




Moses Charikar

Donald E. Knuth Professor and Professor, by courtesy, of Mathematics
Computer Science

 Curriculum Vitae available Online

Bio

BIO

Moses Charikar is the Donald E. Knuth professor of Computer Science at Stanford University. He obtained his PhD from Stanford in 2000, spent a year in the research group at Google, and was on the faculty at Princeton from 2001-2015.

His research interests include: efficient algorithmic techniques for processing, searching and indexing massive high-dimensional data sets; efficient algorithms for computational problems in high-dimensional statistics and optimization problems in machine learning; approximation algorithms for discrete optimization problems with provable guarantees; convex optimization approaches for non-convex combinatorial optimization problems; low-distortion embeddings of finite metric spaces.

He won the best paper award at FOCS 2003 for his work on the impossibility of dimension reduction, the best paper award at COLT 2017, the 10 year best paper award at VLDB 2017 and the 20 year test of time award at STOC 2022. He was jointly awarded the 2012 Paris Kanellakis Theory and Practice Award for his work on locality sensitive hashing, was named a Simons Investigator in theoretical computer science in 2014, and an ACM Fellow in 2021.

ACADEMIC APPOINTMENTS

- Professor, Computer Science
- Professor (By courtesy), Mathematics
- Member, Wu Tsai Human Performance Alliance

HONORS AND AWARDS

- ACM Fellow, ACM (2021)
- Paris Kanellakis Theory and Practice Award, ACM (2012)
- Simons Investigator in Theoretical Computer Science, Simons Foundation (2014)
- Alfred P. Sloan Fellowship, Sloan Foundation (2003)
- Distinguished Alumnus Award, IIT Bombay (2016)
- 20 year test of time award, STOC (2022)
- 10 year best paper award, VLDB (2017)
- Best paper award, COLT (2017)
- Best paper award, FOCS (2003)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Scientific Advisory Board Member, Simons Institute for the Theory of Computing (2015 - 2018)

- Director, Center for Computational Intractability (2012 - 2014)
- Member, SIGACT Committee for the Advancement of Theoretical Computer Science (2011 - 2017)
- Member, ACM-SIAM SODA steering committee (2010 - 2012)

PROFESSIONAL EDUCATION

- B.Tech., Indian Institute of Technology, Bombay , Computer Science and Engineering (1995)
- Ph.D., Stanford University , Computer Science (2000)

PATENTS

- Moses Charikar, Deepa Ramakrishna. "United States Patent 10,282,863 Lossless Compression of Fragmented Image Data", EMC Corporation, May 7, 2019
- Moses Charikar, Deepa Ramakrishna. "United States Patent 10,249,059 Lossless Compression of Fragmented Image Data", EMC Corporation, Apr 2, 2019
- Moses Charikar, Deepa Ramakrishna. "United States Patent 10,114,839 Format Identification for Fragmented Data", EMC Corporation, Oct 30, 2018
- Moses Charikar, Deepa Ramakrishna. "United States Patent 9,684,974 Lossless compression of fragmented image data", EMC Corporation, Jun 20, 2017
- Moses Charikar, Deepa Ramakrishna. "United States Patent 9,558,566 Lossless compression of fragmented image data", EMC Corporation, Jan 31, 2017
- Moses Charikar, Deepa Ramakrishna. "United States Patent 9,495,390 Format identification for fragmented image data", EMC Corporation, Nov 15, 2016
- Moses Charikar, Deepa Ramakrishna. "United States Patent 9,384,218 Format identification for fragmented image data", EMC Corporation, Jul 5, 2016
- Kai Li, Qin, Lv, Moses Charikar. "United States Patent 7966327B2 Similarity search system with compact data structures", The Trustees Of Princeton University, Jun 21, 2011
- Ran Canetti, Moses Charikar, Sridhar Rajagopalan, S. Ravikumar, Amit Sahai, Andrew Tomkins. "United States Patent US7222362B1 Non-transferable anonymous credentials", IBM, May 22, 2007
- Moses Charikar. "United States Patent US7158961 B1 Methods and apparatus for estimating similarity", Google, Inc, Dec 31, 2001

