

# Kasper Green Larsen

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Born: 23. June 1986

Citizenship: Danish

two children (age 12 and 14)



## Education

Ph.D. Computer Science, Aarhus University, August 2008 – May 2013.

Advisor: Lars Arge. Successfully defended May 17th 2013.

B.Sc. Computer Science, Aarhus University, August 2005 – July 2008.

## Professional Appointments

**Full Professor** at Aarhus University. Dep. of Computer Science.

Feb 2022 –

**Head of Algorithms, Data Structures and Foundations of Machine Learning**

Head of Research Group. Aarhus University. Dep. of Computer Science.

June 2021 –

**Senior Scientific Expert** (part time) at Kvantify.

May 2022 –

**Full Professor** (part time) at University of Copenhagen. Dep. of Computer Science.

Oct 2020 – Oct 2021

**Associate Professor** at Aarhus University. Dep. of Computer Science.

May 2018 – Jan 2022

**Member of the Young Academy** under the Royal Danish Academy of Sciences and Letters.

June 2017 – June 2022

**Assistant Professor** at Aarhus University. Dep. of Computer Science.

May 2014 – April 2018

**Scientific Software Developer** at CLC bio.

March 2013 – April 2014.

## Awards

**COLT'23 Best Paper Award** (36th Conference on Learning Theory).

**Presburger Award 2019.**

**CRYPTO'18 Best Paper Award** (38th International Cryptology Conference).

**Teacher of the Year Award 2018.**

*Selected by the students at Computer Science, Aarhus University.*

**Hartmann Foundation's Diploma Prize 2017.**

**Aarhus University Ph.D. Prize 2014.**

**STOC'12 Best Paper Award** (44th ACM Symposium on Theory of Computing).

**STOC'12 Best Student Paper Award** (44th ACM Symposium on Theory of Computing).

*The Danny Lewins Award.*

**FOCS'11 Best Student Paper Award** (52nd IEEE Symposium on Foundations of Computer Science).

*The Machtey Award.*

**Danish Minister of Science's Elite Research Travel Scholarship 2011.**

*Videnskabsministerens EliteForsk Rejsestipendie 2011.*

**Google European Doctoral Fellowship 2010.**

*Google Fellowship in Search and Information Retrieval.*

## Grants

Funding amount is listed in EUR, rounded to nearest multiple of 10k EUR. Exchange rate 1 EUR to DKK of 7.46.

**PI**, ERC (European Research Council) Consolidator Grant. 2,000,000 EUR. 2024 - 2029.

**Co-PI**, Villum Synergy Grant, with Prof. Ove Christiansen (Chemistry AU). 400,000 EUR. 2021 - 2024.

**PI**, DFF (Det Frie Forskningsråd) Sapere Aude Research Leader Grant. 820,000 EUR. 2019 - 2025.

**PI**, Villum Young Investigator Grant. 670,000 EUR. 2016 - 2021.

**PI**, AUFF (Aarhus University Research Foundation) Starting Grant. 220,000 EUR. 2016 - 2021.

## Editorships

Editorial Board, Journal of the ACM (JACM), 2024 -

Editorial Board, SIAM Journal on Computing (SICOMP), 2024 - 2026.

## Committees

Our conferences have program committees typically consisting of 25-50 researchers whose task it is to decide which papers to accept for publication. It is the program committee chair that appoints the rest of the program committee. I've served on the following international program committees:

**SODA'25, ICALP'24, STOC'24, ESA'23, ICALP'22, STOC'22, SODA'22, SOSA'21, ESA'20, SWAT'20, STACS'20, PODS'20, FOCS'18, ICALP'18, SODA'18, MFCS'17, WADS'17, MASSIVE'16, SWAT'16, STOC'16, SODA'16, MASSIVE'15, ESA'15, SoCG'15.**

I have also organized the following international workshops/summer schools:

**Aarhus Summer School on Learning Theory 2024:** Speakers Shai Ben-David, Amin Karbasi, Amir Yehudayoff, Nikita Zhivotovskiy.

