

Sepehr Assadi

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- PROFESSIONAL EXPERIENCE
- ◇ **Assistant Professor**, **Rutgers University**, Department of Computer Science, September 2019 to present
 - ◇ **Postdoctoral Researcher**, **Princeton University**, Department of Computer Science, January 2019 to August 2019
 - Supported by the Simons Collaboration on Algorithms and Geometry.
 - ◇ **Summer intern at Google Research**, New York City, June 2017 to August 2017
- EDUCATION
- ◇ **PhD in Computer and Information Science**, **University of Pennsylvania**, Department of Computer and Information Science, August 2013 to December 2018
 - *Advisor:* Sanjeev Khanna
 - *Thesis:* Combinatorial Optimization on Massive Datasets: Streaming, Distributed, and Massively Parallel Computation
 - * *EATCS Distinguished Dissertation Award*
 - * *ACM-EATCS Principles of Distributed Computing Doctoral Dissertation Award*
 - * *Rubinoff Dissertation Award from University of Pennsylvania*
 - ◇ **B.Sc. in Computer Engineering**, **Sharif University of Technology**, Department of Computer Engineering, September 2008 to July 2013
 - *Thesis:* The Rectangle Escape Problem
 - *Thesis supervisor:* Hamid Zarrabi-Zadeh
- RESEARCH INTERESTS
- My primary research interest is in **theoretical foundations of big data analysis**. This in particular includes **sublinear algorithms and lower bounds** in various models of computation for processing massive datasets such as streaming, distributed communication, massively parallel computation, and sublinear time algorithms. More broadly, I am also interested in algorithmic graph theory, communication complexity, online algorithms, and algorithmic game theory.
- HONORS AND AWARDS
- ◇ **Keynote Speaker** at International Symposium on Distributed Computing, DISC 2022.
 - ◇ **Individual Fulcrum Award** from Rutgers Research Council, 2022.
 - ◇ **Google Research Scholar Program Award**, 2021.
 - ◇ National Science Foundation **Faculty Early Career Development (CAREER) Award**, 2020.
 - ◇ **Best Paper Award** at International Symposium on Distributed Computing, DISC 2020.
 - ◇ ACM-EATCS Principles of Distributed Computing **Doctoral Dissertation Award**, 2019.
 - ◇ **EATCS Distinguished Dissertation Award**, 2019.
 - ◇ **Rubinoff Dissertation Award**, University of Pennsylvania, 2019.
 - ◇ **Best Paper Award** at Symposium on Discrete Algorithms, SODA 2019.
 - ◇ **Best Paper Award** at Symposium on Parallelism in Algorithms and Architectures, SPAA 2017.
 - ◇ **Best Student Paper Award** at Symposium on Principles of Database Systems, PODS 2017.
 - ◇ **Best Paper Award** at Conference on Web and Internet Economics, WINE 2015.

- ◇ **Ranked 8th** in the Asia Regional ACM-ICPC Contest, Tehran, Iran, 2012.
- ◇ **Gold Medal** in the Scientific Olympiad for University Students in Computer Science, Iran, 2012.
- ◇ **Ranked 10th** in National Entrance Exam for M.Sc in Computer Science, Iran, 2010.

TEACHING

- ◇ **Graph Streaming Algorithms and Lower Bounds** (seminar – graduate level)
 - CS 671 – Rutgers University (Fall 2020)
- ◇ **Linear Programming** (graduate level)
 - CS 521 – Rutgers University (Fall 2022)
- ◇ **Design and Analysis Of Data Structures and Algorithms II** (graduate level)
 - CS 514 – Rutgers University (Spring 2020, Fall 2021)
- ◇ **Design and Analysis of Computer Algorithms** (undergraduate level)
 - CS 344 – Rutgers University (Fall 2019, Spring 2021, Spring 2022)

