Curriculum vitae - Nikhil Bansal

Personal Details

Name	Nikhil Bansal
Birth Date	June 12, 1978
Nationality	Indian
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Education

1999–2003	PhD in Computer Science (awarded Dec 22, 2003), Carnegie Mellon University, USA Thesis: Algorithms for Flow Time Scheduling. Advisor: Prof. Avrim Blum
1995–1999	Bachelor of Technology, Computer Science and Engineering Indian Institute of Technology, Mumbai, India.

Employment

2016 (Fall)	Chancellor's Visiting Professor, Computer Science Department, UC Berkeley
2014–	Full Professor, Eindhoven University of Technology (TU/e), Netherlands
2011–2013	Associate Professor, Eindhoven University of Technology (TU/e), Netherlands
2008–2011	Manager, Algorithms Group, IBM T.J. Watson Research Center, New York In addition to research, duties include obtaining funding, seeking business/research opportunities within IBM, and creating a productive environment for the group.
2004–2008	Researcher, IBM T.J. Watson Research Center, New York Duties include performing basic research, technical consulting with external IBM customers and working with IBM product development teams.

Research Interests

Design and analysis of algorithms with focus on approximation and online algorithms. Related areas such as combinatorial optimization, discrete math, machine learning, complexity, queueing theory.

Awards

- Chancellor's Visiting Professorship, Fall 2016, UC Berkeley.
- Best Paper Award at Foundations of Computer Science (FOCS 2011) for the paper *A polylogarithmic competitive algorithm for the k-server problem*.
- Best Paper Award at European Symposium on Algorithms (ESA 2011) for the paper *Deterministic Discrepancy Minimization*.
- Pat Goldberg Best Paper Award at IBM Research 2010 for the paper *Constructive Algorithms for Discrepancy Minimization*.

- Best Paper Award at European Symposium on Algorithms (ESA 2010) for the paper *When LP Is the Cure for Your Matching Woes*.
- Pat Goldberg Best Paper Award at IBM Research 2007 for the paper *A Primal-Dual Randomized Algorithm for Weighted Paging.*
- Siebel Scholarship Award (2003-2004) for exceptional leadership and academic performance.
- IBM PhD Fellowship Award. Two years 2001-2002 and 2002-2003.

Honorary Lectures

- Teaching a Phd level course, *Algorithms and Uncertainty* and UC Berkeley, Fall 2016.
- Invited speaker at the event *Mathematics of Jiri Matousek* 2016, Prague.
- Invited plenary speaker at FSTTCS 2014, New Delhi.
- Invited plenary spekaer at SWAT 2014, Copenhagen.
- Invited semi-plenary speaker at Intl. Symposium on Math. Programming (ISMP 2012), Berlin.
- Invited plenary speaker at ALGO 2012, Ljubljana.
- Montreal Summer School in Graph Theory, 2012, organized by Bruce Reed and Louigi Addario-Berry. Gave 7.5 hour lectures on discrepancy theory.
- Summer School in Combinatorics of Linear and Semidefinite Programming, organized by Fritz Eisenbrand, Berlin, 2012. Gave 3 hour lectures on algorithms for discrepancy.
- Invited plenary speaker at MAPSP 2007.
- Keynote speaker at IBM-NYU-Columbia New York Area Theory Day, 2005.

Other Invited Talks

Over 50 invited lectures at various top universities and research labs including Princeton (3x), MIT (2x), NYU (2x), Microsoft Research (3x), Rutgers (2x), CMU (2x), Harvard, Stanford, UIUC, TTI Chicago, Dartmouth, Columbia, AT&T Research, TU Berlin, Charles University (2x), Warwick.