**Lars Arge Memorial Symposium 2021:** Symposium in honour of Lars Arge at Aarhus University.

**Workshop on Cryptography and Theoretical Computer Science 2020:** Virtual Event at TCC'20.

**Simon's Semester at UC Berkeley 2018:** Workshop on Interactive Complexity.

**Nexus of Information and Computation Theories 2016:** Workshop on Fundamental Inequalities.

**MADALGO Summer School 2016:** Summer School on Streaming Algorithms.

## Post Docs

**Chenglin Fan.** PhD from UT Dallas. 2023–2024, **Arthur da Cunha.** PhD from Inria. 2023 –, **Zeynep Gündogar.** PhD from Istanbul University. 2021 –, **Martin Ritzert.** PhD from Aachen University.

2021 – 2022, **Ora Nova Fandina**. PhD from the Hebrew University. 2020 –, **Mark Simkin**. PhD from Aarhus University. 2020 – 2021, **Lior Kamma**. PhD from the Weizmann Institute. 2017 – 2020.

## Ph.D. Students

**Mikael Møller Høgsgaard**. 2020–, **Alexander Mathiasen**. 2016–2021, **Casper Freksen**. 2016–2020.

## Invited Talks Since 2022

### **Yale Foundations of Data Science Special Seminar.**

New Haven, USA, December 6, 2023.

### **MIT Theory Colloquium.**

Boston, USA, December 5, 2023.

### **TCS+ Seminar (Online).**

Online Talk, October 29, 2023.

### **DeLTA Seminar Copenhagen University.**

Copenhagen, Denmark, October 26, 2023.

### **Simons Workshop on Sketching and Algorithm Design.**

Berkeley, USA, October 9, 2023.

### **Nordic AI Meetup.**

Copenhagen, Denmark, October 4, 2023.

### **Viborg Folkeuniversitet.**

Viborg, Denmark, September 25, 2023.

### **Akademiet for Talentede Unge. Sommercamp Foredrag.**

Herning, Denmark, June 28, 2023.

### **ALGA Workshop Speaker.**

Scicli, Italy, June 7, 2023.

### **ETH Zürich Theory Seminar (Online).**

Zürich, Switzerland, May 11, 2023.

### **UC Berkeley Special Theory Seminar.**

Berkeley, USA, April 27, 2023.

### **NESTOR Foredrag.**

Aarhus, Denmark, April 19, 2023.

### **National University of Singapore Computer Science Research Week Lecturer.**

Singapore, Singapore, January 4 – 6, 2023.

### **Princeton Theory Lunch Seminar.**

Princeton, USA, December 9, 2022.

### **Princeton Institute for Advanced Study Seminar.**

Princeton, USA, December 7, 2022.

### **Offentlige Foredrag i Naturvidenskab.**

Aarhus, Denmark, November 22, 2022.

### **Weizmann Theory Seminar.**

Rohovot, Israel, November 10, 2022.

### **Technion Theory Seminar.**

Haifa, Israel, November 9, 2023.

**Hebrew University Theory Seminar.**

Jerusalem, Israel, November 7, 2022.

**DIMACS Workshop on Lower Bounds and Frontiers in Data Structures.**

New Brunswick, USA, August 8–11, 2022.

**Banff Workshop on Communication Complexity and Applications, III.**

Banff, Canada, July 24–29, 2022.

**UC Berkeley Theory Lunch Seminar.**

Berkeley, USA, May 12, 2022.

**Boston University Theory Seminar (Online).**

Boston, USA, May 9, 2022.

**Purdue University Theory Seminar (Online).**

West Lafayette, USA, March 30, 2022.

## Master Thesis Students

Malthe Pedersen (Data Science) 2024, Jakob Bjørn Hyldgaard 2024, Lena Laustsen 2020, Teis Nørgaard Petersen 2019, Mads Ruge Svejstrup 2019, Jonas Tranberg Sørensen 2019, Jacob Saunte 2018, Marcus Haags 2018, Mathias Kraft Mathiasen 2018, Jonas Hovmand, Peter Gabrielsen, Christoffer Hansen, Thor Bagge, Kent Grigo, Troels Thorsen, Jakob Landbo, Casper Green, Mads Ravn.