PROFESSIONAL ACTIVITIES ◇ **Program Committees:**

- IEEE Symposium on Foundations of Computer Science (FOCS 2023)
 - International Colloquium on Automata, Languages, and Programming (ICALP 2023)
 - ACM SIAM Symposium on Discrete Algorithms (SODA 2023)
 - International Conference on Database Theory (ICDT 2023)
 - International Conference on Randomization and Computation (RANDOM 2022)
 - European Symposium on Algorithms (ESA 2022)
 - ACM Symposium on Theory of Computing (STOC 2022)
 - ACM SIAM Symposium on Discrete Algorithms (SODA 2022)
 - SIAM Symposium on Simplicity in Algorithms (SOSA 2022)
 - ACM Symposium on Principles of Distributed Computing (PODC 2021)
 - ACM Symposium on Principles of Database Systems (PODS 2021)
 - International Colloquium on Automata, Languages, and Programming (ICALP 2020)
 - ACM SIAM Symposium on Discrete Algorithms (SODA 2020)
- ◇ **Junior Program Committees:**
- ACM Conference on Economics and Computation (EC 2021, EC 2022)
 - Conference on Learning Theory (COLT 2021, COLT 2020)
- ◇ **Guest Editorships:**
- Co-editor for SIAM Journal on Computing (SICOMP) special issue for STOC, 2022
 - Co-editor for ACM Transactions on Algorithms (TALG) special issue for SODA, 2020
- ◇ National Science Foundation Panel Service for AF – Algorithmic Foundations (2020, 2021)
 - ◇ External Reviewer for the Icelandic Research Fund (2021)
 - ◇ Guest Reviewer for SIGACT News, 2017 (review of SPAA 2017)
 - ◇ Organizer of Rutgers/DIMACS theory seminar: 2019 – present
- ◇ **Department Committees, Rutgers:**
- Faculty hiring committee: 2020-2021
 - Graduate committee: 2019 – present
 - PhD student admissions committee: 2019, 2020

- M.Sc student admissions committee: 2021, 2022

◇ **External Reviewer:**

- Journals:

- Journal of the ACM (JACM)
- SIAM Journal on Computing (SICOMP)
- ACM Transactions on Computation Theory (TOCT)
- ACM Transactions on Algorithms (TALG)
- Journal of Machine Learning Research (JMLR)
- IEEE Transactions on Parallel and Distributed Systems (TPDS)
- Theoretical Computer Science (TCS)

- Conferences:

- Symposium on Theory of Computing (STOC): 2015, 2018, 2019, 2020, 2021
- Symposium on Foundations of Computer Science (FOCS): 2018, 2019, 2020, 2021, 2022
- Symposium on Discrete Algorithms (SODA): 2017, 2018, 2019, 2021
- Computational Complexity Conference (CCC): 2020, 2021
- International Colloquium on Automata, Languages, and Programming (ICALP): 2016, 2017, 2018, 2019, 2021
- European Symposium on Algorithms (ESA): 2016, 2019, 2020, 2021
- Innovations in Theoretical Computer Science (ITCS): 2016, 2019, 2020, 2021, 2022
- Symposium on Principles of Distributed Computing (PODC): 2019, 2022
- International Symposium on Distributed Computing (DISC): 2020, 2021
- International Symposium on Theoretical Aspects of Computer Science (STACS): 2018, 2020, 2021
- Approximation, Randomization, and Combinatorial Optimization (APPROX-RANDOM): 2017, 2018, 2019, 2021

MENTORING ◇ **Postdocs at Rutgers/DIMACS:**

- Ariel Schwartzman (DIMACS postdoc, 2020 to 2022; now at Google Research)
- Nicole Wein (DIMACS postdoc, 2021 – present)
- Zihan Tan (DIMACS postdoc, 2022 – present)
- Prantar Ghosh (DIMACS postdocs, 2022 – present)