LINKS

- Google Scholar page: <https://scholar.google.com/citations?user=zX3ba1kAAAAJ>
- DBLP page: <https://dblp.uni-trier.de/pers/hd/c/Charikar:Moses>
- Semantic Scholar page: <https://www.semanticscholar.org/author/Moses-Charikar/1745732?sort=velocity>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Efficient algorithmic techniques for processing, searching and indexing massive high-dimensional data sets; efficient algorithms for computational problems in high-dimensional statistics and optimization problems in machine learning; approximation algorithms for discrete optimization problems with provable guarantees; convex optimization approaches for non-convex combinatorial optimization problems; low-distortion embeddings of finite metric spaces.

Teaching

COURSES

2023-24

- Artificial Intelligence: Principles and Techniques: CS 221 (Spr)
- Design and Analysis of Algorithms: CS 161 (Win)
- Machine Learning: CS 229, STATS 229 (Aut)

2022-23

- Artificial Intelligence: Principles and Techniques: CS 221 (Spr)
- Design and Analysis of Algorithms: CS 161 (Win)

- Machine Learning: CS 229, STATS 229 (Aut)

2021-22

- Algorithmic Techniques for Big Data: CS 368 (Spr)
- Design and Analysis of Algorithms: CS 161 (Win)
- Dynamic Data Structures for Graphs: CS 369Z (Aut)
- Machine Learning: CS 229, STATS 229 (Aut)

2020-21

- Design and Analysis of Algorithms: CS 161 (Win)
- Machine Learning: CS 229, STATS 229 (Spr)
- Problem-Solving Lab for CS161: CS 161A (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Jeff Z. HaoChen

Postdoctoral Faculty Sponsor

Kangning Wang

Doctoral Dissertation Co-Advisor (AC)

Ruiquan Gao, Lunjia Hu, Wenzheng Li, Prasanna Ramakrishnan

Master's Program Advisor

Andrew Lee, Pann Sripitak, Ramgopal Venkateswaran, Anthony Zhan, Styopa Zharkov

Doctoral (Program)

Chirag Pabbaraju, Aidan Perreault, Anna Thomas, June Vuong

Publications

PUBLICATIONS

- **Distributed algorithms from arboreal ants for the shortest path problem.** *Proceedings of the National Academy of Sciences of the United States of America*
Garg, S., Shiragur, K., Gordon, D. M., Charikar, M.
2023; 120 (6): e2207959120
- **A Characterization of List Learnability**
Charikar, M., Pabbaraju, C., Servedio, R. A., Saha, B.
ASSOC COMPUTING MACHINERY.2023: 1713-1726
- **p Local Density Estimation in High Dimensions** *MATHEMATICS OF OPERATIONS RESEARCH*
Wu, X., Charikar, M., Natchu, V.
2022
- **Multway Online Correlated Selection**
Blanc, G., Charikar, M., IEEE COMP SOC
IEEE COMPUTER SOC.2022: 1277-1284
- **Almost 3-Approximate Correlation Clustering in Constant Rounds**
Behnezhad, S., Charikar, M., Ma, W., Tan, L., IEEE Comp Soc
IEEE COMPUTER SOC.2022: 720-731

