CURRICULUM VITAE

RASMUS KYNG

NOVEMBER 2026

CONTACT

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ACADEMIC POSITIONS

ETH Zurich, Department of Computer Science	Zurich, Switzerland
Associate Professor, tenured	2026–present
Assistant Professor, tenure track	Fall 2019–2026
Harvard University, Theory of Computation Group at SEAS	Cambridge, U.S.A.
Postdoctoral Fellow	Spring 2018–Spring 2019
UC Berkeley, Simons Institute for Theoretical Computer Science	Berkeley, U.S.A.
Postdoctoral Research Fellow	Fall 2017

EDUCATION

Yale University, Department of Computer Science	New Haven, U.S.A.
Ph.D.	2011–2017
University of Cambridge, Department of Computer Science	Cambridge, United Kingdom
BA Hons Computer Science, First Class Honors	2008–2011
Risskov Gymnasium, upper secondary school	Aarhus, Denmark
Highest GPA in national exams	2005–2008

AWARDS

FOCS Test of Time Award	2026
The ETH Zurich Latsis Prize	2025
ICBS Frontiers of Science Award: Best papers in theoretical computer science ‘18-‘22	2023
The FOCS Best Paper Award	2022
The FOCS Machtey Award for Best Student Paper	2017
Simons Institute Postdoctoral Research Fellowship	2017

GRANTS

Swiss National Science Foundation Starting Grant[1]	2024-2030
1.8 mio. CHF, grant no. TMSGI2 218022	
Title: A New Paradigm for Flow and Cut Algorithms	
Swiss National Science Foundation Project Grant	2021-2025
682 kCHF, grant no. 200021 204787	
Title: Algorithms and Complexity for High-Accuracy Flows and Convex Optimization	

NEWS COVERAGE

Quanta Magazine: “Researchers Achieve ‘Absurdly Fast’ Algorithm for Network Flow”
CACM: “Maximum Flow Through a Network: A Storied Problem and a Groundbreaking Solution”
ETH News: “Researchers at ETH Zurich develop the fastest possible flow algorithm”
The Simons Institute Newsletter: “Theory at the Institute and Beyond”
ETH News: “How randomness tames vast network problems”

CURRENT GROUP

Maximilian Probst Gutenberg, Senior Scientist	Fall 2020–present
Aurelio Sulser, Ph.D. candidate	Fall 2022–present
Wuwei Yuan, direct doctoral candidate	Fall 2024–present
Weixuan Yuan, Ph.D. candidate	Spring 2025–present
Christoph Grunau, postdoc	Spring 2025–present
Gernot Zöcklein, Ph.D. candidate	Fall 2025–present
Yves Baumann, Ph.D. candidate	Fall 2025–present
Ioannis Dorkofikis, Ph.D. candidate	Fall 2025 –present
Haocheng Wang, intern	Fall 2025–present

GROUP ALUMNI

Simon Meierhans, Ph.D. → Google Research Zurich	Fall 2021–2026
Ming Ding, Ph.D. → Quant Researcher at QRT	Fall 2020–Spring 2025
Tianyi Zhang, postdoc → Associate Professor at Nanjing University	2024–2025
Federico Soldà, Ph.D.	Fall 2020–Fall 2024
Abdolahad Zehmankan, postdoc → APTT at ANU	Spring 2020–Fall 2020
Silvia Casacuberta, predoc intern → Oxford MSc, Stanford PhD	Summer 2020–Fall 2020
Pratyai Mazumder, predoc intern → ETH PhD	Fall 2023–Spring 2024

ITS FELLOW AFFILIATES

Shunhua Jiang, Junior Fellow	Spring 2026–present
Sorrachai Yingchareonthawornchai, Junior Fellow	Spring 2025–present

ITS ALUMNI

Deeksha Adil, Junior Fellow → Assistant Professor at TIFR, Mumbai	2023–2026
Weiming Feng, Junior Fellow → Assistant Professor at HKU	2024–2025

SELECTED GROUP AWARDS

Simon Meierhans: ETH Medal for doctoral thesis; ETH Medal for MSc thesis; Google PhD Fellowship 2024
Silvia Casacuberta: CRA Outstanding Undergraduate Research Award

[1] Switzerland was excluded from the ERC for a period of time and introduced this as a replacement.