◇ **PhD Students at Rutgers:**

- Chen Wang (2019 – present)
- Vihan Shah (2020 – present)
- Janani Sundaresan (2021 – present)
- Parth Mittal (2021 – present)

◇ **Master Students at Rutgers:**

- Chaitanya Nalam (2020, now a PhD student at University of Michigan)

◇ **Undergraduate Students at Rutgers:**

- Hoai-an Nguyen (2021 – present)
- Sanjana Pendharkar (2020 – 2021)
- Polina Kochetova (2020, now a PhD student at Simon Fraser University)
- Vihan Shah (2020, now a PhD student at Rutgers)
- Manel Bermad (2020)

- Jakob Degen (2020)
- Arwa El-Hawwat (2019, now a MSc student at Rutgers)

◇ **DIMACS REU Students:**

- Liubov (Luba) Samborska (2022, Yale)
- Glenn Sun (2021, UCLA)
- Andrew Chen (2020, CMU, now a PhD student at Cornell)
- Parth Mittal (2020, Charles University Prague, now a PhD student at Rutgers)
- Pankaj Kumar (2020, Charles University Prague, now a PhD student at Charles University)

◇ **Visiting Undergraduate Students:**

- Nirmal Joshi (2020, VJTI Mumbai, now a PhD student at Northwestern)
- Milind Prabhu (2020, IIT Guwhati)

◇ **PhD Students Worked Closely with outside of Rutgers:**

- Soheil Behnezhad (University of Maryland, now an Assistant Professor at Northeastern)
- Raghuvansh Saxena (Princeton, now a postdoc at Microsoft Research New England)
- Sixue (Cliff) Liu (Princeton, now a postdoc at CMU)
- Yu Chen (University of Pennsylvania, now a postdoc at EPFL)

GRANTS

- ◇ National Science Foundation (NSF) CAREER award CCF-2047061: \$558,159
- ◇ Google Research Scholar Program Award: \$60,000

OUTREACH

- ◇ Annual lectures on “Algorithmic Thinking” given to high-school students at PACT, a summer program in Algorithmic and Combinatorial Thinking for high-school students, run by Prof. Rajiv Gandhi at Princeton (2018 – present)
- ◇ Mentoring undergraduate research as part of DIMACS REU program (4 students) and undergraduate independent studies and summer interns (8 students)
- ◇ Recipient of “Open and Affordable Textbook Program” award from Rutgers for developing affordable course materials for Algorithm Design course

JOURNAL PAPERS

- ◇ *Improved Truthful Mechanisms for Combinatorial Auctions with Submodular Bidders*
S. Assadi, S. Singla
Accepted to SIAM journal on Computing (SICOMP), 2022
Invited paper in the **special issue** for FOCS 2019 papers
- ◇ *Separating the Communication Complexity of Truthful and Non-Truthful Combinatorial Auctions*
S. Assadi, H. Khandeparkar, R. Saxena, M. Weinberg
Accepted to SIAM journal on Computing (SICOMP), 2022
Invited paper in the **special issue** for STOC 2020 papers
- ◇ *Tight Bounds for Single-Pass Streaming Complexity of the Set Cover Problem*
S. Assadi, S. Khanna, Y. Li
SIAM journal on Computing (SICOMP), 2021
Invited paper in the **special issue** for STOC 2016 papers
- ◇ *Combinatorial Auctions Do Need Modest Interaction*
S. Assadi
ACM Transactions on Economics and Computation (TEAC), 2020
Invited paper in the **special issue** for EC 2017 papers