- **Approximation Algorithms for Orthogonal Non-negative Matrix Factorization**
Charikar, M., Hu, L., Banerjee, A., Fukumizu, K.
MICROTOME PUBLISHING.2021
- **Brief Announcement: A Randomness-efficient Massively Parallel Algorithm for Connectivity**
Charikar, M., Ma, W., Tan, L., ACM
ASSOC COMPUTING MACHINERY.2021: 431-433
- **CoopStore: Optimizing Precomputed Summaries for Aggregation** *PROCEEDINGS OF THE VLDB ENDOWMENT*
Gan, E., Bailis, P., Charikar, M.
2020; 13 (11): 2174–87
- **Retrieving Top Weighted Triangles in Graphs**
Kumar, R., Liu, P., Charikar, M., Benson, A. R., ACM
ASSOC COMPUTING MACHINERY.2020: 295–303
- **Institutions Share Successes, Failures, and Advice in Moving the Diversity Needle**
Garcia, D., Charikar, M., Hearn, E., Lazowska, E., Reynolds, J., ASSOC COMP MACHINERY
ASSOC COMPUTING MACHINERY.2020: 331-332
- **Unconditional Lower Bounds for Adaptive Massively Parallel Computation**
Charikar, M., Ma, W., Tan, L., ACM
ASSOC COMPUTING MACHINERY.2020: 141-151
- **Kernel Density Estimation through Density Constrained Near Neighbor Search**
Charikar, M., Kapralov, M., Nouri, N., Siminelakis, P., IEEE
IEEE.2020: 172-183
- **A General Framework for Symmetric Property Estimation**
Charikar, M., Shiragur, K., Sidford, A., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019
- **Multi-commodity Flow with In-Network Processing**
Charikar, M., Naamad, Y., Rexford, J., Zou, X., Disser, Y., Verykios, V. S.
SPRINGER INTERNATIONAL PUBLISHING AG.2019: 73-101
- **Rehashing Kernel Evaluation in High Dimensions**
Siminelakis, P., Rong, K., Bailis, P., Charikar, M., Levis, P., Chaudhuri, K., Salakhutdinov, R.
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2019
- **Sampling Methods for Counting Temporal Motifs**
Liu, P., Benson, A. R., Charikar, M., ACM
ASSOC COMPUTING MACHINERY.2019: 294–302
- **Efficient Profile Maximum Likelihood for Universal Symmetric Property Estimation**
Charikar, M., Shiragur, K., Sidford, A., Charikar, M., Cohen, E.
ASSOC COMPUTING MACHINERY.2019: 780–91
- **Multi-Resolution Hashing for Fast Pairwise Summations**
Charikar, M., Siminelakis, P., IEEE
IEEE COMPUTER SOC.2019: 769–92
- **Hierarchical Clustering for Euclidean Data**
Charikar, M., Chatziafratis, V., Niazadeh, R., Yaroslavtsev, G., Chaudhuri, K., Sugiyama, M.
MICROTOME PUBLISHING.2019
- **Recovery Guarantees For Quadratic Tensors With Sparse Observations**
Zhang, H., Sharan, V., Charikar, M., Liang, Y., Chaudhuri, K., Sugiyama, M.
MICROTOME PUBLISHING.2019

