta, 2000. Workshop on approximation and on-line algorithms, Orsay, 2001. Semester on "Probability, Algorithms and Statistical Physics", MSRI, Berkeley, California, 2005.

LOCAL RESPONSABILITIES. *ENS:* Head of the TALGO (Theory) research group at the CS department of ENS, 2012-16. Responsible for the CS curriculum at ENS (2015-16), for the Math-CS program at ENS (2014-16), CS deparment representative for "Nuit des Sciences" at ENS (2014), Member of the ENS CS department Vision committee (2013), Co-responsible for the ENS CS department lecture series (2012-17).

Brown: Member of the Brown University Committee on Academic Standing (CAS) (2008-2010), freshman and sophomore advising program (2008-2012), Committee on Diversity in Hiring (2006-2008), CS Department Lecture Series (2011-12)CS department PhD Admissions Committee (2004-05, 2005-06 (chair), 2006-07 (chair), 2007-08, 2008-09, 2009-2010 (chair), 2010-2011 (chair)). Chair of the CS department Strategic Opportunities Committee (2008-09).

Orsay: Orsay University Coordinator of all lower-level undergraduate courses in Computer Science, *DEUG Informatique* (1998-2002).

BROADER RESPONSABILITIES.   (Mostly committees)

Elected member of the *Conseil Scientifique* of CNRS, since 2018.

Member of the *Conseil d'Administration* of EPHE (Ecole Pratique des Hautes Etudes), since 2018.

Member of EATCS (European Association for Theoretical Computer Science) Council, since 2017.

Member of the *Conseil Scientifique* of GDR IM (Informatique Mathématique), since 2017.

Member of the *Conseil Scientifique* of SIF (Société informatique de France), since 2012.

Member of the *Comité de Programmation Scientifique*, Institut Henri Poincaré, 2014-18.

Member of Presburger Award Committee, 2014-16 (Chair in 2016).

Member of the ACM-SIAM SODA Steering Committee, until 1/2014.

Journal editor: SIAM Journal on Computing, 2010-2015; Algorithmica, 2004-2010; ESAIM, Probabilités et Statistiques, 2001-2004.

Chair of program committees: APPROX, 2016; ACM-SIAM SODA, 2009.

Member of program committees: ESA'19, ACM STOC'18, HALG 2017, IEEE FOCS'15, WG '14, APPROX '13, APPROX'10, APPROX'07, APPROX'01, APPROX'98, SODA'09, SODA'03, SODA'00, SODA'98, STOC'05, FOCS'02, STACS 2011, STACS '99, ICALP'02, ESA'04, ANALCO'06, WAOA'04, RANDOM'98 .

GRANTS.   *USA.*

NSF Theoretical Foundations 2007 (TF07). Award No.: CCF-0728816, standard grant. P.I.: Kenyon-Mathieu, C. Proposal number: 5-26667. "Designing Approximation Schemes". Effective September 15, 2007 and until August 31, 2010. Amount: 300,000 dollars.

NSF AF: Medium: Collaborative Research: Solutions to Planar Optimization Problems. Co-P.I.: Kenyon-Mathieu, C. Proposal number: 0964037.

European.

European project on Approximation and online algorithms (APPOL), participant (2000-2001).

European project on Approximation and online algorithms (APPOL2), local coordinator (2001-2002), participant (2003-2004).

European ESPRIT Working group on Randomized algorithms (RAND2), participant.

Binational.

French-Belgian bilateral cooperative project CNRS-FNRS, French coordinator (1991-93).

France-Berkeley project on phase transitions and complexity, French coordinator (1998-99).

Université Paris-Sud - Georgia Institute of Technology, CNRS-NSF cooperation grant on randomness, approximation, and new models of computation, French coordinator (1999-2002).

France.

ANR Algorithmic Techniques for Restricted Data Access Models, co-PI, ANR Programme Blanc, 2012-17.

Participant in *ANR* "jeune chercheur" project SAGA, Structural Approximation for Geometric Algorithms, headed by Nabil Mustafa, 2014-18.

Participant in *PSL* project MultiFac, headed by Vangelis Paschos, 2016-18.

Participant in *PGMO* project Online Algorithms with Random Order, headed by Thang Nguyen, 2017-19.

AS CNRS "Algorithms for large graphs", 2003, participant.