- ◇ *The Stochastic Matching Problem with (Very) Few Queries*
S. Assadi, S. Khanna, Y. Li
ACM Transactions on Economics and Computation (TEAC), 2019
Invited paper in the **special issue** for EC 2016 papers
- ◇ *Fast Convergence in the Double Oral Auction*
S. Assadi, S. Khanna, Y. Li, R. Vohra
ACM Transactions on Economics and Computation (TEAC), 2018
Invited paper in the **special issue** for WINE 2015 and EC 2016 papers
- ◇ *On the Rectangle Escape Problem*
A. Ahmadinejad, S. Assadi, E. Emamjomeh-Zadeh, S. Yazdanbod, H. Zarrabi-Zadeh
Theoretical Computer Science (TCS), 2017
- ◇ *A Compile-Time Optimization Method for WCET Reduction in Real-Time Embedded Systems through Block Formation*
M. Mohajjel, M. Taram, S. Assadi, A. Ejlali
ACM Transactions on Architecture and Code Optimization (TACO), 2016
- ◇ *The Minimum Vulnerability Problem*
S. Assadi, E. Emamjomeh-Zadeh, A. Norouzi-Fard, S. Yazdanbod, H. Zarrabi-Zadeh
Algorithmica, 2014
Invited paper in the **special issue** for ISAAC 2012 papers

CONFERENCE
PAPERS

- ◇ *Generalizing Greenwald-Khanna Streaming Quantile Summaries for Weighted Inputs*
S. Assadi, N. Joshi, M. Prabhu, V. Shah
26th International Conference on Database Theory, **ICDT 2023**
- ◇ *Single-pass Streaming Lower Bounds for Multi-armed Bandits Exploration with Instance-sensitive Sample Complexity*
S. Assadi, C. Wang
36th Conference on Neural Information Processing Systems, **Neurips 2022**
- ◇ *Rounds vs Communication Tradeoffs for Maximal Independent Sets*
S. Assadi, G. Kol, Z. Zhang
The 63rd IEEE Symposium on Foundations of Computer Science, **FOCS 2022**
- ◇ *Asymptotically Optimal Bounds for Estimating H-Index in Sublinear Time with Applications to Subgraph Counting*
S. Assadi, H. Nguyen
Approximation, Randomization, and Combinatorial Optimization, **APPROX 2022**
- ◇ *Hierarchical Clustering in Graph Streams: Single-Pass Algorithms and Space Lower Bounds*
S. Assadi, V. Chatziafratis, J. Lacki, V. Mirrokni, C. Wang
35th Annual Conference on Learning Theory, **COLT 2022**
- ◇ *Decremental Matching in General Graphs*
S. Assadi, A. Bernstein, A. Dudeja
49th International Colloquium on Automata, Languages and Programming, **ICALP 2022**
- ◇ *Deterministic Graph Coloring in the Streaming Model*
S. Assadi, A. Chen, G. Sun
54rd ACM Symposium on Theory of Computing, **STOC 2022**