## Bachelor Project Students

Peter Knap Rabjerg 2024, Magnus Riis Jacobsen 2024, Mads Graae Westergaard 2024, Fredrik Sejr Jørgensen (IT-Product Dev.) 2023, Mikkel Vestergaard Larsen (Data Science) 2023, Amanda Le 2023, Tjalfe Sebastian Monberg 2023, Ruben Eik Mortensen 2023, Lukas Petersen (IT-Product Dev.) 2023, Laura Marie Lynggaard Nilsson (Data Science) 2022, Malthe Pedersen (Data Science) 2022, Tobias Jensen (Data Science) 2022, Morten Flensborg Jensen 2020, Sebastian Kolby 2020, Michael Peter Lautrup 2020, Jeppe Kuhlmann Andersen 2020, Frederik Brasch 2020, Morten Aardrup Eskildsen 2019, Lena Laustsen 2019, Emil Kjær Eriksen 2019, Daniel Schelander Korsgaard 2019, Daniel Martin Rasmussen 2019, Jon Wissing 2019, Alexander Mathiasen 2016.

## International Relations

I spent the Fall semester of 2018 as an invited long term visitor at the Simons Institute for Theory of Computing at UC Berkeley. I spent the Fall semester of 2011 as a visiting Ph.D. student at Princeton University.

## Publication List Kasper Green Larsen

I've published 77 papers. The topmost broad theory conferences are STOC and FOCS, followed by SODA and ICALP. The top specialised computational geometry conference is SoCG, the top cryptology conferences are CRYPTO and EUROCRYPT and the top broad machine learning conferences are NeurIPS and ICML. COLT is the top machine learning theory conference. Special issue invitations and spotlight presentations are usually given for the top 10-15% accepted papers.

According to Google Scholar, my h-index is 29 and my total citations is 2390 (on March 22nd, 2024).

**Rule:** In theoretical computer science, we **always** list authors **alphabetically by last name**. Thus

being first or last author is determined solely based on the alphabetic ordering of last names amongst my coauthors and I. Papers deviating from this rule are marked with \* at the end of their titles.

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### *Peer-reviewed Conference and Journal Papers*

77. **The Impossibility of Parallelizing Boosting**  
Amin Karbasi, Kasper Green Larsen  
*ALT'24: 35th Conference on Algorithmic Learning Theory.*
76. **Diagonalization Games**  
Noga Alon, Olivier Bousquet, Kasper Green Larsen, Shay Moran, Shlomo Moran  
*AMM'24: American Mathematical Monthly. Expected to appear in 2024.*
75. **The NFA Acceptance Hypothesis: Non-Combinatorial and Dynamic Lower Bounds**  
Karl Bringmann, Allan Grønlund, Marvin Künnemann, Kasper Green Larsen  
*ITCS'24: 15th Innovations in Theoretical Computer Science.*
74. **Super-Logarithmic Lower Bounds for Dynamic Graph Problems**  
Kasper Green Larsen, Huacheng Yu  
*FOCS'23: 64th IEEE Symposium on Foundations of Computer Science.*  
*Invited to special issue of SIAM Journal on Computing (SICOMP).*
73. **Bagging is an Optimal PAC Learner**  
Kasper Green Larsen  
*COLT'23: 36th Conference on Learning Theory.*  
*Winner of the Best Paper Award.*
72. **AdaBoost is not an Optimal Weak to Strong Learner**  
Mikael Møller Høgsgaard, Kasper Green Larsen, Martin Ritzert  
*ICML'23: 40th International Conference on Machine Learning.*  
*Accepted for Short-Live Presentation.*
71. **The Fast Johnson-Lindenstrauss Transform is Even Faster**  
Ora Nova Fandina, Mikael Møller Høgsgaard, Kasper Green Larsen  
*ICML'23: 40th International Conference on Machine Learning.*
70. **Distributed Shuffling in Adversarial Environments**  
Kasper Green Larsen, Maciej Obremski, Mark Simkin  
*ITC'23: 4th Information-Theoretic Cryptography Conference.*
69. **How to Compress Encrypted Data**  
Nils Fleischhacker, Kasper Green Larsen, Mark Simkin  
*EUROCRYPT'23: 42nd Conference on the Theory and Applications of Cryptography and Information Security.*
68. **Barriers for Faster Dimensionality Reduction**  
Ora Nova Fandina, Mikael Møller Høgsgaard, Kasper Green Larsen  
*STACS'23: 40th Symposium on Theoretical Aspects of Computer Science.*
67. **Fast Discrepancy Minimization with Hereditary Guarantees**  
Kasper Green Larsen  
*SODA'23: 34th ACM-SIAM Symposium on Discrete Algorithms.*
66. **Stronger 3SUM-Indexing Lower Bounds**  
Eldon Chung, Kasper Green Larsen  
*SODA'23: 34th ACM-SIAM Symposium on Discrete Algorithms.*
65. **Optimal Weak to Strong Learning**  
Kasper Green Larsen, Martin Ritzert  
*NeurIPS'22: Conference on Neural Information Processing Systems.*
64. **Improved Coresets for Euclidean k-Means**  
Vincent Cohen-Addad, Kasper Green Larsen, David Saulpic, Chris Schwiegelshohn, Omar Ali Sheikh-Omar  
*NeurIPS'22: Conference on Neural Information Processing Systems.*
63. **Hierarchical Categories in Colored Searching**  
Peyman Afshani, Rasmus Killman, Kasper Green Larsen  
*ISAAC'22: 33rd International Symposium on Algorithms and Computation.*  
*Invited to special issue of Computational Geometry: Theory and Applications (CGTA).*
62. **Towards Optimal Lower Bounds for k-median and k-means Coresets**  
Vincent Cohen-Addad, Kasper Green Larsen, David Saulpic, Chris Schwiegelshohn  
*STOC'22: 54th ACM Symposium on Theory of Computing.*

