

# AKANKSHA AGRAWAL

*Veena and Induprakas Keri Faculty Fellow*  
*Department of Computer Science and Engineering*  
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*Phone:* +91 44 2257 4391

*Born:* 20 February 1991, Bhilai, India

*Date:* 8th July 2024

## FIELDS OF INTEREST

Parameterized Algorithms & Complexity, Graph Algorithms, Exact Algorithms, Approximation Algorithms, Fine Grained Algorithms & Complexity.

## EMPLOYMENT

- Oct. 2020-* Assistant Professor  
Department of Computer Science and Engineering,  
Indian Institute of Technology Madras, Chennai, India
- Mar. 2019-* Postdoctoral Researcher  
*Sept. 2020* Department of Computer Science, Ben-Gurion University of the Negev, Beersheba, Israel
- May. 2018-* Postdoctoral Researcher  
*Feb. 2019* Institute for Computer Science and Control,  
Hungarian Academy of Sciences, Budapest, Hungary

## EDUCATION

- 2015-2017* *Ph.D.*  
Dept. of Informatics, University of Bergen, Bergen, Norway  
Thesis: Graph Modification Problems: Beyond the Known Boundaries  
Advisors: Prof. Saket Saurabh and Prof. Daniel Lokshtanov
- 2012-2014* *Masters*  
Dept. of Comp. Sci. & Automation, Indian Institute of Science, Bengaluru, India  
Thesis: Delaunay Graphs for Various Geometric Objects  
Advisor: Prof. Sathish Govindarajan
- 2008-2012* *Bachelors*  
Dept. of Comp. Sci. & Engg., Shri Shankaracharya College of Engg. & Tech., Chhattisgarh  
Swami Vivekanand Tech. Univ., Bhilai, India

## ACADEMIC SERVICES

### JOURNAL EDITORIAL BOARD & EDITORIAL TASKS

- Associate Editor, Acta Informatica (2023-26).  
Co-editor for a special issue, "Topical Collection on Algorithms and Combinatorial Optimization",  
with Fahad Panolan, Acta Informatica.  
Indian Journal of Discrete Mathematics (2024-27).

### CONFERENCE PROGRAM COMMITTEE

- 11th Annual International Conference on Algorithms and Discrete Applied Mathematics (CALDAM), 2025.  
48th International Symposium on Mathematical Foundations of Computer Science (MFCS), 2023.  
18th International Symposium on Parameterized and Exact Computation (IPEC), 2023.  
Fundamentals of Computation Theory (FCT), 2023.  
International Symposium on Theoretical Aspects of Computer Science (STACS) 2022.  
European Symposium on Algorithms (ESA), 2021.  
16th International Symposium on Parameterized and Exact Computation (IPEC), 2021.  
47th International Workshop on Graph-Theoretic Concepts in Computer Science (WG), 2021.

### ORGANIZER

Dagstuhl Seminar, Jan. 19 -24, 2025, along with Maria Chudnovsky, Daniel Paulusma, and Oliver Schaudt.

ACM India Winter School on Algorithms and Lower Bounds, 3-12 Jan 2022, along with G. Philip. (Initiator and organizer) Reading group on Fine-Grained Complexity at Ben-Gurion University, Apr-Jul 2019.

Algorithms Seminar Series at University of Bergen, Aug-Dec 2016.

## OTHER SERVICES

**Ph.D. Thesis Evaluation Committee:** *i)* Nidhi Purohit, University of Bergen, Norway

Thesis reviewer/examiner for M.S., M.Tech. project, B.Tech. project, and Integrated B.Tech. project, IIT Madras.

Reviewer for journals like Journal of Computer and System Sciences, SIAM Journal on Discrete Mathematics, Theory of Computing Systems, Theoretical Computer Science, Information Processing Letters, Algorithmica, and Discrete Applied Mathematics

Regularly reviewer for conferences like STOC, SODA, ICALP, STACS, ESA, IPEC, WG, ISAAC, SWAT, and FSTTCS

## GRANTS & AWARDS

Class of 1991 CSE Award, IITM, 2023

Distinguished paper award at AAAI 2023

Veena and Induprakas Keri Faculty Fellowship, 2023-2025

SERB Startup Research Grant (SRG/2022/000962), 2022-2024

New Faculty Initiation Grant, IIT Madras, 2020-2022

The PBC Fellowship for Postdoctoral Researchers, Israel, 2018-2020

Meltzer Project Grant for Ph.D. students, Norway, 2017

Travel award at Symposium on Discrete Algorithms (SODA), 2017

## STUDENTS

*Postdoc.:* (former) Abhishek Sahu (currently a visiting faculty at National Institute of Science Education and Research Bhubaneswar).