- ◇ *Brooks' Theorem in Graph Streams: A Single-Pass Semi-Streaming Algorithm for Δ -Coloring*
S. Assadi, P. Kumar, P. Mittal
54rd ACM Symposium on Theory of Computing, **STOC 2022**
- ◇ *SPINE: Scaling up Programming-by-Negative-Example for String Filtering and Transformation*
C. Zuo, S. Assadi, D. Deng
ACM International Conference on Management of Data, **SIGMOD 2022**
- ◇ *An Asymptotically Optimal Algorithm for Maximum Matching in Dynamic Streams*
S. Assadi, V. Shah
The 13th Innovations in Theoretical Computer Science, **ITCS 2022**
- ◇ *Sublinear Time and Space Algorithms for Correlation Clustering via Sparse-Dense Decompositions*
S. Assadi, C. Wang
The 13th Innovations in Theoretical Computer Science, **ITCS 2022**
- ◇ *A Two-Pass (Conditional) Lower Bound for Semi-Streaming Maximum Matching*
S. Assadi
The 33rd Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2022**
- ◇ *Semi-Streaming Bipartite Matching in Fewer Passes and Optimal Space*
S. Assadi, A. Jambulapati, Y. Jin, A. Sidford, K. Tian
The 33rd Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2022**
- ◇ *Ruling Sets in Random Order and Adversarial Streams*
S. Assadi, A. Dudeja
International Symposium on Distributed Computing, **DISC 2021**
- ◇ *On the Robust Communication Complexity of Bipartite Matching*
S. Assadi, S. Behnezhad
Approximation, Randomization, and Combinatorial Optimization, **RANDOM 2021**
- ◇ *Graph Connectivity and Single Element Recovery via Linear and OR Queries*
S. Assadi, D. Chakrabarty, S. Khanna
European Symposium on Algorithms, **ESA 2021**
- ◇ *Fully Dynamic Set Cover via Hypergraph Maximal Matching: An Optimal Approximation Through a Local Approach*
S. Assadi, S. Solomon
European Symposium on Algorithms, **ESA 2021**
- ◇ *Beating Two-Thirds for Random-Order Streaming Matching*
S. Assadi, S. Behnezhad
48th International Colloquium on Automata, Languages and Programming, **ICALP 2021**
- ◇ *Graph Streaming Lower Bounds for Parameter Estimation and Property Testing via a Streaming XOR Lemma*
S. Assadi, V. N
53rd ACM Symposium on Theory of Computing, **STOC 2021**
- ◇ *Improved Truthful Mechanisms for Subadditive Combinatorial Auctions: Breaking the Logarithmic Barrier*
S. Assadi, T. Kesselheim, S. Singla

The 32nd Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2021**

- ◇ *A Simple Semi-Streaming Algorithm for Global Minimum Cuts*
S. Assadi, A. Dudeja
The SIAM Symposium on Simplicity in Algorithms, **SOSA 2021**
- ◇ *An Auction Algorithm for Bipartite Matching in Streaming and Massively Parallel Computation Models*
S. Assadi, C. Liu, R. Tarjan
The SIAM Symposium on Simplicity in Algorithms, **SOSA 2021**
- ◇ *Near-Quadratic Lower Bounds for Two-Pass Graph Streaming Algorithms*
S. Assadi, R. Raz
The 61st IEEE Symposium on Foundations of Computer Science, **FOCS 2020**
- ◇ *Multi-Pass Graph Streaming Lower Bounds for Cycle Counting, MAX-CUT, Matching Size, and Other Problems*
S. Assadi, G. Kol, R. Saxena, H. Yu
The 61st IEEE Symposium on Foundations of Computer Science, **FOCS 2020**
- ◇ *Improved Bounds for Distributed Load Balancing*
S. Assadi, A. Bernstein, Z. Langley
International Symposium on Distributed Computing, **DISC 2020**
Best Paper Award
- ◇ *Palette Sparsification Beyond $(\Delta + 1)$ Vertex Coloring*
N. Alon, S. Assadi
Approximation, Randomization, and Combinatorial Optimization, **RANDOM 2020**
- ◇ *Lower Bounds for Distributed Sketching of Maximal Matchings and Maximal Independent Sets*
S. Assadi, G. Kol, R. Oshman
ACM Symposium on Principles of Distributed Computing, **PODC 2020**
- ◇ *Exploration with Limited Memory: Streaming Algorithms for Coin Tossing, Noisy Comparisons, and Multi-Armed Bandits*
S. Assadi, C. Wang
52nd ACM Symposium on Theory of Computing, **STOC 2020**
- ◇ *Separating the Communication Complexity of Truthful and Non-Truthful Combinatorial Auctions*
S. Assadi, H. Khandeparkar, R. Saxena, M. Weinberg
52nd ACM Symposium on Theory of Computing, **STOC 2020**
Invited to **SICOMP special issue** for STOC 2020 papers
- ◇ *Improved Truthful Mechanisms for Combinatorial Auctions with Submodular Bidders*
S. Assadi, S. Singla
60th Annual IEEE Symposium on Foundations of Computer Science, **FOCS 2019**
Invited to **SICOMP special issue** for FOCS 2019 papers
Invited to **Highlights Beyond EC** in EC'20
Invited research article in **SIGecom Exchanges**
- ◇ *Secretary Ranking with Minimal Inversions*
S. Assadi, E. Balkanski, R. Paes Leme
33rd Conference on Neural Information Processing Systems, **NeurIPS 2019**