Grants

1. **ERC**: An ERC Consolidator grant for the project Algorithms for coping with uncertainty and intractability (ACUITY). 2014-2019. Amount € 1,519,285.
2. **NWO**: A NWO Top Grant for the project "Approximation Algorithms, Quantum Information and Semidefinite Optimization". 2014-2019. Amount € 800,000. Joint with Monique Laurent (CWI) and Ronald de Wolf (CWI).
3. **NWO**: A Vidi Grant for the project "Convex Programming: new frontiers and new applications". 2012-2017. Amount € 800,000.
4. **GRF, Hong Kong**: Competitive on-line scheduling algorithms for minimizing weighted flow time. Jointly with Ho-Leung Chan. 2010 - 2013. Amount 792,000(HK$).
5. **US-Israel BSF**: The k-Server Problem. Jointly with Joseph Naor, Niv Buchbinder and Anupam Gupta. 2011-2015. Amount $200,000. Declined after moving to Europe.

Professional Service

Editorship

- Associate Editor for Journal of the ACM, JACM, 2016-2019.
- Associate Editor for SIAM Journal on Discrete Mathematics, SIDMA, 2012-2018.
- Associate Editor for SIAM Journal on Computing, SICOMP, 2013-2016.
- Associate Editor for Mathematics of Operations Research, MOR, 2013-2016.

Program Chair

- European Symposium on Algorithms (Track A), ESA 2015.
- Models and Algorithms for Planning and Scheduling Problems, MAPSP 2013.

Program Committee Membership

- Foundations of Computer Science, FOCS 2012, 2014.
- Symposium on Theory of Computing, STOC 2009, 2014.
- Innovations in Theoretical Computer Science, ITCS 2016.
- Symposium on Discrete Algorithms, SODA 2012.
- Intl. Colloq. on Automata, Languages and Programming, ICALP 2011,2014.
- International Workshop on Approximation Algorithms, APPROX 2007,2009,2013.
- Foundations of Software Technology and Theoretical Computer Science, FSTTCS 2009, 2012.
- Intl. Colloq. on Structural Information and Communication Complexity, SIROCCO 2012.
- Latin American Theoretical Informatics Symposium, LATIN 2012.
- Integer Programming and Combinatorial Optimization, IPCO 2011, 2016.
- International Computing and Combinatorics Conference, COCOON 2010
- Symposium on Parallel Architectures and Algorithms, SPAA 2009.
- Workshop on online and approximation algorithms, WAOA 2009, 2016.
- European Symposium on Algorithms, ESA 2006, 2015 (chair).

Workshop Organization

- Optimization and Decision-Making Under Uncertainty, 2016, as part of the semester on Algorithms and Uncertainty, at Simons Institute, Berkeley.
- Dagstuhl Workshop on Scheduling, 2016, co-organizing with Nicole Megow and Cliff Stein.
- Relaxations and Polyhedral Methods, Hausdorff Institute Bonn, 2015, co-organizing with Ola Svensson, David Williamson and Jens Vygen.
- Deterministic and Stochastic Scheduling, Eurandom Eindhoven, 2015, co-organizing with Sem Borst, Leen Stougie and Gerhard Woeginger.
- Online Algorithms and Learning, Lorentz Center, Leiden, 2014, co-organized with Avrim Blum, Peter Grunwald, Joseph Naor and Shal Shalev-Schwartz.
- Probability and Combinatorics: Stochastic activity month, Eurandom Eindhoven, 2014, co-organized with Jan Draisma, Remco van der Hofstad, Ross Kang and Tobias Muller.
- 4th SDP days, CWI Amsterdam, 2013, co-organized with Monique Laurent and Frank Vallentin.