*Masters/Dual Degree Research/Project:* (current) Vinod Shambhu Gupta, Krishna Somasundaram (former) Hindanjali Harwanshi.

*Undergrad Research/Project:* (former) T Sai Krishna; Somasi Venkata Viswajit, G. Sai Pradhyumna, Mukkoti Pramod Kumar; Pitchika Vaastav, Siddharth Singh, Allumalla Ravi Kiran, Dhanekula Varun Teja, Shreyas Bhat, Soumita Hait.

*Interns:* (current) Albin James Maliakal, Abhishek Choukuse (former) Harshika Goyal, Aravind Bharathi Valluvan

## PUBLICATIONS

(No. of publications) **Total: 51 (+ 2 invited surveys); Journals 26; Conferences (yet to be published in journals): 25**

### INVITED SURVEYS

[S.2] Akanksha Agrawal and M. S. Ramanujan. **Distance from triviality 2.0: Hybrid parameterizations.** In *Combinatorial Algorithms - 33rd International Workshop (IWOC)*, volume 13270, pages 3–20. Springer, 2022.

[S.1] Akanksha Agrawal and Meirav Zehavi. **Parameterized analysis of art gallery and terrain guarding.** In *Computer Science - Theory and Applications - 15th International Computer Science Symposium in Russia (CSR)*, volume 12159, pages 16–29, 2020.

### JOURNALS PUBLICATIONS

[J.26, C.48] Akanksha Agrawal, Kristine V. K. Knudsen, Daniel Lokshtanov, Saket Saurabh, and Meirav Zehavi. **The parameterized complexity of guarding almost convex polygons.** *Discret. Comput. Geom.*, 71(2):358–398, 2024.

—A preliminary version of this article appeared in SoCG 2020.

[J.25] Akanksha Agrawal, Henning Fernau, Philipp Kindermann, Kevin Mann, and Uéverton S. Souza. **Recognizing well-dominated graphs is coNP-complete.** *Inf. Process. Lett.*, 183:106419, 2024.

[J.24, C.47] Akanksha Agrawal, Daniel Lokshtanov, Pranabendu Misra, Saket Saurabh, and Meirav Zehavi. **Polynomial kernel for interval vertex deletion.** *ACM Trans. Algorithms*, 19(2): 11:1–11:68, 2023.

—A preliminary version of this article appeared in SODA 2019.

