Ajinkya R. Gaikwad

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Education

- **Fcaculty of Information Technology Czech Technical University** — **Prague, Czech Republic**
  Postdoc — *2026–*
- **Indian Institute of Science Education and Research (IISER)** — **Pune, India**
  Ph.D. in Mathematics — *2019–2025*
- **Indian Institute of Science Education and Research (IISER)** — **Pune, India**
  B.S.–M.S. Dual Degree — *2014–2019*

Conference Publications

- Ajinkya Gaikwad, Hitendra Kumar and Soumen Maity, Parameterized Algorithms for Editing to Uniform Cluster Graph, **FCT 2025**. Link
- Ajinkya Gaikwad, Hitendra Kumar, Soumen Maity, Saket Saurabh and Roohani Sharma, MaxMin Separation Problems: FPT Algorithms for st-Separator and Odd Cycle Transversal, **STACS 2025**. Link
- Ajinkya Gaikwad and Soumen Maity, Parameterized complexity of the T_{h+1}-Free Edge Deletion Problem, **FCT 2023**, Lecture Notes in Computer Science, Vol. 14292, 221-233, 2023.Link
- Ajinkya Gaikwad and Soumen Maity, On the Harmless Set Problem Parameterized by Treewidth, **WALCOM 2022**, *Lecture Notes in Computer Science*, Vol. 13174, 227-238, 2022. Link
- Ajinkya Gaikwad, Soumen Maity and Shuvam Kant Tripathi, Parameterized intractability of defensive alliance problem, **CALDAM 2022**, *Lecture Notes in Computer Science*, Vol. 13179, 279-291, 2022.Link
- Ajinkya Gaikwad and Soumen Maity, On Structural Parameterizations of the Offensive Alliance Problem, **COCOA 2021**, *Lecture Notes in Computer Science*, Vol. 13135, 579-586, 2021.Link
- Ajinkya Gaikwad, Soumen Maity and Shuvam Kant Tripathi, The Balanced Satisfactory Partition Problem, **SOFSEM 2021**, Lecture Notes in Computer Science, Vol. 12607, 322-336, 2021. Link
- Ajinkya Gaikwad, Soumen Maity and Shuvam Kant Tripathi, Parameterized Complexity of Locally Minimal Defensive Alliance, **CALDAM 2021**, Lecture Notes in Computer Science, Vol. 12601, 135-148, 2021. Link
- Ajinkya Gaikwad, Soumen Maity and Shuvam Kant Tripathi, Parameterized Complexity of Defensive and Offensive Alliances in Graphs, **ICDCIT 2021**, Lecture Notes in Computer Science, Vol. 12582, 175-187, 2021.Link
- Ajinkya Gaikwad, Soumen Maity and Shuvam Kant Tripathi, Parameterized Complexity of Satisfactory Partition Problem, **COCOA 2020**, Lecture Notes in Computer Science, Vol. 12577, 76-90, 2020.Link

Journal Publications

- Ajinkya Gaikwad and Soumen Maity, Globally Minimal Defensive Alliances: A Parameterized Perspective, **Discrete Applied Mathematics**, (Accepted).
- Ajinkya Gaikwad, Soumen Maity and Shuvam Kant Tripathi, Parameterized Complexity of Locally Minimal Defensive Alliances, **Discrete Applied Mathematics**, (Accepted).

- Ajinkya Gaikwad and Soumen Maity, Structural Parameterizations of the Harmless Set Problem, **Algorithmica**, Vol. 86, 1475-1511, 2024.Link
- Ajinkya Gaikwad and Soumen Maity, Offensive Alliances in Graphs, **Theoretical Computer Science**, Vol. 989, 114401, 2024. Link
- Ajinkya Gaikwad and Soumen Maity, Defensive Alliances in Graphs, **Theoretical Computer Science**, Vol. 928, 136 -150, 2022. Link
- Ajinkya Gaikwad and Soumen Maity, Further parameterized algorithms for the F-free edge deletion problem, **Theoretical Computer Science**, Vol. 933, 125-137, 2022.Link
- Ajinkya Gaikwad, Soumen Maity and Shuvam Kant Tripathi, Parameterized Complexity of Satisfactory Partition Problem, **Theoretical Computer Science**, Vol. 907, 113-127, 2022. Link
- Ajinkya Gaikwad, Soumen Maity, Globally Minimal Defensive Alliances, **Information Processing Letters**, Vol. 177, 106253, 2022. Link

Preprints

- Ajinkya Gaikwad, Hitendra Kumar, S. Padmapriya, Praneet Kumar Patra, Harsh Sanklecha, Soumen Maity, *Inclusive and Exclusive Vertex Splitting into Specific Graph Classes: NP Hardness and Algorithms*. Link
- Ajinkya Gaikwad, *Parameterized Complexity of s-Club Cluster Edge Deletion: When Is the Diameter Bound Necessary?* Link
- Ajinkya Gaikwad, Hitendra Kumar and Soumen Maity, Parameterized Algorithms for Editing to Uniform Cluster Graph. Link
- Ajinkya Gaikwad, Soumen Maity and Saket Saurabh, Parameterized Algorithms for Locally Minimal Defensive Alliance. Link
- Ajinkya Gaikwad and Soumen Maity, Parameterized Complexity of Upper Edge Domination. Link

Professional Services

Reviewed research papers for Discrete Applied Mathematics, Algorithmica, Theoretical Computer Science Journal and also conferences such as MFCS, IWOCA etc.

Teaching

- Teaching Assistant: *Linear Algebra*, Pune University (Fall 2024); *Graph Theory*, NPTEL (Spring 2024), IISER (Spring & Fall 2021); *Graph Theoretic Algorithms and Combinatorics*, Ferguson College (Fall 2023, Fall 2022, Spring 2022, Spring & Summer 2021).
- Lecturer: *Ramsey Theory*, Pune University (Spring 2024); Combinatorics , Ferguson College (Fall 2023).

Fellowships and Awards

- Received the Best PhD Thesis Award from the Department of Mathematics, IISER Pune (2025)
- Received the prestigious Prime Minister's Research Fellowship. (September 2020 - October 2024)
- Received the CSIR NET fellowship. (August 2019 - August 2020)
- Received the Innovation in Science Pursuit for Inspires Research (INSPIRE) fellowship, given by the Department of

Science and Technology, Government of India (August 2014 - May 2019)

- Secured an All India Rank **133** in the Graduate Aptitude Test Engineering (GATE 2019 Mathematics) exam
- Eligible for Junior Research Fellowship after securing an All India Rank **69** in the National Eligibility Test (NET 2018) exam

References

1: Prof. Saket Saurabh — *Professor, The Institute of Mathematical Sciences, Chennai, India. Email: saket@imsc.res.in*

2: Prof. Soumen Maity — *Professor, IISER Pune, India. Email: soumen@iiserpune.ac.in*

3: Dr. Roohani Sharma — *Senior Researcher, Institute for Basic Science, South Korea. Email: roohani.sharma90@gmail.com*