Student Supervision

- PhD: Bouke Cloostermans 2014-now, Marek Elias 2014-now, Greg Koumoutsos 2014-now, Bart Kamphorst (joint with Bert Zwart) 2013-now, Jorn van der Pol (joint with Rudi Pendavingh) 2013-now.
- Masters thesis (at TU/e): Tom Slenders 2013-2014, Bart Post, 2013-2014, Jorn van der Pol (co-advisor) 2012-2013, Reint den Toonder, 2012-2013, Tim Oosterwijk, 2013, Britt Mathijsen (co-advisor) 2013, Annette Ficker, 2013-now.
- Mentor of PhD students: Aravindan Vijayaraghavan, Princeton 2011, Barna Saha, U. Maryland 2010, Roy Schwartz, Technion 2010, Ravishankar Krishnaswamy, Carnegie Mellon Univ. 2009, Viswanath Nagarajan, Carnegie Mellon Univ. 2008, Niv Buchbinder, Technion 2007, Ho-Leung Chan, U. Hong-Kong 2006, Amir Epstein, Tel-Aviv Univ. 2006.
- Postdoc: Seeun William Umboh (2015-), Lukasz Jez (2015-2016), Rohit Khandekar (two year post-doc at IBM) 2006-2008.

Thesis Committees (excluding own students):

- PhD Committees: Rob Eggermont, 2015, TU/e (advisor: Jan Draisma), Yael Fleischmann, 2015, TU/e (advisor: Hans Cuypers), Marc Renault, 2014, Paris (advisor: Adi Rosen), Dimitris Letsios, 2014, Paris, (advisor: Evripides Bampis), Marcel Roeloffzen, 2013, TU/e (advisor: Mark de Berg), Dirk Gerrits, 2013, TU/e (advisor: Mark de Berg), Matthijs Bomhoff, 2013, U. Twente (advisor: Marc Uetz), Lars Praedel, 2012, Kiel (advisor: Klaus Jansen), Cyriel Rutten, 2012, Maastricht (advisor: Tjark Vredeveld), Kevin Verbeek, 2012, TU/e (advisor: Bettina Speckmann), Murat Firat, 2012, TU/e (advisor: Cor Hurkens), Amirali Khosravi, 2011, TU/e (advisor: Mark de Berg), TU/e (advisor: Mark de Berg), Ravishankar Krishnaswamy, 2011, CMU (advisor: Anupam Gupta), Sungjin Im, 2010, UIUC, (advisor: Chandra Chekuri), Mathilde Hurand, 2008, Ecole Polytechnique (advisor: Christoph Durr).
- Masters Committees: Joost Kruijff, 2014, TU/e (advisor: Cor Hurkens), Mereke van Garderen, 2013, TU/e (advisor: Bettina Speckmann), Thomas Meyfroyt, 2013, TU/e (advisor: Onno Boxma), Bauke Conijn, 2013, TU/e (advisor: Wim Nuijten), Yuk Hei Chan, 2009, Chinese Univ. of Hong Kong (advisor: Lap Chi Lau), Ton Godtschalk, 2012, TU/e (advisor: Sem Borst).

Other

- Member of National Science Foundation (NSF) review panel in 2009.

Publications

Refereed Conference Publications

[1] Algorithm for Komlos Conjecture: Matching Banaszczyk's bound. Nikhil Bansal, Daniel Dadush and Shashwat Garg, *Foundations of Computer Science, FOCS 2016*.

[2] Lift and Round to improve weighted completion time on unrelated machines. Nikhil Bansal, Aravind Srinivasan and Ola Svensson, *Symposium on Theory of Computing, STOC 2016*.

[3] Approximation-Friendly Discrepancy Rounding. Nikhil Bansal and Viswanath Nagarajan, *Interger Programming and Combinatorial Optimization, IPCO 2016*.

[4] Improved Approximation for Vector Bin Packing. Nikhil Bansal, Marek Elias and Arindam Khan, *Symposium on Discrete Algorithms, SODA 2016*, pages 1561-1579.

[5] On the Lovasz theta function for independent sets. Nikhil Bansal, Anupam Gupta and Guru Guruganesh. *Symposium on Theory of Computing, STOC 2015*, pages 193-200.

[6] Minimizing flow-time on unrelated machines. Nikhil Bansal and Janardhan Kulkarni, *Symposium on Theory of Computing, STOC 2015* pages 851-860.