EXTENDED CV CONTENTS

CURRICULUM VITAE **1**
- ACADEMIC POSITIONS, EDUCATION, AWARDS, & NEWS; GROUP MEMBERS, ALUMNI, & ITS AFFILIATES . . . 1

TALKS **3**
- INVITED TALKS AND PEER-REVIEWED CONFERENCE PRESENTATIONS 3

COMMUNITY INVOLVEMENT **6**
- ACADEMIC SERVICE 6
- CONFERENCE AND WORKSHOP ORGANIZING 6
- ETH SERVICE 6
- RESEARCH SEMINARS 6
- INTERDISCPLINARY CENTERS 6

PUBLICATIONS **7**
- REFEREED CONFERENCE PUBLICATIONS 7
- REFEREED JOURNAL PUBLICATIONS 9
- DOCTORAL THESIS 9

TALKS

INVITED TALKS AND PEER-REVIEWED CONFERENCE PRESENTATIONS

INSAIT October 2026
Towards a Universal Theory of Acceleration in Convex Optimization

ITS Chalk&Cheese, ETH Zurich September 2026
Towards a Universal Theory of Acceleration in Convex Optimization

SIAM Conference on Optimization (SIAM OP), Edinburgh 2026
Almost-Linear Time Algorithms for Partially Dynamic Graphs

The Simons Institute Program on Complexity Linear Algebra 2025
A Tutorial on Approximate Cholesky Factorization

Cargese Workshop on Combinatorial Optimization 2025
A Course on Almost-Linear Time Algorithms for Partially Dynamic Graphs

MFCS Invited Plenary Talk, Warsaw 2025
Almost-Linear Time Algorithms for Partially Dynamic Graphs

Data Structures and Optimization for Fast Algorithms Reunion Workshop 2025
The Simons Institute, UC Berkeley
Almost-Linear Time Algorithms for Partially Dynamic Graphs

Oberwolfach Combinatorial Optimization Workshop November 2024
Almost-Linear Time Algorithms for Partially Dynamic Graphs

Informal Blackboard Talks, the Simons Institute, UC Berkeley November 2023
Almost-Linear Time Algorithms for Incremental Graphs:
Cycle Detection, SCCs, s-t Shortest Path, and Minimum-Cost Flow

Georgia Tech College of Computing Seminar September 2023
Robust and Practical Solution of Laplacian Equations
by Approximate Elimination

ICALP Invited Plenary Talk July 2023
An Almost-Linear Time Algorithm for Maximum Flow and More

DIMACS Workshop on Modern Techniques in Graph Algorithms June 2023
Tutorial: Maximum Flow and Minimum-Cost Flow in Almost-Linear Time

Highlights of Algorithms (HALG), Prague June 2023
Maximum Flow and Minimum-Cost Flow in Almost-Linear Time

Dagstuhl Seminar on Scalable Data Structures June 2023
Dynamic Spanners

Perspectives on Matrix Computations:
Theoretical Computer Science Meets Numerical Analysis January 2023
BIRS Workshop
Robust and Practical Solution of Laplacian Equations
by Approximate Elimination

EPFL & ETHZ Swiss Winter School
on Theoretical Computer Science January 2023
Lecture series: Maximum Flow and Minimum-Cost Flow in Almost-Linear Time

Columbia University Theory Seminar 2022
Maximum Flow and Minimum-Cost Flow in Almost-Linear Time

Yale University Department of Computer Science Colloquium 2022
Maximum Flow and Minimum-Cost Flow in Almost-Linear Time

Bernoulli Center Workshop: Modern
Trends in Combinatorial Optimization 2022
EPFL
Maximum Flow and Minimum-Cost Flow in Almost-Linear Time