- ◇ *Massively Parallel Algorithms for Finding Well-Connected Components*
S. Assadi, X. Sun, O. Weinstein
ACM Symposium on Principles of Distributed Computing, **PODC 2019**
- ◇ *Distributed Weighted Matching via Randomized Composable Coresets*
S. Assadi, M. Bateni, V. Mirrokni
36th International Conference on Machine Learning, **ICML 2019**
- ◇ *When Algorithms for Maximal Independent Set and Maximal Matching Run in Sublinear Time*
S. Assadi, S. Solomon.
46th International Colloquium on Automata, Languages and Programming, **ICALP 2019**
- ◇ *Distributed and Streaming Linear Programming in Low Dimensions*
S. Assadi, N. Karpov, Q. Zhang.
38th Annual ACM Symposium on Principles of Database Systems, **PODS 2019**
Invited to **TODS special issue** for PODS 2019 papers
- ◇ *Polynomial Pass Lower Bounds for Graph Streaming Algorithms*
S. Assadi, Y. Chen, S. Khanna.
51st ACM Symposium on Theory of Computing, **STOC 2019**
- ◇ *A Simple Sublinear-Time Algorithm for Counting Arbitrary Subgraphs via Edge Sampling*
S. Assadi, M. Kapralov, S. Khanna.
10th Innovations in Theoretical Computer Science, **ITCS 2019**
- ◇ *Sublinear Algorithms for $(\Delta + 1)$ Vertex Coloring*
S. Assadi, Y. Chen, S. Khanna.
30th Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2019**
Best Paper Award
Invited to Highlights of Algorithms, **HALG 2020**
- ◇ *Coresets Meet EDCS: Algorithms for Matching and Vertex Cover on Massive Graphs*
S. Assadi, M. Bateni, A. Bernstein, V. Mirrokni, C. Stein
30th Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2019**
- ◇ *Fully Dynamic Maximal Independent Set with Sublinear in n Update Time*
S. Assadi, K. Onak, B. Schieber, S. Solomon.
30th Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2019**
- ◇ *Stochastic Submodular Cover with Limited Adaptivity*
A. Agarwal, S. Assadi, S. Khanna.
30th Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2019**
- ◇ *Towards a Unified Theory of Sparsification for Matching Problems*
S. Assadi, A. Bernstein.
2nd Symposium on Simplicity in Algorithms, **SOSA 2019**
- ◇ *Fully Dynamic Maximal Independent Set with Sublinear Update Time*
S. Assadi, K. Onak, B. Schieber, S. Solomon.
50th Annual ACM Symposium on the Theory of Computing, **STOC 2018**
- ◇ *Tight Bounds on the Round Complexity of the Distributed Maximum Coverage Problem*
S. Assadi, S. Khanna.