[7] Tight Bounds for Double Coverage Against Weak Adversaries. Nikhil Bansal, Marek Elias, Lukasz Jez, Greg Koumoutsos and Kirk Pruhs, *WAOA 2015*, pages 47-58.

[8] A 2-Competitive Algorithm For Online Convex Optimization With Switching Costs. Nikhil Bansal, Anupam Gupta, Ravishankar Krishnaswamy, Kirk Pruhs, Kevin Schewior and Cliff Stein, *APPROX 2015*, pages 96-109.

[9] Minimizing maximum flow-time on related machines. Nikhil Bansal and Bouke Cloostermans, *APPROX 2015*, pages 85-95.

[10] Approximating independent set in sparse graphs. Nikhil Bansal, *ACM-SIAM Symposium on Discrete Algorithms, SODA 2015*, pages 1-8.

[11] On the adaptivity gap of stochastic orienteering. Nikhil Bansal and Viswanath Nagarajan, *Integer Programming and Combinatorial Optimization, IPCO 2014*, pages 114-125.

[12] Almost tight bounds for Vector Scheduling. Nikhil Bansal, Tjark Vredeveld and Ruben van der Zwaan, LATIN 2014, pages 45-59.

[13] Approximating real-time scheduling on identical machines. Nikhil Bansal, Cyriel Rutten, Suzanne van der Ster, Tjark Vredeveld and Ruben van der Zwaan, *LATIN 2014*, pages 550-561.

[14] Improved Approximation Algorithm for Two-Dimensional Bin Packing. Nikhil Bansal and Arindam Khan, *ACM-SIAM Symposium on Discrete Algorithms, SODA 2014*, pages 13-25.

[15] Better Algorithms and Hardness for Broadcast Scheduling via a Discrepancy Approach. Nikhil Bansal, Moses Charikar, Ravishankar Krishnaswamy and Shi Li, *ACM-SIAM Symposium on Discrete Algorithms, SODA 2014*, pages 55-71.

[16] On the number of matroids. Nikhil Bansal, Rudi Pendavingh and Jorn van der Pol. *ACM-SIAM Symposium on Discrete Algorithms, SODA 2013*, pages 675-694.

[17] Weighted Geometric Set Multi-cover via Quasi-uniform Sampling. Nikhil Bansal and Kirk Pruhs, *European Symposium on Algorithms , ESA 2012*, pages 145-156.

[18] Tight time-space tradeoff for mutual exclusion. Nikhil Bansal, Vibhor Bhatt, Prasad Jayanti and Ranganath Kondapally, *Symposium on Theory of Computing, STOC 2012*, pages 971-982.

[19] Multicast Routing for Energy Minimization Using Speed Scaling. Nikhil Bansal, Anupam Gupta, Ravishankar Krishnaswamy, Viswanath Nagarajan, Kirk Pruhs and Cliff Stein, *First Mediterranean Conference on Algorithms, MedAlg 2012*, pages 37-51.

[20] A Polylogarithmic-Competitive Algorithm for the k-Server Problem. Nikhil Bansal, Niv Buchbinder, Aleksander Madry and Joseph (Seffi) Naor, *Foundations of Computer Science, FOCS 2011*, pages 267-276.

Co-winner of the best paper award at FOCS 2011.

[21] Min-Max Graph Partitioning and Small-Set Expansion. Nikhil Bansal, Uriel Feige, Robert Krauthgamer, Konstantin Makarychev, Viswanath Nagarajan, Joseph (Seffi) Naor and Roy Schwartz, *Foundations of Computer Science, FOCS 2011*, pages 17-26.

[22] Deterministic Discrepancy Minimization. Nikhil Bansal and Joel Spencer, *European Symposium on Algorithms , ESA 2011*, pages 408-420.

Winner of the best paper award at ESA 2011.

[23] On Capacitated Set Cover Problems, Nikhil Bansal, Ravishankar Krishnaswamy and Barna Saha, *Approximation Algorithms for Combinatorial Optimization, APPROX 2011*, pages 38-49.