- **Efficient Density Evaluation for Smooth Kernels**
Backurs, A., Charikar, M., Indyk, P., Siminelakis, P., Thorup, M.
IEEE COMPUTER SOC.2018: 615–26
- **Hierarchical Clustering with Structural Constraints**
Chatziafratis, V., Niazadeh, R., Charikar, M., Dy, J., Krause, A.
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2018
- **Local Density Estimation in High Dimensions**
Wu, X., Charikar, M., Natchu, V., Dy, J., Krause, A.
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2018
- **Hashing-Based-Estimators for Kernel Density in High Dimensions**
Charikar, M., Siminelakis, P., IEEE
IEEE.2017: 1032–43
- **Learning from Untrusted Data**
Charikar, M., Steinhardt, J., Valiant, G., Hatami, H., McKenzie, P., King
ASSOC COMPUTING MACHINERY.2017: 47–60
- **Approximate Hierarchical Clustering via Sparsest Cut and Spreading Metrics**
Charikar, M., Chatziafratis, V., ACM
ASSOC COMPUTING MACHINERY.2017: 841–54
- **Local Guarantees in Graph Cuts and Clustering**
Charikar, M., Gupta, N., Schwartz, R., Eisenbrand, F., Koenemann, J.
SPRINGER INTERNATIONAL PUBLISHING AG.2017: 136–47
- **Avoiding Imposters and Delinquents: Adversarial Crowdsourcing and Peer Prediction**
Steinhardt, J., Valiant, G., Charikar, M., Lee, D. D., Sugiyama, M., Luxburg, U. V., Guyon, Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2016
- **Top-k Frequent Item Maintenance over Streams** *DATA STREAM MANAGEMENT: PROCESSING HIGH-SPEED DATA STREAMS*
Charikar, M., Garofalakis, M., Gehrke, J., Rastogi, R.
2016: 103–19
- **Spectral Embedding of k-Cliques, Graph Partitioning and k-Means**
Awasthi, P., Charikar, M., Krishnaswamy, R., Sinop, A., ACM
ASSOC COMPUTING MACHINERY.2016: 301–10
- **Targeted exploration and analysis of large cross-platform human transcriptomic compendia** *NATURE METHODS*
Zhu, Q., Wong, A. K., Krishnan, A., Aure, M. R., Tadych, A., Zhang, R., Corney, D. C., Greene, C. S., Bongo, L. A., Kristensen, V. N., Charikar, M., Li, K., Troyanskaya, et al
2015; 12 (3): 211-?
- **Relax, No Need to Round: Integrality of Clustering Formulations**
Awasthi, P., Bandeira, A. S., Charikar, M., Krishnaswamy, R., Villar, S., Ward, R., ACM
ASSOC COMPUTING MACHINERY.2015: 191–200
- **Smoothed Analysis of Tensor Decompositions**
Bhaskara, A., Charikar, M., Moitra, A., Vijayaraghavan, A., Assoc Comp Machinery
ASSOC COMPUTING MACHINERY.2014: 594–603
- **Online Bipartite Matching with Decomposable Weights**
Charikar, M., Henzinger, M., Nguyen, H. L., Schulz, A. S., Wagner, D.
SPRINGER-VERLAG BERLIN.2014: 260–71
- **A Dependent LP-Rounding Approach for the k-Median Problem**
Charikar, M., Li, S., Czumaj, A., Mehlhorn, K., Pitts, A., Wattenhofer, R.
SPRINGER-VERLAG BERLIN.2012: 194–205

- **On Quadratic Programming with a Ratio Objective**
Bhaskara, A., Charikar, M., Manokaran, R., Vijayaraghavan, A., Czumaj, A., Mehlhorn, K., Pitts, A., Wattenhofer, R.
SPRINGER-VERLAG BERLIN.2012: 109–20
- **Improved Approximation Algorithms for Label Cover Problems** *ALGORITHMICA*
Charikar, M., Hajiaghayi, M., Karloff, H.
2011; 61 (1): 190-206
- **BEATING THE RANDOM ORDERING IS HARD: EVERY ORDERING CSP IS APPROXIMATION RESISTANT** *SIAM JOURNAL ON COMPUTING*
Guruswami, V., Hastad, J., Manokaran, R., Raghavendra, P., Charikar, M.
2011; 40 (3): 878-914
- **Tight Hardness Results for Minimizing Discrepancy**
Charikar, M., Newman, A., Nikolov, A., SIAM, ACM
SIAM.2011: 1607–14
- **Near Linear Lower Bound for Dimension Reduction in $l(1)$**
Andoni, A., Charikar, M. S., Neiman, O., Nguyen, H. L., Ostrovsky, R.
IEEE COMPUTER SOC.2011: 315–23
- **FITTING TREE METRICS: HIERARCHICAL CLUSTERING AND PHYLOGENY** *SIAM JOURNAL ON COMPUTING*
Ailon, N., Charikar, M.
2011; 40 (5): 1275-1291
- **$l(2)(2)$ Spreading Metrics for Vertex Ordering Problems** *ALGORITHMICA*
Charikar, M., Hajiaghayi, M. T., Karloff, H., Rao, S.
2010; 56 (4): 577-604
- **LOCAL GLOBAL TRADEOFFS IN METRIC EMBEDDINGS** *SIAM JOURNAL ON COMPUTING*
Charikar, M., Makarychev, K., Makarychev, Y.
2010; 39 (6): 2487-2512
- **Vertex Sparsifiers and Abstract Rounding Algorithms**
Charikar, M., Leighton, T., Li, S., Moitra, A., IEEE Computer Society
IEEE COMPUTER SOC.2010: 265–74
- **Detecting High Log-Densities - an $O(n^{1/4})$ Approximation for Densest k -Subgraph**
Bhaskara, A., Charikar, M., Chlamtac, E., Feige, U., Vijayaraghavan, A., ACM
ASSOC COMPUTING MACHINERY.2010: 201–10
- **Near-Optimal Algorithms for Maximum Constraint Satisfaction Problems** *ACM TRANSACTIONS ON ALGORITHMS*
Charikar, M., Makarychev, K., Makarychev, Y.
2009; 5 (3)
- **Every Permutation CSP of arity 3 is Approximation Resistant** *PROCEEDINGS OF THE 24TH ANNUAL IEEE CONFERENCE ON COMPUTATIONAL COMPLEXITY*
Charikar, M., Guruswami, V., Manokaran, R.
2009: 62-73
- **Improved Approximation Algorithms for Label Cover Problems**
Charikar, M., Hajiaghayi, M., Karloff, H., Fiat, A., Sanders, P.
SPRINGER-VERLAG BERLIN.2009: 23–+
- **MaxMin Allocation via Degree Lower-bounded Arborescences** *STOC'09: PROCEEDINGS OF THE 2009 ACM SYMPOSIUM ON THEORY OF COMPUTING*
Bateni, M., Charikar, M., Guruswami, V.
2009: 543-552
- **Integrality Gaps for Sherali-Adams Relaxations** *STOC'09: PROCEEDINGS OF THE 2009 ACM SYMPOSIUM ON THEORY OF COMPUTING*
Charikar, M., Makarychev, K., Makarychev, Y.
2009: 283-292