Milan Theory Workshop: Spectral and Convex Optimization
Techniques in Graph Algorithms 2022
Bocconi University
Maximum Flow and Minimum-Cost Flow in Almost-Linear Time

Algorithms and Foundations for Data Science Workshop 2022
CMU/Nanyang Technological University
Scalar and Matrix Chernoff Bounds from ℓ_∞-Independence

European Meeting on Algorithmic Challenges of Big Data 2022
University of Warwick/University of Warsaw
Almost-Linear Time Algorithms for Maximum Flow and More

TCS+ Talk 2022
Almost-Linear Time Algorithms for Maximum Flow and More

Approximation and Relaxation Workshop 2021
Hausdorff Program on Discrete Optimization
Two-Commodity Flow is as Hard as Linear Programming

INFORMS Session on Bridging Discrete and Continuous Optimization 2021
A Numerical Analysis Approach to Convex Optimization

Continuous Approaches to Discrete Optimization Workshop 2021
Hausdorff Program on Discrete Optimization
A Numerical Analysis Approach to Convex Optimization

Complexity of Matrix Computations Panel 2021
NCSU/UC Berkeley/University of Oxford/Cornell/Caltech
Laplacian solvers

Workshop on Algorithms for Large Data (WALD(O)) 2021
CMU/Google Research
Hardness Results for Structured Linear Equations and Programs

Max Planck Advanced Course on the Foundations of Computer Science (ADFOCS) 2021
Graphs, Sampling, and Iterative methods (three lectures)

SIAM Annual Meeting 2021
Two-Commodity Flow is as Hard as Linear Programming

Georgetown University Computer Science Colloquium 2021
A Numerical Analysis Approach to Convex Optimization

Hebrew University Theory Seminar 2021
A Numerical Analysis Approach to Convex Optimization

EPFL Theory Seminar 2020
A Numerical Analysis Approach to Convex Optimization

ICCOPT, Berlin 2019
Optimization on Graphs

Workshop on Fine Grained Approximation Algorithms & Complexity, Bertinoro 2019
Hardness Results for Structured Linear Systems

UT Austin Theory Seminar 2019
A Numerical Analysis Approach to Convex Optimization

Harvard Theory of Computation Seminar 2019
A Numerical Analysis Approach to Convex Optimization

Beyond Randomized Rounding and the Probabilistic Method Workshop, 2019
Geometry of Polynomials Program at the Simons Institute, UC Berkeley
A Matrix Chernoff Bound for Strongly Rayleigh Distributions
and Spectral Sparsifiers from a few Random Spanning Trees

SODA, San Diego 2019
Iterative Refinement for ℓ_p-norm Regression

Bridging Continuous and Discrete Optimization Reunion Workshop 2018
The Simons Institute, UC Berkeley
Iterative Refinement for ℓ_p-norm Regression

Caltech Theory Seminar 2018
Approximate Gaussian Elimination

Northwestern Quarterly Theory Workshop 2018
Analysis Using Matrix Martingales

FOCS, Paris 2018
A Matrix Chernoff Bound for Strongly Rayleigh Distributions
and Spectral Sparsifiers from a few Random Spanning Trees

FOCS, Paris 2018
Solving Directed Laplacians in Nearly Linear Time through Sparse LU Factorizations

Laplacians 2.0 Workshop, FOCS, Paris 2018
Analysis Using Matrix Martingales

Randomized Numerical Linear Algebra and Applications Workshop, 2018
Foundations of Data Science Program at the Simons Institute, UC Berkeley
Matrix Martingales in Randomized Numerical Linear Algebra

High-Performance Graph Algorithms Seminar, Dagstuhl 2018
Optimization on Graphs

Discrepancy and Integer Programming Workshop, CWI Amsterdam 2018
Matrix Approximation by Row Sampling

Graphs Across Domains Workshop, UC Berkeley 2018
Optimization on Graphs

Michael Cohen Memorial Symposium, the Simons Institute, UC Berkeley 2017
Michael Cohen and Directed Laplacians