61. **Optimality of the Johnson-Lindenstrauss Dimensionality Reduction for Practical Measures**  
Yair Bartal, Ora Nova Fandina, Kasper Green Larsen  
*SoCG'22: 38th ACM Symposium on Computational Geometry.*  
*Invited to special issue of Journal of Computational Geometry (JoCG); declined*
60. **Property-Preserving Hash Functions from Standard Assumptions**  
Nils Fleischhacker, Kasper Green Larsen, Mark Simkin  
*EUROCRYPT'22: 41st Conference on Theory and Applications of Cryptology and Information Security.*
59. **CountSketches, Feature Hashing and the Median of Three**  
Kasper Green Larsen, Rasmus Pagh, Jakub Tetek  
*ICML'21: 38th International Conference on Machine Learning.*
58. **Broadcast Secret-Sharing, Bounds and Applications**  
Ivan Damgård, Kasper Green Larsen, Sophia Yakoubov  
*ITC'21: 2nd Information-Theoretic Cryptography Conference.*
57. **Further Unifying the Landscape of Cell Probe Lower Bounds**  
Kasper Green Larsen, Jonathan Lindegaard Starup, Jesper Steensgaard  
*SOSA'21: 3rd Symposium on Simplicity in Algorithms.*
56. **Optimal Oblivious Priority Queues**  
Zahra Jafargholi, Kasper Green Larsen, Mark Simkin  
*SODA'21: 32nd ACM-SIAM Symposium on Discrete Algorithms.*
55. **Predicting Positive and Negative Links with Noisy Queries: Theory and Practice\***  
Charalampos E. Tsourakakis, Michael Mitzenmacher, Kasper Green Larsen, Jaroslaw Blasiok, Ben Lawson, Preetum Nakkiran, Vasileios Nakos  
*Internet Mathematics 2020.*
54. **Margins are Insufficient for Explaining Gradient Boosting**  
Allan Grønlund, Lior Kamma, Kasper Green Larsen  
*NeurIPS'20: 34th Conference on Neural Information Processing Systems.*
53. **Lower Bounds for Multi-Server Oblivious RAMs**  
Kasper Green Larsen, Mark Simkin, Kevin Ye  
*TCC'20: 18th Theory of Cryptography Conference.*
52. **Secret Sharing Lower Bound: Either Reconstruction is Hard or Shares are Long**  
Kasper Green Larsen, Mark Simkin  
*SCN'20: 12th Conference on Security and Cryptography for Networks.*
51. **Near-Tight Margin-Based Generalization Bounds for Support Vector Machines**  
Allan Grønlund, Lior Kamma, Kasper Green Larsen  
*ICML'20: 37th International Conference on Machine Learning.*
50. **Optimal Learning of Joint Alignments with a Faulty Oracle**  
Kasper Green Larsen, Michael Mitzenmacher, Charalampos E. Tsourakakis  
*ISIT'20: IEEE International Symposium on Information Theory.*
49. **Clustering with a Faulty Oracle**  
Kasper Green Larsen, Michael Mitzenmacher, Charalampos E. Tsourakakis  
*WWW'20: The Web Conference.*
48. **Lower Bounds for Oblivious Near-Neighbor Search**  
Kasper Green Larsen, Tal Malkin, Omri Weinstein, Kevin Ye  
*SODA'20: 31st ACM-SIAM Symposium on Discrete Algorithms.*
47. **Margin-Based Generalization Lower Bounds for Boosted Classifiers**  
Allan Grønlund, Lior Kamma, Kasper Green Larsen, Alexander Mathiasen, Jelani Nelson  
*NeurIPS'19: 33rd Conference on Neural Information Processing Systems.*
46. **Communication Lower Bounds for Statistically Secure MPC, with or without Preprocessing**  
Ivan Damgård, Kasper Green Larsen, Jesper Buus Nielsen  
*CRYPTO'19: 39th International Cryptology Conference.*
45. **Optimal Minimal Margin Maximization with Boosting**  
Allan Grønlund, Kasper Green Larsen, Alexander Mathiasen  
*ICML'19: 36th International Conference on Machine Learning.*
44. **Lower Bounds for Multiplication via Network Coding**  
Peyman Afshani, Casper Freksen, Lior Kamma, Kasper Green Larsen  
*ICALP'19: 46th International Colloquium on Automata, Languages and Programming.*
43. **Lower Bounds for External Memory Integer Sorting via Network Coding**  
Alireza Farhadi, MohammadTaghi Hajiaghayi, Kasper Green Larsen, Elaine Shi  
*STOC'19: 51st ACM Symposium on Theory of Computing.*  
*Invited to Communications of the ACM.*

