

Rian Neogi

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I am currently doing my PhD at the Combinatorics and Optimization department of University of Waterloo under the supervision of Kanstantsin Pashkovich and Chaitanya Swamy. My interests lie in Algorithmic Game Theory and Combinatorial Optimization.

Education

- 2021–current **PhD in Mathematics**, *University of Waterloo*, Waterloo
- 2020–2021 **MMath in Mathematics**, *University of Waterloo*, Waterloo
- 2018–2020 **M. Sc in Computer Science**, *Institute of Mathematical Sciences*, Chennai
- 2013–2017 **B. Tech in Computer Science**, *NIIT University*, New Delhi

Publications

- EC 2026 **Multidimensional Budget-Feasible Mechanism Design**
with Kanstantsin Pashkovich and Chaitanya Swamy
<https://arxiv.org/abs/2508.09367>
- EC 2025 **An $O(\log \log n)$ -approximate budget feasible mechanism for subadditive valuations**
with Kanstantsin Pashkovich and Chaitanya Swamy
<https://arxiv.org/abs/2506.04665>
- ITCS 2024 **Budget-Feasible Mechanism Design: Simpler, Better Mechanisms and General Payments Constraints**
with Kanstantsin Pashkovich and Chaitanya Swamy
https://www.math.uwaterloo.ca/~rneogi/publication/bfm_itcs/BFM_ITCS.pdf
- MFCS 2020 **On the Parameterized Complexity of Deletion to $\mathcal{H}$ -free Strong Components**
with M. S. Ramanujan, Saket Saurabh and Roohani Sharma
<https://arxiv.org/abs/2005.01359>
- WG 2020 **Recognizing k -Clique Extendible Orderings**
with Mathew Francis and Venkatesh Raman
<https://arxiv.org/abs/2007.06060>
- TCS 2019 **Tractability of König edge deletion problems**
with Diptapriyo Majumdar, Venkatesh Raman and S. Vaishali
<https://arxiv.org/abs/1811.04560>
- CALDAM 2017 **Exact and Parameterized Algorithms for (k, i) -coloring**
with Diptapriyo Majumdar, Venkatesh Raman and Prafulkumar Tale
https://link.springer.com/chapter/10.1007/978-3-319-53007-9_25

Other Activities

Combinatorial Optimization Reading Group

I organise the Combinatorial Optimization reading group at the University of Waterloo.
Here is the website: <https://www.math.uwaterloo.ca/~rneogi/comb-opt-group/>

DRP Mentorship Program

I took part in the DRP mentorship program during Fall 2024, Spring 2025 and Fall 2025, where I mentored undergraduate students for a research project.