Stanford Theory Seminar 2017
Approximate Gaussian Elimination

FOCS, Berkeley 2017
Hardness Results for Structured Linear Systems

UC Berkeley Theory Seminar 2017
Hardness Results for Structured Linear Systems

Google Research Seminar, Mountain View 2017
Hardness Results for Structured Linear Systems

Yale Department of Statistics and Data Science, YPNG Seminar 2017
Approximate Gaussian Elimination

MSR Redmond 2017
Regression, Elimination, and Sampling on Graphs

University of Copenhagen Theory Seminar 2017
Approximate Gaussian Elimination

CMU Theory Seminar 2016
Approximate Gaussian Elimination

Georgia Tech Theory Seminar 2016
Approximate Gaussian Elimination

Princeton University October 2016
Approximate Gaussian Elimination

UC Berkeley Math Dept. Seminar 2016
Approximate Gaussian Elimination

Google Research NYC 2016
Approximate Gaussian Elimination

FOCS, New Brunswick 2016
Approximate Gaussian Elimination

MIT A&C Seminar 2016
Approximate Gaussian Elimination

Aarhus University Theory Seminar 2016
Lipschitz Learning on Graphs

China Theory Week, Hong Kong 2016
Approximate Gaussian Elimination

SIAM Annual Meeting, Boston 2016
Approximate Cholesky Factorization

STOC, Boston 2016
Sparsified Cholesky and Multigrid Solvers for Connection Laplacians

IT University of Copenhagen Theory Seminar 2015
Lipschitz Learning and Isotonic Regression on Graphs

COMMUNITY INVOLVEMENT

ACADEMIC SERVICE

Program committee memberships
Symposium on Theory of Computing (STOC): 2022, 2023, 2025, 2026, 2027
Innovations in Theoretical Computer Science (ITCS): 2020, 2027
Symposium on Discrete Algorithms (SODA): 2023, 2024, 2026
International Colloquium on Automata, Languages and Programming (ICALP): 2024
Symposium on Simplicity in Algorithms (SOSA): 2022, 2024
European Symposium on Algorithms (ESA): Track A, 2021; Track S, 2022
Reviewer, ERC Consolidator Grant: 2024
Conference reviews, 2027 (ongoing/upcoming): STOC, ITCS, SODA, SOSA
Conference reviews, 2026: STOC, SODA, ICALP
Conference reviews, 2025: STOC, FOCS, SODA, ITCS, ICALP
Conference reviews, 2024: STOC, ITCS, SODA, FOCS, SPAA, ICALP, SOSA
Journal reviews, 2023: SICOMP, JACM
Conference reviews, 2023: FOCS, STOC, SODA, SOSA
Journal reviews, 2022: Journal of Fourier Analysis and Applications, ACM Transactions on Computation Theory
Conference reviews, 2022: STOC, ICALP, FOCS, ESA, SODA, ITCS, SOSA
Conference reviews, 2021: RANDOM, FOCS, SODA, ESA, SOSA
Journal reviews, 2020: JACM
Conference reviews, 2020: ITCS, STOC, FOCS, ISAAC, SODA, ICALP
Journal reviews, 2019: ToC
Conference reviews, 2019: COLT, ICALP, FOCS, STOC, ITCS, SODA, SOSA
Conference reviews, 2018: SODA
Conference reviews, 2017: ICALP, APPROX, RANDOM, FOCS

CONFERENCE AND WORKSHOP ORGANIZING

Local Chair, Highlights of Algorithms (HALG) 2025

EFPL & ETHZ Swiss Winter School on Theoretical Computer Science — January 2025
EFPL & ETHZ Swiss Winter School on Theoretical Computer Science — January 2024

Venice Workshop on High-Dim. and Complex Data Algorithms — May 2025

Workshop: Linear Systems and Eigenvalue Problems — Fall 2025
UC Berkeley Simons Institute Program
on Complexity and Linear Algebra

Workshop: Optimization and Algorithm Design — Fall 2023
UC Berkeley Simons Institute Program
on Data Structures and Optimization for Fast Algorithms