- **Aggregating Inconsistent Information: Ranking and Clustering** *JOURNAL OF THE ACM*
Ailon, N., Charikar, M., Newman, A.
2008; 55 (5)
- **Online Multicast with Egalitarian Cost Sharing** *SPAA'08: PROCEEDINGS OF THE TWENTIETH ANNUAL SYMPOSIUM ON PARALLELISM IN ALGORITHMS AND ARCHITECTURES*
Charikar, M., Karloff, H., Mathieu, C., Naor, J. (., Saks, M.
2008: 70-76
- **Sizing Sketches: A Rank-Based Analysis for Similarity Search** *SIGMETRICS'07: PROCEEDINGS OF THE 2007 INTERNATIONAL CONFERENCE ON MEASUREMENT & MODELING OF COMPUTER SYSTEMS*
Wang, Z., Dong, W., Josephson, W., Lv, Q., Charikar, M., Li, K.
2007; 35 (1): 157-168
- **A Divide and Conquer Algorithm for d-Dimensional Arrangement**
Charikar, M., Makarychev, K., Makarychev, Y., SIAM/ACM
SIAM.2007: 541-46
- **Near-Optimal Algorithms for Maximum Constraint Satisfaction Problems**
Charikar, M., Makarychev, K., Makarychev, Y., SIAM/ACM
SIAM.2007: 62-68
- **On finding frequent elements in a data stream** *APPROXIMATION, RANDOMIZATION, AND COMBINATORIAL OPTIMIZATION: ALGORITHMS AND TECHNIQUES*
Charikar, M., Chen, K., Farach-Colton, M.
2007; 4627: 584-?
- **On the advantage over random for maximum acyclic subgraph** *48TH ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*
Charikar, M., Makarychev, K., Makarychev, Y.
2007: 625-633
- **Local global tradeoffs in metric embeddings** *48TH ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*
Charikar, M., Makarychev, K., Makarychev, Y.
2007: 713-723
- **Improved Approximation for Directed Cut Problems** *STOC 07: PROCEEDINGS OF THE 39TH ANNUAL ACM SYMPOSIUM ON THEORY OF COMPUTING*
Agarwal, A., Alon, N., Charikar, M.
2007: 671-680
- **Special issue on FOCS 2001 - Guest editor's foreword** *JOURNAL OF COMPUTER AND SYSTEM SCIENCES*
Charikar, M.
2006; 72 (5): 785
- **On the integrality ratio for the asymmetric traveling salesman problem** *MATHEMATICS OF OPERATIONS RESEARCH*
Charikar, M., Goemans, M. X., Karloff, H.
2006; 31 (2): 245-252
- **A Robust Maximum Completion Time Measure for Scheduling**
Charikar, M., Khuller, S., SIAM/ACM
SIAM.2006: 324-+
- **I(2)(2) Spreading Metrics For Vertex Ordering Problems**
Charikar, M., Hajiaghayi, M., Karloff, H., Rao, S., SIAM/ACM
SIAM.2006: 1018-+
- **Directed Metrics and Directed Graph Partitioning Problems**
Charikar, M., Makarychev, K., Makarychev, Y., SIAM/ACM
SIAM.2006: 51-60