42. **Constructive Discrepancy Minimization with Hereditary L2 Guarantees**  
Kasper Green Larsen  
*STACS'19: 36th Symposium on Theoretical Aspects of Computer Science.*
41. **Lower Bounds for Oblivious Data Structures**  
Riko Jacob, Kasper Green Larsen, Jesper Buus Nielsen  
*SODA'19: 30th ACM-SIAM Symposium on Discrete Algorithms.*
40. **A Faster External Memory Priority Queue with DecreaseKeys**  
Shunhua Jiang, Kasper Green Larsen  
*SODA'19: 30th ACM-SIAM Symposium on Discrete Algorithms.*
39. **Fully Understanding the Hashing Trick**  
Casper Benjamin Freksen, Lior Kamma, Kasper Green Larsen  
*NeurIPS'18: 32nd Conference on Neural Information Processing Systems.*  
*Accepted as Spotlight paper.*
38. **Yes, There is an Oblivious RAM Lower Bound!**  
Kasper Green Larsen, Jesper Buus Nielsen  
*CRYPTO'18: 38th International Cryptology Conference.*  
*Winner of the Best Paper Award.*
37. **Tight Cell Probe Bounds for Succinct Boolean Matrix-Vector Multiplication**  
Diptarka Chakraborty, Lior Kamma, Kasper Green Larsen.  
*STOC'18: 50th ACM Symposium on Theory of Computing.*
36. **Crossing the Logarithmic Barrier for Dynamic Boolean Data Structure Lower Bounds**  
Kasper Green Larsen, Omri Weinstein, Huacheng Yu.  
*STOC'18: 50th ACM Symposium on Theory of Computing.*  
*Invited to special issue of SIAM Journal on Computing (SICOMP).*
35. **Upper and Lower Bounds for Dynamic Data Structures on Strings**  
Raphaël Clifford, Allan Grønlund, Kasper Green Larsen, Tatiana Starikovskaya.  
*STACS'18: 35th Symposium on Theoretical Aspects of Computer Science.*
34. **On Using Toeplitz and Circulant Matrices for Johnson-Lindenstrauss Transforms**  
Casper Benjamin Freksen, Kasper Green Larsen.  
*ISAAC'17: 28th International Symposium on Algorithms and Computation.*  
*Invited to special issue of Algorithmica.*
33. **A Dichotomy for Regular Expression Membership Testing**  
Karl Bringmann, Allan Grønlund, Kasper Green Larsen.  
*FOCS'17: 58th IEEE Symposium on Foundations of Computer Science.*
32. **Optimality of the Johnson-Lindenstrauss Lemma**  
Kasper Green Larsen, Jelani Nelson.  
*FOCS'17: 58th IEEE Symposium on Foundations of Computer Science.*  
*Invited to special issue of SIAM Journal on Computing (SICOMP); declined*
31. **DecreaseKeys are Expensive for External Memory Priority Queues**  
Kasper Eenberg, Kasper Green Larsen, Huacheng Yu.  
*STOC'17: 49th ACM Symposium on Theory of Computing.*
30. **Faster Online Matrix-Vector Multiplication**  
Kasper Green Larsen, Ryan Williams.  
*SODA'17: 28th ACM-SIAM Symposium on Discrete Algorithms.*
29. **Heavy Hitters via Cluster-Preserving Clustering**  
Kasper Green Larsen, Jelani Nelson, Huy L. Nguyen, Mikkel Thorup.  
*FOCS'16: 57th IEEE Symposium on Foundations of Computer Science.*  
*Invited to Communications of the ACM.*
28. **How to Prove Knowledge of Small Secrets**  
Carsten Baum, Ivan Damgård, Kasper Green Larsen, Michael Nielsen.  
*CRYPTO'16: 36th International Cryptology Conference.*
27. **Towards Tight Lower Bounds for Range Reporting on the RAM**  
Allan Grønlund, Kasper Green Larsen.  
*ICALP'16: 43rd International Colloquium on Automata, Languages and Programming.*
26. **The Johnson-Lindenstrauss Lemma is Optimal for Linear Dimensionality Reduction**  
Kasper Green Larsen, Jelani Nelson.  
*ICALP'16: 43rd International Colloquium on Automata, Languages and Programming.*
25. **New Unconditional Hardness Results for Dynamic and Online Problems**  
Raphaël Clifford, Allan Grønlund, Kasper Green Larsen.  
*FOCS'15: 56th IEEE Symposium on Foundations of Computer Science.*