ETH SERVICE

D-INFK Strategy Commission — Spring 2024–Fall 2026
Board of the Institute for Theoretical Studies — Fall 2024–Spring 2029
ETH Hiring Commissions — Fall 2023 (direct hire), Spring 2024
ETH Research Commission — Spring 2023
D-INFK Teaching Commission — Spring 2020-Fall 2021, Spring 2025–present

RESEARCH SEMINARS

ETH Zurich Algorithms and Complexity Seminar — Fall 2020–present

INTER-DISCIPLINARY CENTERS

Member of the Foundations of Data Science Seminar — Fall 2020–present

PUBLICATIONS

As is customary in the field of theoretical computer science, authors are listed alphabetically by surname. Members of my group (at the time of writing the paper) in **bold**.

REFEREED CONFERENCE PUBLICATIONS

1 *Back in the Saddle: Toward Parallel Approximate Minimum-Cost Flow*
R. Kyng and **A. L. Sulser**
International Colloquium on Automata, Languages and Programming (ICALP) 2026

2 *Deterministic Almost-Linear-Time Gomory-Hu Trees*
A. Abboud, **R. Kyng**, J. Li, D. Panigrahi, **M. Probst**, T. Saranurak, **W. Yuan**, and **W. Yuan**
IEEE Symposium on Foundations of Computer Science (FOCS) 2025

3 *Random-Shift Revisited: Tight Approximations for Tree Embeddings and ℓ_1-Oblivious Routings*
R. Kyng, **M. Probst**, and **T. Rieder**
IEEE Symposium on Foundations of Computer Science (FOCS) 2025

4 *Bootstrapping Dynamic APSP via Sparsification*
R. Kyng, **S. Meierhans**, and **G. Zöcklein**
European Symposium on Algorithms (ESA) 2025

5 *Acceleration Meets Inverse Maintenance: Faster ℓ_∞-Regression*
D. Adil, S. Jiang, and **R. Kyng**
EATCS International Colloquium on Automata (ICALP) 2025

6 *A Simple Dynamic Spanner via APSP*
R. Kyng, **S. Meierhans**, and **G. Zöcklein**
EATCS International Colloquium on Automata (ICALP) 2025

7 *Almost-Linear Time Algorithms for Decremental Graphs:*
Min-Cost Flow and More via Duality
J. Brand, L. Chen, **R. Kyng**, Y. Liu, **S. Meierhans**, **M. Probst**, and S. Sachdeva
IEEE Symposium on Foundations of Computer Science (FOCS) 2024
Featured in ETH News

8 *Almost-Linear Time Algorithms for Incremental Graphs:*
Cycle Detection, SCCs, s-t Shortest Path, and Minimum-Cost Flow
L. Chen, **R. Kyng**, Y. Liu, **S. Meierhans**, and **M. Probst**
ACM SIGACT Symposium on Theory of Computing (STOC) 2024
Featured in the Simons Institute Newsletter and ETH News

9 *A Dynamic Shortest Paths Toolbox:*
Low-Congestion Vertex Sparsifiers and their Applications
R. Kyng, **S. Meierhans**, and **M. Probst**
ACM SIGACT Symposium on Theory of Computing (STOC) 2024

10 *Optimal Electrical Oblivious Routing on Expanders*
C. Florescu, **R. Kyng**, **M. Probst**, and S. Sachdeva
EATCS International Colloquium on Automata,
Languages and Programming (ICALP) 2024

11 *A Framework for Parallelizing Approximate Gaussian Elimination*
Y. Baumann and **R. Kyng**
ACM Symposium on Parallelism in Algorithms and Architectures (SPAA) 2024

12 *Incremental Approximate Maximum Flow on Undirected Graphs*
in Subpolynomial Update Time
J. Brand, L. Chen, **R. Kyng**, Y. Liu, R. Peng, **M. Probst**, S. Sachdeva, and A. Sidford
ACM-SIAM Symposium on Discrete Algorithms (SODA) 2024