29th Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2018**

- ◇ *Randomized Composable Coreset for Matching and Vertex Cover*
S. Assadi, S. Khanna
29th Annual ACM Symposium on Parallelism in Algorithms and Architectures, **SPAA 2017**
Best Paper Award (co-winner)
Invited to Highlights of Algorithms, **HALG 2018**
- ◇ *Learning with Limited Rounds of Adaptivity: Coin Tossing, Multi-Armed Bandits, and Ranking from Pairwise Comparisons*
A. Agarwal, S. Agarwal, S. Assadi, S. Khanna
30th Annual Conference on Learning Theory, **COLT 2017**
- ◇ *Combinatorial Auctions Do Need Modest Interaction*
S. Assadi
18th ACM Conference on Economics and Computation, **EC 2017**
Invited to **TEAC special issue** for EC 2017 papers
- ◇ *The Stochastic Matching Problem: Beating Half with a Non-Adaptive Algorithm*
S. Assadi, S. Khanna, Y. Li
18th ACM Conference on Economics and Computation, **EC 2017**
- ◇ *Tight Space-Approximation Tradeoff for the Multi-Pass Streaming Set Cover Problem*
S. Assadi
36th Annual ACM Symposium on Principles of Database Systems, **PODS 2017**
Best Student Paper Award
- ◇ *On Estimating Maximum Matching Size in Graph Streams*
S. Assadi, S. Khanna, Y. Li
28th Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2017**
Invited to Highlights of Algorithms, **HALG 2017**
- ◇ *Tight Bounds for Single-Pass Streaming Complexity of the Set Cover Problem*
S. Assadi, S. Khanna, Y. Li
48th Annual Symposium on the Theory of Computing, **STOC 2016**
Invited to **SICOMP special issue** for STOC 2016 papers
- ◇ *The Stochastic Matching Problem With (Very) Few Queries*
S. Assadi, S. Khanna, Y. Li
17th ACM Conference on Economics and Computation, **EC 2016**
Invited to **TEAC special issue** for EC 2016 papers
- ◇ *Algorithms for Provisioning Queries and Analytics*
S. Assadi, S. Khanna, Y. Li, V. Tannen
19th International Conference on Database Theory, **ICDT 2016**
- ◇ *Maximum Matchings in Dynamic Graph Streams and the Simultaneous Communication Model*
S. Assadi, S. Khanna, Y. Li, G. Yaroslavtsev
27th Annual ACM-SIAM Symposium on Discrete Algorithms, **SODA 2016**
- ◇ *Dynamic Sketching for Graph Optimization Problems with Applications to Cut-Preserving Sketches*
S. Assadi, S. Khanna, Y. Li, V. Tannen
35th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer

Science, **FSTTCS 2015**

- ◇ *Fast Convergence in the Double Oral Auction*
S. Assadi, S. Khanna, Y. Li, R. Vohra
11th Conference on Web and Internet Economics, **WINE 2015**
Best Paper Award
Invited to **TEAC special issue** for WINE 2015 and EC 2016 papers
- ◇ *Online Assignment of Heterogeneous Tasks in Crowdsourcing Markets*
S. Assadi, J. Hsu, S. Jabbari
3rd AAAI Conference on Human Computation & Crowdsourcing, **HCOMP 2015**
- ◇ *On The Rectangle Escape Problem*
S. Assadi, E. Emamjomeh-Zadeh, S. Yazdanbod, H. Zarrabi-Zadeh
25th Canadian Conference on Computational Geometry, **CCCG 2013**
- ◇ *The Minimum Vulnerability Problem*
S. Assadi, E. Emamjomeh-Zadeh, A. Norouzi-Fard, S. Yazdanbod, H. Zarrabi-Zadeh
23rd International Symposium on Algorithms and Computation, **ISAAC 2012**
Invited to **Algorithmica special issue** for ISAAC 2012 papers