24. **Adapt or Die: Polynomial Lower Bounds for Non-Adaptive Dynamic Data Structures**  
Joshua Brody, Kasper Green Larsen.  
*ToC'15: Theory of Computing, Vol 11. 2015.*
23. **Time Lower Bounds for Nonadaptive Turnstile Streaming Algorithms**  
Kasper Green Larsen, Jelani Nelson, Huy L. Nguyen.  
*STOC'15: 47th ACM Symposium on Theory of Computing.*
22. **Approximate Range Emptiness in Constant Time and Optimal Space**  
Mayank Goswami, Allan Grønlund, Kasper Green Larsen, Rasmus Pagh.  
*SODA'15: 26th ACM-SIAM Symposium on Discrete Algorithms.*
21. **Optimal Planar Orthogonal Skyline Counting Queries**  
Gerth Stølting Brodal, Kasper Green Larsen.  
*SWAT'14: 14th Scandinavian Symposium and Workshop on Algorithm Theory.*
20. **On Hardness of Several String Problems**  
Kasper Green Larsen, J Ian Munro, Jesper Sindahl Nielsen, Sharma V. Thankachan.  
*CPM'14: 25th Symposium on Combinatorial Pattern Matching.*
19. **Near-Optimal Labeling Schemes for Nearest Common Ancestors**  
Steffen Alstrup, Esben Bistrup Halvorsen, Kasper Green Larsen.  
*SODA'14: 25th ACM-SIAM Symposium on Discrete Algorithms.*
18. **Succinct Sampling from Discrete Distributions**  
Karl Bringmann, Kasper Green Larsen.  
*STOC'13: 45th ACM Symposium on Theory of Computing.*
17. **Near-Optimal Range Reporting Structures for Categorical Data**  
Kasper Green Larsen, Freek van Walderveen.  
*SODA'13: 24th ACM-SIAM Symposium on Discrete Algorithms.*
16. **Higher Cell Probe Lower Bounds for Evaluating Polynomials**  
Kasper Green Larsen.  
*FOCS'12: 53rd IEEE Symposium on Foundations of Computer Science.*
15. **Improved Range Searching Lower Bounds**  
Kasper Green Larsen, Huy L. Nguyen.  
*SoCG'12: 28th ACM Symposium on Computational Geometry.*
14. **Higher-dimensional Orthogonal Range Reporting and Rectangle Stabbing in the Pointer Machine Model**  
Peyman Afshani, Lars Arge, Kasper Green Larsen.  
*SoCG'12: 28th ACM Symposium on Computational Geometry.*
13. **The Cell Probe Complexity of Dynamic Range Counting**  
Kasper Green Larsen.  
*STOC'12: 44th ACM Symposium on Theory of Computing.*  
*Winner of the Best Paper Award and winner of the Best Student Paper Award (the Danny Lewins Award).*  
*Invited to Journal of the ACM (JACM). Declined.*
12. **Linear-Space Data Structures for Range Mode Query in Arrays**  
Timothy M. Chan, Stephane Durocher, Kasper Green Larsen, Jason Morrison, Bryan T. Wilkinson.  
*STACS'12: 29th Symposium on Theoretical Aspects of Computer Science.*  
*Invited to special issue of Theory of Computing Systems (TOCS).*
11. **I/O-Efficient Data Structures for Colored Range and Prefix Reporting**  
Kasper Green Larsen, Rasmus Pagh.  
*SODA'12: 23rd ACM-SIAM Symposium on Discrete Algorithms.*
10. **On Range Searching in the Group Model and Combinatorial Discrepancy**  
Kasper Green Larsen.  
*FOCS'11: 52nd IEEE Symposium on Foundations of Computer Science*  
*Winner of the Best Student Paper Award (the Machtey Award).*  
*Invited to special issue of SIAM Journal on Computing (SICOMP).*
9. **Orthogonal Range Searching on the RAM, Revisited**  
Timothy M. Chan, Kasper Green Larsen, Mihai Patrascu.  
*SoCG'11: 27th ACM Symposium on Computational Geometry.*  
*Invited to special issue of Computational Geometry: Theory and Applications (CGTA). Declined.*
8. **(Approximate) Uncertain Skylines**  
Peyman Afshani, Pankaj K. Agarwal, Lars Arge, Kasper Green Larsen, Jeff M. Phillips.  
*ICDT'11: 14th International Conference on Database Theory.*  
*Invited to special issue of Theory of Computing Systems (TOCS).*
7. **Range Selection and Median: Tight Cell Probe Lower Bounds and Adaptive Data Structures**  
Allan Grønlund Jørgensen, Kasper Green Larsen.  
*SODA'11: 22nd ACM-SIAM Symposium on Discrete Algorithms.*