[24] Minimum Congestion Mapping in a Cloud. Nikhil Bansal, Kang-Won Lee, Viswanath Nagarajan and Murtaza Zafer, *Symposium on Principles of Distributed Computing, PODC 2011*, pages 267–276.

[25] Constructive Algorithms for Discrepancy Minimization. Nikhil Bansal, *Foundations of Computer Science, FOCS 2010*, pages 3–10.

Co-winner of the IBM Research 2010 best paper award.

[26] The Geometry of Scheduling. Nikhil Bansal and Kirk Pruhs, *Foundations of Computer Science, FOCS 2010*, pages 407–414.

[27] When LP is the cure for your matching woes. Nikhil Bansal, Anupam Gupta, Jian Li, Julian Mestre, Viswanath Nagarajan and Atri Rudra. *European Symposium on Algorithms, ESA 2010*, pages 218–229.

Co-winner of the best paper award at ESA 2010.

[28] Inapproximability of Hypergraph Vertex Cover and Applications to Scheduling Problems. Nikhil Bansal and Subhash Khot, *International Colloquium on Automata, Languages and Programming, ICALP 2010*, pages 250–261.

[29] Metrical Task Systems and k-server problem on HSTs. Nikhil Bansal, Niv Buchbinder and Seffi Naor, *International Colloquium on Automata, Languages and Programming, ICALP 2010*, pages 287–298.

[30] Better Scalable Algorithms for Broadcast Scheduling. Nikhil Bansal, Ravishankar Krishnaswamy and Viswanath Nagarajan *International Colloquium on Automata, Languages and Programming, ICALP 2010*, pages 324–335.

[31] Approximation Algorithms for Diversified Search Ranking. Nikhil Bansal, Kamal Jain, Anna Kazeykina and Joseph Naor, *International Colloquium on Automata, Languages and Programming, ICALP 2010*, pages 273–284.

[32] On k-Column Sparse Packing Programs. Nikhil Bansal, Nitish Korula, Viswanath Nagarajan and Aravind Srinivasan, *Integer Programming and Combinatorial Optimization, IPCO 2010*, pages 369–382.

[33] On Generalizations of Network Design Problems with Degree Bounds. Nikhil Bansal, Rohit Khandekar, Jochen Konemann, Viswanath Nagarajan, and Britta Peis, *Integer Programming and Combinatorial Optimization, IPCO 2010*, pages 110–123.

[34] Towards the Randomized k-Server Conjecture: A Primal-Dual Approach. Nikhil Bansal, Niv Buchbinder and Seffi Naor, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2010*, pages 40–55.

[35] A Constant Factor Approximation Algorithm for Generalized Min-Sum Set Cover. Nikhil Bansal, Anupam Gupta and Ravishankar Krishnaswamy, *ACM-SIAM Symposium on Discrete Algorithms, SODA 2010*, pages 1539–1545.

[36] A Structural Lemma in 2-Dimensional Packing, and its Implications on Approximability. Nikhil Bansal, Alberto Caprara, Klaus Jansen, Lars Praedel, Maxim Sviridenko, in *International Symposium on Algorithms and Computation, ISAAC 2009*.

[37] Regularity Lemmas and Combinatorial Algorithms. Nikhil Bansal and Ryan Williams, in *Foundations of Computer Science, FOCS 2009*, pages 745–754.

[38] Optimal Long Code Test with One Free Bit. Nikhil Bansal and Subhash Khot, in *Foundations of Computer Science, FOCS 2009*, pages 453–462.

[39] Improved Bounds for Speed Scaling in Devices Obeying the Cube-Root Rule. Nikhil Bansal, Ho-Leung Chan, Kirk Pruhs, Dmitriy Rogozhnikov-Katz, in *International Colloquium on Automata, Languages and Programming, ICALP 2009*, pages 144-155.

