Daksh Dheer

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Interests

Motivated to work in algebraic number theory, particularly class groups, and related areas, with strong background in algebra, representation theory (of quivers and finite groups), homological algebra, valuation theory, algebraic topology, and commutative algebra.

Education

- Master of Science (by Research) Mathematics: Current GPA: 9.37
  Indian Institute of Science Education and Research (IISER), Thiruvananthapuram
  Batch topper

- Bachelor of Science (Honours) Mathematics (2023) : CGPA : 9.23
  Hansraj College, University of Delhi

- CBSE XII (2020) : 97.5%
  Ryan International School, Jaipur

Experience

April 2025 – present

Master's Thesis
Under the supervision of Prof. Viji Z. Thomas, IISER Thiruvananthapuram
Currently reading Valued Fields by Engler and Prestel, alongside Neukirch's Algebraic Number Theory. Aiming to study class field theory by graduation.

February 2024 – October 2024

Guided Reading Project
Under the supervision of Prof. Viji Z. Thomas, IISER Thiruvananthapuram
Read several sections and chapters from M. Isaacs': Finite Group Theory and J.P. Serre's Finite Groups, particularly concerning the transfer homomorphism, advanced properties of p-Sylow subgroups and structure of subgroups of products of groups.

Jan 2021 – April 2023

College Societies

The Poetry Society (January 2021 – April 2023) Served as a member of the Editorial and Technical teams of Kavyanjali, the poetry society of Hansraj College.

Debating Society (January 2021 – August 2021) Participated in debates and improved communication skills while being part of the English Debating society.

Oct 2020 – Aug 2022

Editor - Undergraduate Academic Journal (Aankalan)

Editor-in-Chief: (Aug 2021 – Aug 2022) Served as the Ed-in-Chief of the third edition of the Annual Academic Journal of the Mathematics Department, Hansraj College.

Assistant Editor: (October 2020 – August 2021) Served as an assistant editor in the 2^{nd} edition of the journal.

Research Schools and Conferences Attended

October 2025	*International Conference on Class Groups of Number Fields and Related Topics (ICCGNFRT - 2025), hosted at SRM University AP*
June 2025	*Mini course on Spectral Sequences and their applications in Homological Algebra (2025), conducted by Indian Institute of Science Education and Research (IISER) Thiruvananthapuram*
January 2025	*Frontier Symposium in Mathematics 2025, conducted by Indian Institute of Science Education and Research (IISER) Thiruvananthapuram*
December 2024	*Representation Theory of Quivers and BGG Category O for semi simple Lie Algebras (2024), conducted by Indian Institute of Technology (IIT) Kanpur*
June 2024 - July 2024	*Annual Foundation School - III, conducted by Indian Institute of Space and Technology (IIST) Thiruvananthapuram*
February 2024	*Frontier Symposium in Mathematics 2024, conducted by Indian Institute of Science Education and Research (IISER) Thiruvananthapuram*
July 2022	*Madhava Nurture Camp'22 - conducted by Indian Institute of Technology Bhubaneswar*
November 2021	*Madhava Nurture Camp'21 - conducted by St. Xavier's College, Kolkata*

Awards and Recognition

- Current batch topper, MS (by Research) Mathematics (2023 – present).
- **INSPIRE - Scholarship for Higher Education** fellowship, 2020-2023.
- Delhi University topper, B.Sc. (Hons.) Mathematics (2021).
- Special academic prizes awarded (undergraduate): Shrimati Krishnawanti Daulat Ram Chadha Prize, Shri Ladha Ram Delory Prize, Alumunus Prof. Nem Kumar Jain Prize, Pradeep Kumar Gupta Prize.

Skills

Critical Thinking	MATLAB
Communication	Python
Collaboration	LaTeX

Relevant Coursework

Some of the courses and topics I have studied as part of my coursework:

- Discrete Mathematics
- Groups and Rings
- Fields, Modules and Algebras
- Analysis on Manifolds
- Complex Analysis
- Algebraic Topology
- Number Theory and Cryptography
- Hyperbolic Geometry and Fuchsian Groups

- Homological Algebra
- Commutative Algebra
- Finite and Infinite Galois Theory
- Representation Theory of Finite Groups
- Differential Geometry
- Category Theory
- Algebraic Number Theory
- General Topology

References

Prof. Viji Z. Thomas
Thesis Advisor
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Dr. Shrihari Sridharan
School of Mathematics
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