"Bonus Qualité-Recherche" project of the Université de Paris-Sud on graphs for the web, participant, 2003.

AS CNRS "Analyse Structurelle et Algorithmique des Rseaux Dynamiques", participant, 2003.

ACI Grid, participant (2001-2003).

CNRS bidisciplinary project physics and computer science, CS coordinator (1997-98).

INRIA cooperative project AlCOPhys (algorithms, combinatorics, and statistical physics), local coordinator (1999-2001).

"Bonus Qualité-Recherche" project of the Université de Paris-Sud on phase transitions, CS coordinator, 1999.

Project of the French Ministry of Education and Research, on approximability and local search, local coordinator (1999-2001).

BROADER IMPACT.   More information can be found on `linkedin.com/in/claire-mathieu-06b723109`

- Since 2012, in collaboration with Serge Abiteboul, design of a series of interviews *Entretiens autour de l'informatique* published on the blog Binaire which is hosted by *Le Monde* newspaper.

- Serge Abiteboul and Claire Mathieu: Enseigner linformatique aux juristes. Enjeux numriques, 3, September 2018, Annales des Mines

- Speaking on the radio: La Chronique, France-culture, February 2016. La méthode scientifique, France-culture, November 2017. La méthode scientifique, France-culture, *Algorithmes prédictifs: la nouvelle boule de cristal*, June 2018. Science-friction, Médiapart, *Faut-il avoir peur des algorithmes ?*, June 2018. Autour de la question, RFI, January 2018.

- Interviews with newspaper journalists: L'Humanité, panel, *Zéro en maths, mais où donc est le problème?*, January 2017. Le Figaro, November 2017, *Algorithmes: nous vivons aujourd'hui dans une sorte de Far-West*. L'Opinion, juillet 2018. La Recherche, *Parcoursup passe son premier bac*, juillet 2018. EducPros, L'Etudiant, June 2018. Marianne, May 2018. Science et Avenir, June 2018.

- Speaker, Forum du CNRS, *Les algorithmes peuvent-ils contribuer au bien commun ?*, November 2017. Panel member, Impact2 event at the City Hall of Paris, March 2018. Speaker, Cité des Sciences et de l'Industrie, *Des études au travail : ces algorithmes qui nous trient*, October 2018. Panel member, Annales des Mines, "Les métiers du droit au défi du numérique", October 2018. Table ronde, "Transparence des algorithmes", INRIA Alumni, November 2018.

- Interviewed by Thore Husfeldt, Computer Science Video Series Cast IT, Copenhagen, Denmark, August 2018.

- In collaboration with Hugo Gimbert, publication of a report on the algorithms of *Parcoursup*, a platform used nationwide in 2018 for French college admissions. `https://framagit.org/parcoursup/algorithmes-de-parcoursup/blob/master/doc/presentation_algorithmes_parcoursup.pdf`

Publication list since 2013

1. Adam Kurpisz, Monaldo Mastrolilli, Claire Mathieu, Tobias Mmke, Victor Verdugo, Andreas Wiese: Semidefinite and linear programming integrality gaps for scheduling identical machines. Math. Program. 172(1-2): 231-248 (2018)

2. Sampath Kannan, Claire Mathieu, Hang Zhou: Graph Reconstruction and Verification. ACM Trans. Algorithms 14(4): 40:1-40:30 (2018)

3. Claire Mathieu. L'algorithmique. Librairie Anthème Fayard et Collège de France, 2018. ISBN: 978-2-213-70936-9. Mars 2018.

4. Dimitris Fotakis, Laurent Gourvès, Claire Mathieu, Abhinav Srivastav: Covering Clients with Types and Budgets. ISAAC 2018.

5. Vincent Cohen-Addad, Varun Kanade, Frederik Mallmann-Trenn, Claire Mathieu: Hierarchical Clustering: Objective Functions and Algorithms. SODA 2018: 378-397

6. Daniel Antunes, Claire Mathieu, Nabil H. Mustafa: Combinatorics of Local Search: An Optimal 4-Local Hall's Theorem for Planar Graphs. ESA 2017: 8:1-8:13

7. Monika Henzinger, Dariusz Leniowski, Claire Mathieu: Dynamic Clustering to Minimize the Sum of Radii. ESA 2017: 48:1-48:10