- [J.23, C.46] Akanksha Agrawal, Tanmay Inamdar, Saket Saurabh, and Jie Xue. **Clustering what matters: Optimal approximation for clustering with outliers.** *J. Artif. Intell. Res.*, 78:143–166, 2023.  
—A preliminary version of this article appeared in AAAI 2023 (**Distinguished paper**).
- [J.22, C.45] Akanksha Agrawal, Daniel Lokshtanov, Pranabendu Misra, Saket Saurabh, and Meirav Zehavi. **Erdős-pósa property of obstructions to interval graphs.** *Journal of Graph Theory*, 102(4):702–727, 2023.  
—A preliminary version of this article appeared in STACS 2018.
- [J.21, C.44] Akanksha Agrawal, Sutanay Bhattacharjee, Satyabrata Jana, and Abhishek Sahu. **Parameterized complexity of perfectly matched sets.** *Theor. Comput. Sci.*, 958:113861, 2023.  
—A preliminary version of this article appeared in IPEC 2022.
- [J.20, C.43] Akanksha Agrawal, Pratibha Choudhary, N. S. Narayanaswamy, K. K. Nisha, and Vijayaragunathan Ramamoorthi. **Parameterized complexity of minimum membership dominating set.** *Algorithmica*, 85(11):3430–3452, 2023.  
—A preliminary version of this article appeared in WALCOM 2022.
- [J.19, C.42] Akanksha Agrawal. **Fine-grained complexity of rainbow coloring and its variants.** *Journal of Computer and System Sciences*, 124:140–158, 2022.  
—A preliminary version of this article appeared in MFCS 2017.
- [J.18, C.41] Akanksha Agrawal, Sudeshna Kolay, and Meirav Zehavi. **Parameter analysis for guarding terrains.** *Algorithmica*, 84(4):961–981, 2022.  
—A preliminary version of this article appeared in SWAT 2020.
- [J.17, C.40] Akanksha Agrawal, Lawqueen Kanesh, Fahad Panolan, M. S. Ramanujan, and Saket Saurabh. **A fixed-parameter tractable algorithm for elimination distance to bounded degree graphs.** *SIAM Journal of Discrete Mathematics*, 36(2):911–921, 2022.  
—A preliminary version of this article appeared in STACS 2021.
- [J.16, C.39] Akanksha Agrawal, Pranabendu Misra, Fahad Panolan, and Saket Saurabh. **Fast exact algorithms for survivable network design with uniform requirements.** *Algorithmica*, 84(9):2622–2641, 2022.  
—A preliminary version of this article appeared in WADS 2017.
- [J.15, C.38] Akanksha Agrawal, Madhumita Kundu, Abhishek Sahu, Saket Saurabh, and Prafullkumar Tale. **Parameterized complexity of maximum edge colorable subgraph.** *Algorithmica*, 84(10):3075–3100, 2022.  
—A preliminary version of this article appeared in COCOON 2020.
- [J.14, C.37] Akanksha Agrawal, Fahad Panolan, Saket Saurabh, and Meirav Zehavi. **Simultaneous feedback edge set: A parameterized perspective.** *Algorithmica*, 83(2):753–774, 2021.  
—A preliminary version of this article appeared in ISAAC 2016.
- [J.13, C.36] Akanksha Agrawal, Lawqueen Kanesh, Saket Saurabh, and Prafullkumar Tale. **Paths to trees and cacti.** *Theoretical Computer Science*, 860:98–116, 2021.  
—A preliminary version of this article appeared in CIAC 2017.
- [J.12, C.35] Akanksha Agrawal, Pallavi Jain, Lawqueen Kanesh, and Saket Saurabh. **Parameterized complexity of conflict-free matchings and paths.** *Algorithmica*, 82(7):1939–1965, 2020.  
—A preliminary version of this article appeared in MFCS 2019.
- [J.11, C.34] Akanksha Agrawal, Daniel Lokshtanov, Pranabendu Misra, Saket Saurabh, and Meirav Zehavi. **Polylogarithmic approximation algorithms for weighted- $\mathcal{F}$ -deletion problems.** *ACM Transactions on Algorithms*, 16(4):51:1–51:38, 2020.  
—A preliminary version of this article appeared in APPROX 2018.
- [J.10, C.33] Akanksha Agrawal, Sushmita Gupta, Pallavi Jain, and R. Krithika. **Quadratic vertex kernel for split vertex deletion.** *Theoretical Computer Science*, 833:164–172, 2020.  
—A preliminary version of this article appeared in CIAC 2019.
- [J.9, C.32] Akanksha Agrawal, Fedor V. Fomin, Daniel Lokshtanov, Saket Saurabh, and Prafullkumar Tale. **Path contraction faster than  $2^n$ .** *SIAM J. Discret. Math.*, 34(2):1302–1325, 2020.  
—A preliminary version of this article appeared in ICALP 2019.
- [J.8] Akanksha Agrawal, N. R. Aravind, Subrahmanyam Kalyanasundaram, Anjeneya Swami Kare, Juho Lauri, Neeldhara Misra, and I. Vinod Reddy. **Parameterized complexity of happy coloring problems.** *Theoretical Computer Science*, 835:58–81, 2020.  
—Partially based on the article that appeared in IWOCA 2017.
- [J.7, C.31] Akanksha Agrawal, Daniel Lokshtanov, Pranabendu Misra, Saket Saurabh, and Meirav Zehavi. **Feedback vertex set inspired kernel for chordal vertex deletion.** *ACM Transactions on Algorithms*, 15(1):11:1–11:28, 2019.  
—A preliminary version of this article appeared in SODA 2017.