13 *A Deterministic Almost-Linear Time Algorithm for Minimum-Cost Flow*
J. Brand, L. Chen, **R. Kyng**, Y. Liu, R. Peng, **M. Probst**, S. Sachdeva, and A. Sidford
IEEE Symposium on Foundations of Computer Science (FOCS) 2023

14 *Maintaining Expander Decompositions via Sparse Cuts*
Y. Hua, **R. Kyng**, **M. Probst**, and **Z. Wu**.
ACM-SIAM Symposium on Discrete Algorithms (SODA) 2023

15 *A Simple Framework for Finding Balanced Sparse Cuts via APSP*
L. Chen, **R. Kyng**, **M. Probst**, and S. Sachdeva.
SIAM Symposium on Simplicity in Algorithms (SOSA) 2023

16 *Maximum Flow and Minimum-Cost Flow in Almost-Linear Time*
L. Chen, **R. Kyng**, Y. Liu, R. Peng, **M. Probst**, and S. Sachdeva
IEEE Symposium on Foundations of Computer Science (FOCS) 2022
Won the FOCS Best Paper Award and ICBS Best Paper 2018-2022 Award
Featured in Quanta Magazine, CACM, the Simons Institute Newsletter, and ETH News
Invited to Highlights of Algorithms (HALG) 2023

17 *Derandomizing Random Walks in Almost-Linear Time*
R. Kyng, **S. Meierhans**, and **M. Probst**
IEEE Symposium on Foundations of Computer Science (FOCS) 2022

18 *Scalar and Matrix Chernoff Bounds from ℓ_∞-Independence*
T. Kaufman, **R. Kyng**, and **F. Solda**
ACM-SIAM Symposium on Discrete Algorithms (SODA) 2022

19 *Incremental SSSP for Sparse Digraphs Beyond the Hopset Barrier*
R. Kyng, **S. Meierhans**, and **M. Probst**
ACM-SIAM Symposium on Discrete Algorithms (SODA) 2022

20 *Two-Commodity Flow is as Hard as Linear Programming*
M. Ding, **R. Kyng**, and P. Zhang
EATCS International Colloquium on Automata,
Languages and Programming (ICALP) 2022

21 *Hardness Results for Laplacians of Simplicial Complexes via Sparse-Linear Equation Complete Gadgets*
M. Ding, **R. Kyng**, **M. Probst**, and P. Zhang
EATCS International Colloquium on Automata,
Languages and Programming (ICALP) 2022

22 *Faster Sparse Matrix Inversion and Rank Computation in Finite Fields*
S. Casacuberta and **R. Kyng**
Innovations in Theoretical Computer Science (ITCS) 2022

23 *On the Oracle Complexity of Higher-Order Smooth Non-Convex Finite-Sum Optimization*
N. Emmenegger, **R. Kyng**, and **A. Zehmakan**
International Conference on Artificial Intelligence and Statistics (AISTATS) 2022

24 *Almost-linear-time Weighted ℓ_p-norm Solvers in Slightly Dense Graphs via Sparsification*
D. Adil, B. Bullins, **R. Kyng**, and S. Sachdeva
EATCS International Colloquium on Automata,
Languages and Programming (ICALP) 2021

25 *Packing LPs are Hard to Solve Accurately, Assuming Linear Equations are Hard*
R. Kyng, D. Wang, and P. Zhang
ACM-SIAM Symposium on Discrete Algorithms (SODA) 2020

26 *Flows in Almost Linear Time via Adaptive Preconditioning*
R. Kyng, R. Peng, S. Sachdeva, and D. Wang
ACM SIGACT Symposium on Theory of Computing (STOC) 2019

27 *Iterative Refinement for ℓ_p-norm Regression*
R. Kyng, D. Adil, R. Peng, and S. Sachdeva
ACM-SIAM Symposium on Discrete Algorithms (SODA) 2019

28 *A Matrix Chernoff Bound for Strongly Rayleigh Distributions and Spectral Sparsifiers from a few Random Spanning Trees*
R. Kyng and Z. Song
IEEE Symposium on Foundations of Computer Science (FOCS) 2018