8. Fabrice Benhamouda, Tancrde Lepoint, Claire Mathieu, Hang Zhou: Optimization of Bootstrapping in Circuits. SODA 2017: 2423-2433

9. Vincent Cohen-Addad, Philip N. Klein, Claire Mathieu: Local Search Yields Approximation Schemes for k-Means and k-Median in Euclidean and Minor-Free Metrics. FOCS 2016: 353-364

10. Amos Fiat, Anna R. Karlin, Elias Koutsoupias, Claire Mathieu, Rotem Zach: Carpooling in Social Networks. ICALP 2016: 43:1-43:13

11. Adam Kurpisz, Monaldo Mastrolilli, Claire Mathieu, Tobias Mömke, Victor Verdugo, Andreas Wiese: Semidefinite and Linear Programming Integrality Gaps for Scheduling Identical Machines. IPCO 2016: 152-163

12. Varun Kanade, Reut Levi, Zvi Lotker, Frederik Mallmann-Trenn, Claire Mathieu: Distance in the Forest Fire Model How far are you from Eve? SODA 2016: 1602-1620

13. Vincent Cohen-Addad, éric Colin de Verdire, Philip N. Klein, Claire Mathieu, David Meierfrankenfeld: Approximating connectivity domination in weighted bounded-genus graphs. STOC 2016: 584-597

14. Aparna Das, Claire Mathieu: A Quasipolynomial Time Approximation Scheme for Euclidean Capacitated Vehicle Routing. Algorithmica 73(1): 115-142 (2015)

15. Glencora Borradaile, Philip N. Klein, Claire Mathieu: A Polynomial-Time Approximation Scheme for Euclidean Steiner Forest. ACM Trans. Algorithms 11(3): 19:1-19:20 (2015)

16. Vincent Cohen-Addad, Claire Mathieu: Effectiveness of Local Search for Geometric Optimization. Symposium on Computational Geometry 2015: 329-343

17. Sampath Kannan, Claire Mathieu, Hang Zhou: Near-Linear Query Complexity for Graph Inference. ICALP (1) 2015: 773-784

18. Chen Avin, Barbara Keller, Zvi Lotker, Claire Mathieu, David Peleg, Yvonne Anne Pignolet: Homophily and the Glass Ceiling Effect in Social Networks. ITCS 2015: 41-50

19. Philip N. Klein, Claire Mathieu, Hang Zhou: Correlation Clustering and Two-edge-connected Augmentation for Planar Graphs. STACS 2015: 554-567

20. Frédéric Magniez, Claire Mathieu, Ashwin Nayak: Recognizing Well-Parenthesized Expressions in the Streaming Model. SIAM J. Comput. 43(6): 1880-1905 (2014)

21. Matthew Cary, Aparna Das, Benjamin Edelman, Ioannis Giotis, Kurtis Heimerl, Anna R. Karlin, Scott Duke Kominers, Claire Mathieu, Michael Schwarz: Convergence of Position Auctions under Myopic Best-Response Dynamics. ACM Trans. Economics and Comput. 2(3): 9:1-9:20 (2014)

22. David Eisenstat, Claire Mathieu, Nicolas Schabanel: Facility Location in Evolving Metrics. ICALP (2) 2014: 459-470

23. Monik Khare, Claire Mathieu, Neal E. Young: First Come First Served for Online Slot Allocation and Huffman Coding. SODA 2014: 445-454

24. David Eisenstat, Philip N. Klein, Claire Mathieu: Approximating k-center in planar graphs. SODA 2014: 617-627

25. Vincent Cohen-Addad, Zhentao Li, Claire Mathieu, Ioannis Milis: Energy-Efficient Algorithms for Non-preemptive Speed-Scaling. WAOA 2014: 107-118

26. Claire Mathieu, David B. Wilson: The Min Mean-Weight Cycle in a Random Network. Combinatorics, Probability and Computing 22(5): 763-782 (2013)

27. Claire Mathieu, Hang Zhou: Graph Reconstruction via Distance Oracles. ICALP (1) 2013: 733-744

Preprints or papers in preparation

- Chien-Chung Huang, Mathieu Mari, Claire Mathieu, Nabil Mustafa: Maximizing Area in a Euclidian plane with Connectivity Constraints. In preparation.

- Claire Mathieu, Neal Young. Competitiveness of the Bigtable problem. In preparation.