- **Clustering with qualitative information** *JOURNAL OF COMPUTER AND SYSTEM SCIENCES*
Charikar, M., Guruswami, V., Wirth, A.
2005; 71 (3): 360-383
- **On the impossibility of dimension reduction in $l(1)$** *JOURNAL OF THE ACM*
Brinkman, B., Charikar, M.
2005; 52 (5): 766-788
- **The smallest grammar problem** *13th Annual ACM/SIAM Symposium on Discrete Algorithms*
Charikar, M., Lehman, E., Liu, D., Panigrahy, R., Prabhakaran, M., Sahai, A., Shelat, A.
IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2005: 2554-76
- **Improved combinatorial algorithms for facility location problems** *SIAM JOURNAL ON COMPUTING*
Charikar, M., Guha, S.
2005; 34 (4): 803-824
- **A Tight Threshold for Metric Ramsey Phenomena**
Charikar, M., Karagiozova, A., SIAM/ACM
SIAM.2005: 129-36
- **Fitting tree metrics: Hierarchical clustering and phylogeny** *46TH ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*
Ailon, N., Charikar, M.
2005: 73-82
- **Sampling bounds for stochastic optimization** *APPROXIMATION, RANDOMIZATION AND COMBINATORIAL OPTIMIZATION: ALGORITHMS AND TECHNIQUES*
Charikar, M., Chekuri, C., Pal, M.
2005; 3624: 257-269
- **Resource optimization in QoS multicast routing of real-time multimedia** *IEEE-ACM TRANSACTIONS ON NETWORKING*
Charikar, M., Naor, J., Schieber, B.
2004; 12 (2): 340-348
- **Clustering to minimize the sum of cluster diameters** *JOURNAL OF COMPUTER AND SYSTEM SCIENCES*
Charikar, M., Panigrahy, R.
2004; 68 (2): 417-441
- **Finding frequent items in data streams** *THEORETICAL COMPUTER SCIENCE*
Charikar, M., Chen, K., Farach-Colton, M.
2004; 312 (1): 3-15
- **Incremental clustering and dynamic information retrieval** *SIAM JOURNAL ON COMPUTING*
Charikar, M., Chekuri, C., Feder, T., Motwani, R.
2004; 33 (6): 1417-1440
- **The advantage of network coding for improving network throughput** *2004 IEEE INFORMATION THEORY WORKSHOP, PROCEEDINGS*
Agarwal, A., Charikar, M.
2004: 247-249
- **Minimizing wirelength in zero and bounded skew clock trees** *SIAM JOURNAL ON DISCRETE MATHEMATICS*
Charikar, M., Kleinberg, J., Kumar, R., Rajagopalan, S., Sahai, A., Tomkins, A.
2004; 17 (4): 582-595
- **On the integrality ratio for asymmetric TSP** *45TH ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*
Charikar, M., Goemans, M. X., Karloff, H.
2004: 101-107
- **Maximizing quadratic programs: extending Grothendieck's inequality** *45TH ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*