- [J.6, C.30] Akanksha Agrawal, Daniel Lokshtanov, Saket Saurabh, and Meirav Zehavi. **Split contraction: The untold story**. *ACM Transactions on Computation Theory*, 11(3):18:1–18:22, 2019.  
—A preliminary version of this article appeared in STACS 2017.
- [J.5, C.29] Akanksha Agrawal, Saket Saurabh, and Prafullkumar Tale. **On the parameterized complexity of contraction to generalization of trees**. *Theory of Computing Systems*, 63(3):587–614, 2019.  
—A preliminary version of this article appeared in IPEC 2017.
- [J.4, C.28] Akanksha Agrawal, Saket Saurabh, Roohani Sharma, and Meirav Zehavi. **Kernels for deletion to classes of acyclic digraphs**. *Journal of Computer and System Sciences*, 92:9–21, 2018.  
—A preliminary version of this article appeared in ISAAC 2016.
- [J.3, C.27] Akanksha Agrawal, Daniel Lokshtanov, Diptapriyo Majumdar, Amer E. Mouawad, and Saket Saurabh. **Kernelization of cycle packing with relaxed disjointness constraints**. *SIAM Journal on Discrete Mathematics*, 32(3):1619–1643, 2018.  
—A preliminary version of this article appeared in ICALP 2016.
- [J.2, C.26] Akanksha Agrawal, Daniel Lokshtanov, Amer E. Mouawad, and Saket Saurabh. **Simultaneous feedback vertex set: A parameterized perspective**. *ACM Transactions on Computation Theory*, 10(4):18:1–18:25, 2018.  
—A preliminary version of this article appeared in STACS 2016.
- [J.1] Akanksha Agrawal, Saket Saurabh, Roohani Sharma, and Meirav Zehavi. **Parameterised algorithms for deletion to classes of DAGs**. *Theory of Computing Systems*, 62(8):1880–1909, 2018.

#### CONFERENCE PUBLICATIONS (NOT YET PUBLISHED IN JOURNALS)

- [C.25] Akanksha Agrawal, Paloma T. Lima, Daniel Lokshtanov, Saket Saurabh, and Roohani Sharma. **Odd Cycle Transversal on  $P_5$ -free graphs in quasi-polynomial time**. In *Proceedings of the 2024 ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2024 (to appear).
- [C.24] Akanksha Agrawal, Satyabrata Jana, and Abhishek Sahu. **A polynomial kernel for proper helly circular-arc vertex deletion**. In *Theoretical Informatics - 16th Latin American Symposium (LATIN)*, volume 14579, pages 208–222, 2024.
- [C.23] Akanksha Agrawal, Sergio Cabello, Michael Kaufmann, Saket Saurabh, Roohani Sharma, Yushi Uno, and Alexander Wolff. **Eliminating crossings in ordered graphs**. In *19th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT)*, volume 294, pages 1:1–1:19, 2024.
- [C.22] Akanksha Agrawal, Dániel Marx, Daniel Neuen, and Jasper Slusallek. **Computing square colorings on bounded-treewidth and planar graphs**. In *Proceedings of the 2023 ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 2087–2110. SIAM, 2023.
- [C.21] Akanksha Agrawal, John Augustine, David Peleg, and Srikanth Ramachandran. **Local recurrent problems in the SUPPORTED model**. In *27th International Conference on Principles of Distributed Systems, OPODIS 2023 (also, Brief Announcement, PODC 2023)*, volume 286 of *LIPICs*, pages 22:1–22:19, 2023.
- [C.20] Akanksha Agrawal and M. S. Ramanujan. **Approximately interpolating between uniformly and non-uniformly polynomial kernels**. In *43rd IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS)*, volume 284 of *LIPICs*, pages 36:1–36:17, 2023.
- [C.19] Akanksha Agrawal, Lawqueen Kanesh, Daniel Lokshtanov, Fahad Panolan, M. S. Ramanujan, Saket Saurabh, and Meirav Zehavi. **Deleting, eliminating and decomposing to hereditary classes are all fpt-equivalent**. In *Proceedings of the 2022 ACM-SIAM Symposium on Discrete Algorithms (SODA)*, pages 1976–2004, 2022.
- [C.18] Akanksha Agrawal, Soumita Hait, and Amer E. Mouawad. **On finding short reconfiguration sequences between independent sets**. To appear in *33rd International Symposium on Algorithms and Computation (ISAAC)*, 2022.
- [C.17] Akanksha Agrawal, Saket Saurabh, and Meirav Zehavi. **A finite algorithm for the realizability of a delaunay triangulation**. To appear in *17th International Symposium on Parameterized and Exact Computation (IPEC)*, 2022.
- [C.16] Akanksha Agrawal, Ravi Kiran Allumalla, and Varun Teja Dhanekula. **Refuting FPT algorithms for some parameterized problems under gap-ETH**. In Petr A. Golovach and Meirav Zehavi, editors, *16th International Symposium on Parameterized and Exact Computation (IPEC)*, volume 214 of *LIPICs*, pages 2:1–2:12, 2021.
- [C.15] Akanksha Agrawal, Aditya Anand, and Saket Saurabh. **A polynomial kernel for deletion to ptolemaic graphs**. In Petr A. Golovach and Meirav Zehavi, editors, *16th International Symposium on Parameterized and Exact Computation (IPEC)*, volume 214, pages 1:1–1:15, 2021.
- [C.14] Akanksha Agrawal and M. S. Ramanujan. **On the parameterized complexity of clique elimination distance**. In *15th International Symposium on Parameterized and Exact Computation (IPEC)*, volume 180, pages 1:1–1:13, 2020.