- Claire Mathieu, Simon Mauras: How to aggregate top lists: score-based approximation schemes. Submitted.

- Vincent Cohen-Addad, Frederik Mallmann-Trenn, Claire Mathieu: Instance-Optimality in the Noisy Value-and Comparison-Model - Accept, Accept, Strong Accept: Which Papers get in? CoRR abs/1806.08182 (2018)

- Frederik Mallmann-Trenn, Claire Mathieu, Victor Verdugo: Skyline Computation with Noisy Comparisons. CoRR abs/1710.02058 (2017)

Publication list until end of 2012

The publications below are ordered by topics, and by inverse chronological order within each topic. When the same piece of research led to a conference and a journal publications, it appears only once in the list, at the date of publication of the conference proceedings.

Approximation algorithms

1. Christian Konrad, Frédéric Magniez, Claire Mathieu: Maximum Matching in Semi-streaming with Few Passes. APPROX-RANDOM 2012: 231-242

2. Anna R. Karlin, Claire Mathieu, C. Thach Nguyen: Integrality Gaps of Linear and Semi-Definite Programming Relaxations for Knapsack. IPCO 2011: 301-314

3. David Eisenstat, Philip N. Klein, Claire Mathieu: An efficient polynomial-time approximation scheme for Steiner forest in planar graphs. SODA 2012.

4. Mohammadhossein Bateni, Mohammadtaghi Hajiaghayi, Philip Klein and Claire Mathieu A Polynomial-time Approximation Scheme for Planar Multiway Cut. SODA 2012.

5. Claire Mathieu and Adrian Vladu, Online Ranking for Tournament Graphs, 8th Workshop on Approximation and Online Algorithms, September 2010, WAOA 2010: 201-212.

6. Aparna Das, Claire Mathieu and Shay Mozes, The Train Delivery Problem - Vehicle Routing Meets Bin Packing, 8th Workshop on Approximation and Online Algorithms, September 2010, WAOA 2010: 94-105.

7. C. Mathieu, O. Sankur, and W. Schudy. Online correlation clustering. STACS 2010: Proc. 27th Symposium on Theoretical Aspects of Computer Science, 573-584.

8. Correlation Clustering with Noisy Input, Claire Mathieu and Warren Schudy, ACM SIAM SODA 2010, 712-728.

9. A quasi-polynomial time approximation scheme for Euclidean capacitated vehicle routing, Aparna Das and Claire Mathieu, ACM SIAM SODA 2010, 390-403. *Algorithmica*, to appear.

10. Aparna Das, Claire Kenyon-Mathieu: On Hierarchical Diameter-Clustering and the Supplier Problem. Theory Comput. Syst. 45(3): 497-511 (2009)

11. Sherali-Adams relaxations of the matching polytope, Claire Mathieu and Alistair Sinclair, ACM STOC 2009: 293-30.

12. Improved Approximation Algorithms for Budgeted Allocations. Yossi Azar, Benjamin Birnbaum, Anna R. Karlin, Claire Mathieu and C. Thach Nguyen. Automata, Languages and Programming (ICALP), 35th International Colloquium, Pages 1 86-197, 2008.

13. Online multicast with egalitarian cost sharing. Moses Charikar, Howard Karloff, Claire Mathieu, Joseph (Seffi) Naor, and Michael Saks. Twentieth annual ACM symposium on Parallelism in algorithms and architectures (SPAA), 2008, pp. 70-76.

14. A polynomial-time approximation scheme for Euclidean Steiner forest. Glencora Borradaile, Philip Klein, and Claire Mathieu. Forty-Ninth Annual IEEE Symposium on Foundations of Computer Science (FOCS), October 2008, Philadelphia, Pennsylvania.

15. Glencora Borradaile, Philip N. Klein, Claire Mathieu: An O(n log n) approximation scheme for Steiner tree in planar graphs. ACM Transactions on Algorithms 5(3): (2009)

16. On-line bipartite matching made simple, Benjamin Birnbaum and Claire Mathieu, ACM SIGACT News, Volume 39 , Issue 1 (March 2008), pp. 80-87.