6. **Cleaning Massive Sonar Point Clouds**  
Lars Arge, Kasper Green Larsen, Thomas Mølhave, Freek Van Walderveen.  
*GIS'10: 18th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems.*
5. **Cell Probe Lower Bounds and Approximations for Range Mode**  
Mark Greve, Allan Grønlund Jørgensen, Kasper Dalgaard Larsen, Jakob Truelsen.  
*ICALP'10: 37th International Colloquium on Automata, Languages and Programming.*
4. **Orthogonal Range Reporting: Query Lower Bounds, Optimal Structures in 3-d and Higher Dimensional Improvements**  
Peyman Afshani, Lars Arge, Kasper Dalgaard Larsen.  
*SoCG'10: 26th ACM Symposium on Computational Geometry.*  
*Invited to special issue of Computational Geometry: Theory and Applications (CGTA). Declined.*
3. **Orthogonal Range Reporting in Three and Higher Dimensions**  
Peyman Afshani, Lars Arge, Kasper Dalgaard Larsen.  
*FOCS'09: 50th IEEE Symposium on Foundations of Computer Science.*
2. **Mental Models and Programming Aptitude**  
Michael E. Caspersen, Jens Bennesen, Kasper Dalgaard Larsen.  
*ITiCSE'07: 12th Conference on Innovation and Technology in Computer Science Education.*

### *Invited Abstracts*

1. **I/O-Efficient Spatial Data Structures for Range Queries**  
Lars Arge, Kasper Green Larsen.  
*Invited abstract in SIGSPATIAL Special, July, 2012.*