29 *Solving Directed Laplacians in Nearly Linear Time through Sparse LU Factorizations*
M.B. Cohen, J. Kelner, **R. Kyng**, J. Peebles, R. Peng, A.B. Rao, and A. Sidford
IEEE Symposium on Foundations of Computer Science (FOCS) 2018

30 *Incomplete Nested Dissection*
R. Kyng, R. Peng, R. Schwieterman, and P. Zhang
ACM SIGACT Symposium on Theory of Computing (STOC) 2018

31 *Hardness Results for Structured Linear Systems*
R. Kyng and P. Zhang
IEEE Symposium on Foundations of Computer Science (FOCS) 2017
Won the FOCS Machtey Award for Best Student Paper

32 *Sampling Random Spanning Trees Faster than Matrix Multiplication*
D. Durfee, **R. Kyng**, J. Peebles, A.B. Rao, and S. Sachdeva
ACM SIGACT Symposium on Theory of Computing (STOC) 2017

33 *A Framework for Analyzing Resparsification Algorithms*
R. Kyng, J. Pachocki, R. Peng, and S. Sachdeva
ACM-SIAM Symposium on Discrete Algorithms (SODA) 2017

34 *Approximate Gaussian Elimination for Laplacians: Fast, Sparse, and Simple*
R. Kyng and S. Sachdeva
IEEE Symposium on Foundations of Computer Science (FOCS) 2016
Invited to Highlights of Algorithms (HALG) 2017
FOCS Test of Time Award 2026

35 *Sparsified Cholesky and Multigrid Solvers for Connection Laplacians*
R. Kyng, Y.T. Lee, R. Peng, S. Sachdeva, and D.A. Spielman
ACM SIGACT Symposium on Theory of Computing (STOC) 2016

36 *Fast, Provable Algorithms for Isotonic Regression in all ℓ_p-norms*
R. Kyng, A. Rao, and S. Sachdeva.
Conference and Workshop on Neural Information Processing Systems (NeurIPS) 2015

37 *Algorithms for Lipschitz Learning on Graphs*
R. Kyng, A. Rao, S. Sachdeva, and D.A. Spielman
Conference on Learning Theory (COLT) 2015

38 *Solving SDD Linear Systems in Nearly $m \log^{1/2} n$ Time*
M.B. Cohen, **R. Kyng**, G.L. Miller, J.W. Pachocki, R. Peng, A. Rao, and S.C. Xu
ACM SIGACT Symposium on Theory of Computing (STOC) 2015

REFEREED JOURNAL PUBLICATIONS

39 *AC(k): Robust Solution of Laplacian Equations by Randomized Approximate Cholesky Factorization*
Y. Gao, **R. Kyng**, and D. Spielman
SIAM Journal on Scientific Computing (SISC), 48(3): A1643–A1684, 2026

40 *Assessing GPT Performance in a Proof-Based University-Level Course Under Blind Grading*
M. Ding, **R. Kyng**, **F. Solda**, and **W. Yuan**
EATCS Bulletin, Vol 146, 2025

41 *Maximum Flow and Minimum-Cost Flow in Almost-Linear Time*
L. Chen, **R. Kyng**, Y. Liu, R. Peng, **M. Probst**, and S. Sachdeva
Journal of the ACM (JACM), Volume 72, Issue 3, 2025

42 *Fast Algorithms for ℓ_p-Regression*
D. Adil, **R. Kyng**, R. Peng, and S. Sachdeva
Journal of the ACM (JACM), 71(5), Article 34, 2024

43 *Four Deviations Suffice for Rank 1 Matrices*
R. Kyng, K. Luh, and Z. Song
Advances in Mathematics, Volume 375, 2 December 2020

44 *Hardness Results for Structured Linear Systems*
R. Kyng and Peng Zhang
SIAM Journal on Computing (SICOMP), Special Section FOCS 2017 (2020)

DOCTORAL THESIS

45 *Approximate Gaussian Elimination*
R. Kyng
Doctoral thesis, Yale University Department of Computer Science, 2017