17. Marek Chrobak, Claire Kenyon, John Noga, Neal E. Young: Incremental Medians via Online Bidding. Algorithmica 50(4): 455-478 (2008)

18. How to rank with few errors. Claire Kenyon-Mathieu, Warren Schudy. ACM STOC 2007: 95-103.

19. Steiner Tree in Planar Graphs: An O (n log n) Approximation Scheme with Singly-Exponential Dependence on Epsilon. Glencora Borradaile, Philip N. Klein, Claire Mathieu. WADS 2007: 275-286.

20. Competitiveness via doubling. Marek Chrobak, Claire Kenyon-Mathieu. ACM SIGACT News, December 2006, in press.

21. A Polynomial-Time Approximation Scheme for Steiner Tree in Planar Graphs. Glencora Borradaile, Claire Kenyon-Mathieu and Philip Klein. ACM-SIAM Symposium on Discrete Algorithms (SODA), January 2007.

22. Linear Programming Relaxations of Maxcut. Wenceslas Fernandez de la Vega and Claire Kenyon-Mathieu. ACM-SIAM Symposium on Discrete Algorithms (SODA), January 2007.

23. On hierarchical diameter-clustering, and the supplier problems. Aparna Das and Claire Kenyon. Proceedings of WAOA'06, Fourth Workshop on Approximation and Online Algorithms, September 2006, Zurich, Switzerland, Lecture Notes i n Computer Science, Springer.

24. Bin Packing in Multiple Dimensions: Inapproximability Results and Approximation Schemes, Nikhil Bansal, José R. Correa, Claire Kenyon and Maxim Sviridenko, *Mathematics of Operations Research*, Vol. 31, no. 1, February 2006, pp. 31-49.

25. Online Medians via Online Bribery. Marek Chrobak, Claire Kenyon, John Noga, and Neal E. Young. LATIN'06: Theoretical Informatics, Valdivia, Chile, March 2006, Lecture Notes in Computer Science 3887, pages 311-322.

26. The Reverse Greedy Algorithm for the Metric K-Median Problem, Marek Chrobak, Claire Kenyon and Neal Young. Conference version: COCOON 2005: 654-660. Journal version: *Information Processing Letters*, Volume 97, Issue 2, (31 January 2006) Pages 68-72.

27. On Profit-Maximizing Envy-Free Pricing Venkatesan Guruswami, Jason Hartline, Anna Karlin, David Kempe, Claire Kenyon and Frank McSherry, Proceedings of the *Sixteenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2005, Pages 1164 - 1173.

28. Asymptotic Approximation Schemes for Two-Dimensional Packing, J. Correa and Claire Kenyon, Proceedings of the *Fifteenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2004, Pages: 186 - 195.

29. Approximation Schemes for Metric Bisection and Partitioning, W. Fernandez de la Vega, Marek Karpinski, and Claire Kenyon, Proceedings of the *Fifteenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2004, Pages: 506 - 515.

30. OPT versus LOAD in Dynamic Storage Allocation, Adam L. Buchsbaum, Howard Karloff, Claire Kenyon, Nick Reingold, and Mikkel Thorup. Thirty-Fifth Annual ACM Symposium on Theory of Computing (STOC) 2003, 556–564. SIAM J. on Computing, Volume 33, Issue 3, Pages: 632 - 646.

31. Approximation Schemes for Clustering Problems, W. Fernandez de la Vega, Marek Karpinski, Claire Kenyon, and Yuval Rabani. Thirty-Fifth Annual ACM Symposium on Theory of Computing (STOC), 2003, 50–58.

32. Huffman Coding with Unequal Letter Costs, Mordecai J. Golin, Claire Kenyon and Neal E. Young, Proceedings of the *Thirty-Fourth Annual ACM Symposium on Theory of Computing (STOC)*, 2002, 785–791. Expanded journal version: Huffman Coding with Letter Costs: A Linear-Time Approximation Scheme. SIAM J. Comput. 41(3): 684-713 (2012)

33. Dynamic TCP acknowledgement and other stories about $e/(e-1)$. Anna R. Karlin, Claire Kenyon and Dana Randall, Algorithmica, 36, 3, 209–224, 2003. A preliminary version appeared in the proceedings of the *Thirty-Third Annual ACM Symposium on Theory of Computing (STOC)*, Crete, May 21-23, 502–509, 2001.

34. Better Approximation Algorithms for Bin Covering, Janos Csirik, David Johnson and Claire Kenyon, Proceedings of the *Twelth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pp. 557–566, 2001.