[40] Job Admission and Resource Allocation in Distributed Streaming Systems. Joel Wolf, Nikhil Bansal, Kirsten Hildrum, Sujay Parekh, Deepak Rajan, Rohit Wagle, Kun-Lung Wu, in *Job Scheduling Strategies for Parallel Processing, JSSPP 2009*, pages 169-189.

[41] Weighted flow time does not admit O(1) competitive algorithms. Nikhil Bansal, Ho-Leung Chan, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2009*, pages 1238-1244.

[42] Speed Scaling with an arbitrary power function. Nikhil Bansal, Ho-Leung Chan, Kirk Pruhs, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2009*, pages 693-701.

[43] A logarithmic approximation for unsplittable flow on line graphs. Nikhil Bansal, Zachary Friggstad, Rohit Khandekar, Mohammad R. Salavatipour, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2009*, pages 702-709 .

[44] Randomized competitive algorithms for generalized caching. Nikhil Bansal, Niv Buchbinder, Joseph Naor, in *ACM Symposium on Theory of Computing, STOC 2008*, pages 235–244.

[45] Additive guarantees for degree bounded directed network design. Nikhil Bansal, Rohit Khandekar, Viswanath Nagarajan, in *ACM Symposium on Theory of Computing, STOC 2008*, pages 769–778.

[46] Classical approximation schemes for the ground-state energy of quantum and classical Ising spin glasses on planar graphs. Nikhil Bansal, Sergey Bravyi and Barbara Terhal, in *Quantum Information Processing, QIP 2008*.

[47] SODA: An Optimizing Scheduler for Large-Scale Stream-Based Distributed Computer Systems. Joel Wolf, Nikhil Bansal, Kirsten Hildrum, Sujay Parekh, Deepak Rajan, Rohit Wagle, Kun-Lung Wu, in *ACM/IFIP/USENIX Middleware Conference, 2008*.

[48] Towards Optimal Resource Allocation in Partial-Fault Tolerant Applications. Nikhil Bansal, Ranjita Bhagwan, Navendu Jain, Yoonho Park, Deepak Turaga, Chitra Venkatramani, in *Proceedings of IEEE INFOCOM 2008*, pages 1319–1327.

[49] Average Rate Speed Scaling. Nikhil Bansal, David P. Bunde, Ho-Leung Chan, Kirk Pruhs, in *Latin American Theoretical Informatics, LATIN 2008*, pages 240–251.

[50] Speed Scaling with a Solar Cell. Nikhil Bansal, Ho-Leung Chan, Kirk Pruhs, in *Algorithmic Aspects in Information and Management, AAIM 2008*, pages 15–26.

[51] Scheduling for Speed Bounded Processors. Nikhil Bansal, Ho-Leung Chan, Tak Wah Lam, Lap-Kei Lee, in *International Colloquium on Automata, Languages and Programming, ICALP 2008*, pages 409–420.

[52] A primal-dual randomized algorithm for weighted paging. Nikhil Bansal, Niv Buchbinder and Joseph (Seffi) Naor, in *IEEE Symposium on Foundations of Computer Science, FOCS 2007*, pages 507–517.

Co-winner of the IBM Research 2007 best paper award.

[53] Non-Preemptive min-sum scheduling with resource augmentation. Nikhil Bansal, Ho-Leung Chan, Rohit Khandekar, Kirk Pruhs, Baruch Schieber and Cliff Stein, in *IEEE Symposium on Foundations of Computer Science, FOCS 2007*, pages 614–624.

[54] An $O(\log^2 k)$ competitive algorithm for metric bipartite matching, Nikhil Bansal, Niv Buchbinder, Anupam Gupta and Joseph (Seffi) Naor, in *European Symposium on Algorithms, ESA 2007*, pages 522–533.

[55] Competitive algorithms for due date scheduling, Nikhil Bansal, Ho-Leung Chan, Kirk Pruhs, in *34th International Colloquium on Automata, Languages and Programming, ICALP 2007*, pages 28–39.