INVITED
TALKS

- ◇ **Keynotes:**
 - 36th International Symposium on Distributed Computing (DISC 2022), Keynote speaker, October 2022
- ◇ **Workshops and Other Events:**
 - Workshop on Advances in Distributed Graph Algorithms, “*Lower Bounds for Distributed Sketching*”, October 2022
 - Simons-DIMACS Workshop on Lower Bounds and Frontiers in Data Structures, “*Tight Bounds for Monotone Minimal Perfect Hashing*”, August 2022
 - FODSI Workshop on Sublinear Algorithms, “*A (Slightly) Sublinear Space Streaming Algorithm for Matchings*”, August 2022
 - Banff Workshop on Communication Complexity and Applications III, “*Recent Advances in Multi-Pass Graph Streaming Lower Bounds*”, July 2022
 - Workshop on Algorithms and Foundations for Data Science, “*Brooks’ Theorem in Graph Streams*”, June 2022
 - Workshop on Algorithms for Large Data (Online), WALDO 2021, “*Multi-Pass Graph Streaming Lower Bounds for Parameter Estimation and Property Testing Problems*”, August 2021
 - INFORMS Session on Bandits Meet Optimization, “*Exploration with Limited Memory: Streaming Algorithms for Multi-Armed Bandits*”, November 2020
 - Highlights of Algorithm Conference, “*Sublinear Algorithms for $(\Delta + 1)$ Vertex Coloring*”, August 2020
 - New York Area Theory Day, “*Sublinear Algorithms for $(\Delta + 1)$ Vertex Coloring*”, May 2019
 - Simons Institute meeting on Algorithms and Geometry Collaboration, “*Sublinear Algorithms for $(\Delta + 1)$ Vertex Coloring*”, February 2019
 - Simons Institute workshop on Sublinear Algorithms and Nearest-Neighbor Search, “*Sublinear Algorithms for $(\Delta + 1)$ Vertex Coloring*”, November 2018
 - Linear Sketching as a Tool for Everything workshop at FOCS’17, “*Lower Bounds for Linear Sketches of Approximate Matchings and Matrix Rank*”, October 2017
- ◇ **Seminars and Colloquia:**

- MIT Algorithms and Complexity Seminar, “*Deterministic Graph Coloring in the Streaming Model*”, March 2022
- Rutgers Discrete Math Seminar, “*Palette Sparsification for Vertex Coloring*”, October 2021
- University of Washington Theory Seminar, “*Multi-Pass Graph Streaming Lower Bounds for Parameter Estimation and Property Testing Problems*”, April 2020
- Rutgers/DIMACS Theory Seminar, “*Improved Truthful Mechanisms for Combinatorial Auctions with Submodular Bidders*”, September 2019
- MIT Theory of Computation Colloquium, “*Sublinear Algorithms for $(\Delta+1)$ Vertex Coloring*”, May 2019
- Cornell CS Theory Seminar, “*Sublinear Algorithms for $(\Delta + 1)$ Vertex Coloring*”, May 2019
- Google NYC Research Seminar, “*Sublinear Algorithms for $(\Delta + 1)$ Vertex Coloring*”, April 2019
- Princeton Theory Seminar, “*Polynomial Pass Lower Bounds in Graph Streams*”, April 2019
- Rutgers/DIMACS Theory Seminar, “*Polynomial Pass Lower Bounds in Graph Streams*”, March 2019
- TCS+ Online Seminar, “*A Simple Sublinear-Time Algorithm for Counting Arbitrary Subgraphs via Edge Sampling*”, February 2019
- Indiana Theory Seminar, “*Tight Bounds on the Round Complexity of the Distributed Maximum Coverage Problem*”, November 2017
- Columbia Theory Seminar, “*Tight Bounds on the Round Complexity of the Distributed Maximum Coverage Problem*”, October 2017
- IBM Watson Research Seminar, “*Randomized Composable Coreset for Matching and Vertex Cover*”, September 2017
- Google NYC Research Seminar, “*Learning with Limited Rounds of Adaptivity*”, July 2017
- Upenn Theory Seminar, “*Combinatorial Auctions Do Need Modest Interaction*”, April 2017
- Johns Hopkins Algorithms and Complexity Seminar, “*Matching Size and Matrix Rank Estimation in Data Streams*”, April 2017
- Google NYC Research Seminar, “*Tight Bounds for Single-Pass Streaming Complexity of the Set Cover Problem*”, November 2016
- Columbia Theory Seminar, “*Tight Bounds for Linear Sketches of Approximate Matchings*”, January 2016
- Upenn Theory Seminar, “*Tight Bounds for Linear Sketches of Approximate Matchings*”, January 2016