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- Charikar, M., Wirth, A.
2004: 54-60
- **On the impossibility of dimension reduction in $l(1)$** *44TH ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*
Brinkman, B., Charikar, M.
2003: 514-523
 - **Clustering with qualitative information** *44TH ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*
Charikar, M., Guruswami, V., Wirth, A.
2003: 524-533
 - **A constant-factor approximation algorithm for the k-median problem** *31st Annual ACM Symposium on Theory of Computing*
Charikar, M., Guha, S., Tardos, E., Shmoys, D. B.
ACADEMIC PRESS INC ELSEVIER SCIENCE.2002: 129-49
 - **Query strategies for priced information** *32nd Annual ACM Symposium on Theory of Computing*
Charikar, M., Fagin, R., Guruswami, V., Kleinberg, J., Raghavan, P., Sahai, A.
ACADEMIC PRESS INC ELSEVIER SCIENCE.2002: 785-819
 - **Algorithms for capacitated vehicle routing** *SIAM JOURNAL ON COMPUTING*
Charikar, M., Khuller, S., Raghavachari, B.
2002; 31 (3): 665-682
 - **New algorithms for subset query, partial match, orthogonal range searching, and related problems** *AUTOMATA, LANGUAGES AND PROGRAMMING*
Charikar, M., Indyk, P., Panigrahy, R.
2002; 2380: 451-462
 - **Dimension reduction in the $l(1)$ norm** *FOCS 2002: 43RD ANNUAL IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE, PROCEEDINGS*
Charikar, M., Sahai, A.
2002: 551-560
 - **On semidefinite programming relaxations for graph coloring and vertex cover** *PROCEEDINGS OF THE THIRTEENTH ANNUAL ACM-SIAM SYMPOSIUM ON DISCRETE ALGORITHMS*
Charikar, M.
2002: 616-620
 - **Finding frequent items in data streams** *AUTOMATA, LANGUAGES AND PROGRAMMING*
Charikar, M., Chen, K., Farach-Colton, M.
2002; 2380: 693-703
 - **Delayed information and action in on-line algorithms** *INFORMATION AND COMPUTATION*
Albers, S., Charikar, M., Mitzenmacher, M.
2001; 170 (2): 135-152
 - **On page migration and other relaxed task systems** *THEORETICAL COMPUTER SCIENCE*
Bartal, Y., Charikar, M., Indyk, P.
2001; 268 (1): 43-66
 - **Algorithms for facility location problems with outliers** *12th Annual ACM-SIAM Symposium on Discrete Algorithms*
Charikar, M., Khuller, S., Mount, D. M., Narasimhan, G.
SIAM.2001: 642-651
 - **Min-wise independent permutations** *30th Annual ACM Symposium on Theory of Computing*
Broder, A. Z., Charikar, M., Frieze, A. M., Mitzenmacher, M.
ACADEMIC PRESS INC ELSEVIER SCIENCE.2000: 630-59
 - **On-line load balancing for related machines** *JOURNAL OF ALGORITHMS*
Berman, P., Charikar, M., Karpinski, M.
2000; 35 (1): 108-121

- **Minimum outage transmission over fading channels with delay constraint** *IEEE International Conference on Communications (ICC 2000)*
Negi, R., Charikar, M., Cioffi, J.
IEEE.2000: 282–286
- **Approximation algorithms for directed Steiner problems** *JOURNAL OF ALGORITHMS-COGNITION INFORMATICS AND LOGIC*
Charikar, M., Chekuri, C., Cheung, T. Y., Dai, Z., Goel, A., Guha, S., Li, M.
1999; 33 (1): 73-91
- **Minimizing wirelength in zero and bounded skew clock trees** *10th Annual ACM-SIAM Symposium on Discrete Algorithms*
Charikar, M., Kleinberg, J., Kumar, R., Rajagopalan, S., Sahai, A., Tomkins, A.
SIAM.1999: 177–184
- **Approximating a finite metric by a small number of tree metrics** *39th Annual Symposium on Foundations of Computer Science*
Charikar, M., Chekuri, C., Goel, A., Guha, S., Plotkin, S.
IEEE COMPUTER SOC.1998: 379–388
- **Delayed information and action in on-line algorithms** *39th Annual Symposium on Foundations of Computer Science*
Albers, S., Charikar, M., Mitzenmacher, M.
IEEE COMPUTER SOC.1998: 71–80
- **The finite capacity dial-a-ride problem** *39th Annual Symposium on Foundations of Computer Science*
Charikar, M., Raghavachari, B.
IEEE COMPUTER SOC.1998: 458–467
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