[56] Robust Reductions from Ranking to Classification, Maria-Florina Balcan, Nikhil Bansal, Alina Beygelzimer, Don Coppersmith, John Langford and Gregory B. Sorkin, in *20th Annual Conference on Learning Theory, COLT 2007*, pages 604–619.

[57] Dynamic Pricing for Impatient Bidders, Nikhil Bansal, Ning Chen, Neva Cherniavsky, Atri Rudra, Baruch Schieber and Maxim Sviridenko, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2007*, pages 726–735.

[58] Speed Scaling for Weighted Flow time, Nikhil Bansal, Kirk Pruhs and Cliff Stein, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2007*, pages 805–813.

[59] Harmonic Algorithm for 3-Dimensional Strip Packing Problem, Nikhil Bansal, Maxim Sviridenko, Xin Han, Kazuo Iwama and Guochuan Zhang, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2007*, pages 1197–1206.

[60] Improved approximation algorithms for multi-dimensional bin packing problems, Nikhil Bansal, Alberto Caprara and Maxim Sviridenko, in *IEEE Symposium on Foundations of Computer Science, FOCS 2006*, pages 697–708.

[61] The Santa Claus Problem, Nikhil Bansal and Maxim Sviridenko, in *38th Annual ACM Symposium on Theory of Computing, STOC 2006*, pages 31–40.

[62] A Quasi-PTAS for unsplittable flow on line graphs, Nikhil Bansal, Amit Chakrabarti, Amir Epstein and Baruch Schieber, in *38th Annual ACM Symposium on Theory of Computing, STOC 2006*, pages 721–729.

[63] Minimizing Setup and Beam-On times in Radiation Therapy, Nikhil Bansal, Don Coppersmith and Baruch Schieber, in *Approximation Algorithms for Combinatorial Optimization, APPROX 2006*, pages 27–38.

[64] Improved Approximation Algorithms for broadcast scheduling, Nikhil Bansal, Don Coppersmith and Maxim Sviridenko, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2006*, pages 344–353.

[65] A tale of two-dimensional bin packing, Nikhil Bansal, Andrea Lodi and Maxim Sviridenko, in *IEEE Symposium on Foundations of Computer Science, FOCS 2005*, pages 657–666.

[66] Jobshop scheduling with unit processing times. Nikhil Bansal, Tracy Kimbrel and Maxim Sviridenko, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2005*, pages 381–389.

[67] Approximating the average response time in broadcast scheduling, Nikhil Bansal, Moses Charikar, Sanjeev Khanna, Joseph Naor, in *ACM-SIAM Symposium on Discrete Algorithms, SODA 2005*, pages 215–221.

[68] Speed Scaling to manage temperature. Nikhil Bansal and Kirk Pruhs, in *Symposium on Theoretical Aspects of Computer Science, STACS 2005*, pages 460–471.

[69] Speed Scaling to manage energy and temperature. Nikhil Bansal, Tracy Kimbrel and Kirk Pruhs, in *IEEE Symposium on Foundations of Computer Science, FOCS 2004*, pages 520–529.

[70] Approximation Agorithms for Deadline-TSP and Vehicle Routing with Time-Windows, Nikhil Bansal, Avrim Blum, Shuchi Chawla and Adam Meyerson, *ACM Symposium on Theory of Computing, STOC 2004*, pages 166–174.

[71] Further Improvements in Competitive Guarantees for QoS Buffering, M. Mahdian, N. Bansal, L. Fleischer, T. Kimbrel, B. Schieber, M. Sviridenko, in *International Colloquium on Automata, Languages and Programming, ICALP 2004*, pages 196–207.

[72] Efficient algorithms for finding submasses in weighted strings, N. Bansal, M. Cieliebak and Z. Liptak, in *Combinatorial Pattern Matching, CPM 2004*, pages 194–204.

[73] Server Scheduling in the Weighted l_p Norm, Nikhil Bansal and Kirk Pruhs, in *Latin American Theoretical Informatics, LATIN 2004*, pages 434–443.