- [C.13] Akanksha Agrawal, Grzegorz Guspil, Jayakrishnan Madathil, Saket Saurabh, and Meirav Zehavi. **Connecting the dots (with minimum crossings)**. In *35th International Symposium on Computational Geometry (SoCG)*, pages 7:1–7:17, 2019.
- [C.12] Akanksha Agrawal, Sudeshna Kolay, Jayakrishnan Madathil, and Saket Saurabh. **Parameterized complexity classification of deletion to list matrix-partition for low-order matrices**. In *30th International Symposium on Algorithms and Computation (ISAAC)*, volume 149, pages 41:1–41:14, 2019.
- [C.11] Akanksha Agrawal, Arindam Biswas, Édouard Bonnet, Nick Brettell, Radu Curticapean, Dániel Marx, Tillmann Miltzow, Venkatesh Raman, and Saket Saurabh. **Parameterized streaming algorithms for min-ones d-sat**. In *39th IARCS Annual Conference on Foundations of Software Technology (FSTTCS)*, volume 150, pages 8:1–8:20, 2019.
- [C.10] Akanksha Agrawal, Pallavi Jain, Lawqueen Kanesh, Daniel Lokshtanov, and Saket Saurabh. **Conflict free feedback vertex set: A parameterized dichotomy**. In *43rd International Symposium on Mathematical Foundations of Computer Science (MFCS)*, pages 53:1–53:15, 2018.
- [C.9] Akanksha Agrawal, Pallavi Jain, Lawqueen Kanesh, Pranabendu Misra, and Saket Saurabh. **Exploring the kernelization borders for hitting cycles**. In *13th International Symposium on Parameterized and Exact Computation (IPEC)*, pages 14:1–14:14, 2018.
- [C.8] Akanksha Agrawal, Pratibha Choudhary, Pallavi Jain, Lawqueen Kanesh, Vibha Sahlot, and Saket Saurabh. **Hitting and covering partially**. In *Computing and Combinatorics - 24th International Conference (COCOON)*, pages 751–763, 2018.
- [C.7] Akanksha Agrawal. **On the parameterized complexity of happy vertex coloring**. In *Combinatorial Algorithms - 28th International Workshop (IWOCA)*, pages 103–115, 2017.
- [C.6] Akanksha Agrawal, R. Krithika, Daniel Lokshtanov, Amer E. Mouawad, and M. S. Ramanujan. **On the parameterized complexity of simultaneous deletion problems**. In *37th IARCS Annual Conference on Foundations of Software Technology (FSTTCS)*, pages 9:1–9:14, 2017.
- [C.5] Akanksha Agrawal, Daniel Lokshtanov, and Amer E. Mouawad. **Critical node cut parameterized by treewidth and solution size is  $W[1]$ -hard**. In *Graph-Theoretic Concepts in Computer Science - 43rd International Workshop (WG)*, pages 32–44, 2017.
- [C.4] Akanksha Agrawal, Sudeshna Kolay, Daniel Lokshtanov, and Saket Saurabh. **A faster FPT algorithm and a smaller kernel for block graph vertex deletion**. In *Theoretical Informatics - 12th Latin American Symposium (LATIN)*, pages 1–13, 2016.
- [C.3] Akanksha Agrawal, Sushmita Gupta, Saket Saurabh, and Roohani Sharma. **Improved algorithms and combinatorial bounds for independent feedback vertex set**. In *11th International Symposium on Parameterized and Exact Computation (IPEC)*, pages 2:1–2:14, 2016.
- [C.2] Akanksha Agrawal, Sudeshna Kolay, Saket Saurabh, and Roohani Sharma. **Kernelizing buttons and scissors**. In *Proceedings of the 28th Canadian Conference on Computational Geometry (CCCG)*, pages 279–286, 2016.
- [C.1] Akanksha Agrawal, Sathish Govindarajan, and Neeldhara Misra. **Vertex cover gets faster and harder on low degree graphs**. In *Computing and Combinatorics - 20th International Conference (COCOON)*, pages 179–190, 2014.