35. Scheduling to minimize the average completion time of dedicated tasks, Foto Afrati, Evripidis Bampis, Aleksei V. Fishkin, Klaus Jansen, and Claire Kenyon, Proceedings of the *FSTTCS 2000* conference, Delhi, LNCS 1974, pp. 454-464, 2000.

36. Polynomial-time approximation scheme for data broadcast, Claire Kenyon, Nicolas Schabanel, and Neal Young, Proceedings of the *Thirty-Second Annual ACM Symposium on Theory of Computing (STOC)*, Portland, Oregon, May 21-23, pp. 659–666, 2000.

37. A PTAS for the average weighted completion time problem on unrelated machines, Foto Afrati, Evripidis Bampis, Claire Kenyon and Ioannis Milis, *Journal of Scheduling*, Special Issue on Approximation Algorithms, 3(6), 323-332, 2000. A preliminary version appeared in: Approximation Schemes for Scheduling to Minimize Average Weighted Completion Time with Release Dates, F. Afrati, E. Bampis, C. Chekuri, D. Karger, C. Kenyon, S. Khanna, I. Milis, M. Queyranne, M. Skutella, C. Stein and M. Sviridenko, Proceedings of the 1999 *Symposium on Foundations of Computer Science (FOCS)* (plenary session), New York City, NY, October 17-19, pp. 32–44, 1999.

38. A self-organizing bin packing heuristic. Janos Csirik, David S. Johnson, Claire Kenyon, Peter W. Shor, and Richard Weber, Proceedings of the *Workshop on Algorithm Engineering and Experimentation (ALENEX 99)*, pp. 246–265, 1999.

39. Scheduling on a Constant Number of Machines. Foto N. Afrati, Evripidis Bampis, Claire Kenyon and Ioannis Milis, Proceedings of *RANDOM-APPROX* 1999, Lecture Notes in Computer Science 1671, pp. 281–287, 1999.

40. The Data Broadcast Problem with Non-Uniform Transmission Times. Claire Kenyon and Nicolas Schabanel. Algorithmica, 35, 2, 146–175, 2003. A preliminary version appeared in the Proceedings of the *Tenth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pp. 547-556, 1999.

41. A Randomized Approximation Scheme for Metric MAX-CUT. W. Fernandez de la Vega and Claire Kenyon. *Journal of Computer and System Sciences (JCSS)*, 63(4): 531-541 (2001). A preliminary version appeared in the proceedings of the *Thirty-Ninth Annual IEEE Symposium on Foundations of Computer Science (FOCS)*, pp.468-471, 1998.

42. Scheduling Multiprocessor Tasks on Dedicated Processors. A.K. Amoura, E. Bampis, C. Kenyon, and Y. Manoussakis. *Algorithmica*, 32(2) 247-261, 2002. A preliminary version appeared in the proceedings of the the *5th Annual European Symposium (ESA'97)*, LNCS 1284, pp. 1–12, 1997.

43. A near-optimal solution to a two-dimensional cutting stock problem, Claire Kenyon et Eric Rémila, *Mathematics of Operations Research*, 25, 4, November 2000, 645-656. A preliminary version appeared in the proceedings of the 37*th Symposium on Foundations of Computer Science (FOCS)*, 31-36, 1996.

44. How to take short cuts. Claire Kenyon et Richard Kenyon. *Discrete et Computational Geometry* 8 (1992):251-264.. A preliminary version appeared in the proceedings of the 7th *Annual ACM Symposium on Computational Geometry*, New Hampshire, pp. 250-255, ACM Press, 1991.

Probabilistic analysis of algorithms

45. Frédéric Magniez, Claire Mathieu, Ashwin Nayak: Recognizing well-parenthesized expressions in the streaming model. STOC 2010: 261-270.

46. Irit Katriel, Claire Kenyon-Mathieu, Eli Upfal: Commitment under uncertainty: Two-stage stochastic matching problems. Theor. Comput. Sci. 408(2-3): 213-223 (2008).

47. Commitment Under Uncertainty: Two-Stage Stochastic Matching Problems. Irit Katriel, Claire Kenyon-Mathieu, Eli Upfal. ICALP 2007: 171-182.

48. Yet another algorithm for dense max-cut: go greedy. Claire Mathieu and Warren Schudy. ACM-SIAM SODA, January 2008, to appear.

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