[74] New Approximability and Inapproximability Results for 2-dimensional bin packing. Nikhil Bansal and Maxim Sviridenko, *Symposium on Discrete Algorithms, SODA 2004*, pages 189–196.

[75] Approximation Schemes for Flow Time on Multiple Machines, in *Symposium on Discrete Algorithms, SODA 2004*, pages 565–567.

[76] Scheduling For Flow-Time with Admission Control (or, How to manage your to-do list), Nikhil Bansal Avrim Blum, Shuchi Chawla and Kedar Dhamdhere, in *European Symposium on Algorithms, ESA 2003*, pages 43–54.

[77] Online Oblivious Routing, Nikhil Bansal, Avrim Blum, Shuchi Chawla and Adam Meyerson, in *ACM Symposium on Parallel Algorithms and Architectures, SPAA 2003*, pages 44–49.

[78] Server Scheduling in the L_p Norm: A Rising Tide Lifts All Boat, Nikhil Bansal and Kirk Pruhs, in *ACM Symposium on Theory of Computing, STOC 2003*, pages 242–250.

[79] Capacity, Mobility and Delay in Wireless Ad hoc Networks, Nikhil Bansal and Zhen Liu, in conference of the *IEEE Computer and Communications Societies, IEEE INFOCOM 2003*,pages 1553–1563.

[80] Improving web Performance in Broadcast-Unicast Networks, Mukesh Agrawal, Amit Manjhi, Nikhil Bansal and Srinivasan Seshan, in *conference of the IEEE Computer and Communications Societies, IEEE INFOCOM 2003*, pages 229–239.

[81] Non-Clairvoyant Scheduling for Mean Slowdown, Nikhil Bansal, Kedar Dhamdhere, Jochen Konemann and Amitabh Sinha, in *Symposium on Theoretical Aspects of Computer Science, STACS 2003*, pages 260–270.

[82] Minimizing Weighted Flow Time, Nikhil Bansal and Kedar Dhamdhere, *in ACM-SIAM Symposium on Discrete Algorithms, SODA 2003*, pages 508–516.

[83] Correlation Clustering, Nikhil Bansal and Avrim Blum and Shuchi Chawla, *in Foundations of Computer Science, FOCS 2002*, pages 238–247.

[84] Bin-packing with fragile objects, with Zhen Liu and Arvind Sankar, *in 2nd IFIP International Conference on Theoretical Computer Science, TCS 2002*, pages 38–46.

[85] Analysis of SRPT Scheduling: Investigating Unfairness, Nikhil Bansal and Mor Harchol-Balter in *ACM SIGMETRICS/Performance 2001*, pages 279–290.

[86] SRPT Scheduling for Web Servers, Mor Harchol-Balter, Nikhil Bansal and Bianca Schroeder, in *Workshop on Job Scheduling Strategies for Parallel Processing, JSSPP 2001*, pages 11–20.

[87] Upper Bounds for MaxSat: Further Improved, Nikhil Bansal and Venkatesh Raman in *Tenth Annual International Symposium on Algorithms and Computation, ISAAC 99*, pages 247–258.

Journal Publications

[88] On the number of matroids. Nikhil Bansal, Rudi Pendavingh and Jorn van der Pol, *Combinatorica*, 35(3), 253-277, 2015.

[89] A Polylogarithmic-Competitive Algorithm for the k-Server Problem. Nikhil Bansal, Niv Buchbinder, Aleksander Madry and Joseph Naor, *Journal of the ACM, JACM*, 62(5), 2015.

[90] On the adaptivity gap of stochastic orienteering. Nikhil Bansal and Viswanath Nagarajan, *Math. Programming A*, 154(1-2), 145-172, 2015.

[91] Minimum Congestion Mapping in a Cloud. Nikhil Bansal, Kang-Won Lee, Viswanath Nagarajan and Murtaza Zafer, Siam Journal on Computing, 44(3), 819-843, 2015.

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