## TALKS

### (SELECTED) INVITED TALKS

2024

(Upcoming) Lectures at ACM-India Summer School on Algorithmic Approaches to NP-completeness, 2024.

*Polynomial Time Algorithm For Odd Cycle Transversal on  $P_5$ -free Graphs* at Recent Trends in Algorithms, 2024.

*Hybrid Parameterizations for Graph Problems* at Pre-conference School, the Conference on Algorithms and Discrete Applied Mathematics (CALDAM), 2024.

*Theoretical CS - Research and Opportunities in India* at ACM-India Event on Research Opportunity in Computer Science (ROCS), IIT Madras 2024.

2022

(**Keynote Speaker**) *Distance from triviality 2.0: Hybrid parameterizations* at The 33rd International Workshop on Combinatorial Algorithms (IWOCA), 2022.

*Lectures on Parameterized Algorithms* at FDP Program at SRM University, 2022.

2020

*Lectures* at the (online) workshop Parameterized Complexity 301, 2020.

*Parameterized Guarding of Art Gallery via CSP* at **Rising Star Talks**, TCS Women Spotlight Workshop 2020.

*Polynomial Kernel for Interval Vertex Deletion* at Discrete Math Seminar 2020, IBS, South Korea.

*Guarding Terrains through the Lens of Parameterized Complexity* at Parameterized Complexity Seminar 2020, India.

*Publishing: quantity v/s quality? (Theory)* at ACM-W Grad Cohort 2020, IIT Gandhinagar.

#### OTHER TALKS

2023

*Approximately interpolating between polynomial and non-uniformly polynomial kernels* at FSTTCS 2023, IIT Hyderabad, India.

2022

*Lectures* at the online ACM India Winter School on Algorithms and Lower Bounds.

*Deleting, eliminating and decomposing to hereditary classes are all FPT-equivalent* at SODA 2022 (online).

2020

*Guarding Polygons via CSP* at Algorithms Seminar, Tel-Aviv University, Tel-Aviv, Israel.

*Guarding Polygons and Terrains* at CS Theory Seminar, Ben-Gurion University of the Negev, Beersheba, Israel.

2019

*Guarding Polygons via CSP* at

- Indian Institute of Science, Bangalore, India,
- Indian Institute of Technology Madras, Chennai, India
- Indian Institute of Technology Hyderabad, Hyderabad, India, and
- Indian Institute of Technology Gandhinagar, Gandhinagar, India.

*Path Contraction Faster than  $2^n$*  at ICALP 2019, Patras, Greece.

*A Polynomial Kernel for Interval Vertex Deletion* at New Horizons in Parameterized Complexity, Dagstuhl Seminar 2019, Dagstuhl, Germany.

2018

*Conflict Free Feedback Vertex Set: A Parameterized Dichotomy* at MFCS 2018, Liverpool, UK.

*Polylogarithmic Approximation Algorithms for Weighted-F-Deletion Problems* at APPROX 2018, Princeton, USA.

2017

*Fine-grained Complexity of Rainbow Coloring and its Variants* at MFCS, Aalborg, Netherlands.

*Hardness of Problems in P* at Algorithms Seminar Series, University of Bergen, Bergen, Norway.

*Finite Algorithm for Delaunay Realizability* at Algorithms Seminar Series, University of Bergen, Bergen, Norway.

*Split Contraction: The Untold Story* at STACS 2017, Hannover, Germany.

*Feedback Vertex Set Inspired Kernel for Chordal Vertex Deletion* at SODA 2017, Barcelona, Spain and at Algorithms Seminar Series, University of Bergen, Bergen, Norway.

2016

*Simultaneous Feedback Edge Set: A Parameterized Perspective* at ISAAC 2016, Sydney, Australia.

*Kernels for Deletion to Classes of Acyclic Digraphs* at ISAAC 2016, Sydney, Australia.

*Improved Algorithms and Combinatorial Bounds for Independent Feedback Vertex Set* at IPEC 2016, Aarhus, Denmark.

*Kernelization of Cycle Packing with Relaxed Disjointness Constraints* at ICALP 2016, Rome, Italy.

2015

*A Faster FPT Algorithm and a Smaller Kernel for Block Graph Vertex Deletion* at Algorithms Seminar Series, University of Bergen, Bergen, Norway.

*Vertex Cover on Delaunay Graphs* at Algorithms Seminar Series at University of Bergen, Bergen, Norway.

2014

*Vertex Cover Gets Faster and Harder on Low Degree Graphs* at COCOON 2014, Atlanta, USA.

#### RECENT WORKSHOPS & RESEARCH VISITS

(Upcoming) *New Tools in Parameterized Complexity: Paths, Cuts, and Decomposition*, Oct. 06-11, 2024, Dagstuhl, Germany.

ACM-SIAM Symposium on Discrete Algorithms (SODA), 2024.

Visiting Researcher, University of Bergen, Dec. 11-15 2023, Bergen, Norway.

New Frontiers of Parameterized Complexity in Graph Drawing, Apr. 16-21, 2023, Dagstuhl, Germany.

Vertex Partitioning in Graphs: From Structure to Algorithms, Nov. 27-Dec. 2, 2022, Dagstuhl, Germany.

Graph Decompositions: Small Width, Big Challenges, Oct. 24-28, 2022, Lorentz Center, Germany.

Visiting Scientist (19 Jun.-13 Jul. 2022), Weizmann Institute of Science, Rehovot, Israel (hosted by David Peleg using the IITM-VHAR fund).

Visiting Scientist (10-18 Jun. 2022), University of Trier, Trier, Germany (hosted by Henning Fernau).

Visiting Postdoc. (Jul. 2019), Institute of Mathematical Sciences, Chennai, India (hosted by: Saket Saurabh).

Algorithmic Tractability via Sparsifiers, Leh, India.

Workshop on Kernelization (WORKER), Bergen, Norway.

Visiting Postdoc. (June 2019), University of Bergen, Bergen, Norway (hosted by: Saket Saurabh).

New Horizons in Parameterized Complexity, Dagstuhl Seminar, Dagstuhl, Germany.

19th Max Planck Advanced Course on Foundations of Computer Science, Fine Grained Complexity, Saarbrücken, Germany.

Visiting Postdoc. (Sept. 2018), University of Warwick, Warwick, England (hosted by: Prof. Ramanujan Sridharan).

Visiting Researcher (Jan-May 2018), Institute of Mathematical Sciences, Chennai, India (hosted by: Prof. Saket Saurabh).

Recent Advances in Parameterized Complexity, Tel-Aviv, Israel.

Recent Advances in Algorithms, St. Petersburg, Russia.

The 15th Annual Winter School in Algorithms, Myrkdalen, Norway.

BeHard + Parapprox  $++ = < 3$ , Solstrand, Norway.

Workshop on Satisfiability Lower Bounds and Tight Results for Parameterized and Exponential-Time Algorithms, Simons Institute for the Theory of Computing, UC-Berkley, California.

Workshop on Kernelization (WORKER), Nordfjordeid, Norway.

The 13th Annual Winter School in Algorithms, Ustaoset, Norway.

Advanced School on Parameterized Algorithms and Kernelization, Institute of Mathematical Sciences, Chennai, India.

Instructional School for Lecturers in Linear Algebra, CEMS, Department of Mathematics, Kumaun University, Almora, India.

Recent Advances in Algorithms and Complexity, Indian Institute of Technology, Delhi, India.

## (RECENT) TEACHING

(CS2800, Jan-May 2024) Design & Analysis of Algorithms, (CS6101, Aug-Nov 2023; CS6190, Feb-Jun 2021) Parameterized Algorithms, (CS6841, Jan-May 2023) Approximation Algorithms, (CS5800, Aug-Nov 2022) Advanced Data Structures & Algorithms, (CS6100, Jan-May 2022) Fine Grained Algorithms & Complexity, (CS6100, Aug-Nov 2021) Kernelization.

## REFERENCES

Prof. Saket Saurabh ([saket@imsc.res.in](mailto:saket@imsc.res.in))  
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