

MEGHANA BHAT ¹

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| CONTACT INFORMATION | 603 A-2 Science block Indian Institute of Technology Dharwad 580011 India. | Personal email - <code>mbhat.maths@gmail.com</code> Institutional email- <code>ma21dpf01@gmail.com</code> |
| RESEARCH INTERESTS | Hilbert functions, Waring rank problem of forms. | |
| EDUCATION | Indian Institute of Technology Dharwad | |
| | Ph.D. in Mathematics CGPA: 9.56/10 • Thesis title: Hilbert functions and its applications to Waring decomposition and singularity theory • Advisor: Prof. Shreedevi Masuti | July 2021- July 2026 |
| | Pondicherry University, Pondicherry | |
| | M.Sc. Mathematics CGPA: 9.49/10 | July 2019 - July 2021 |
| HONOURS / AWARDS | Prime Minister's Research Fellow (PMRF) (2022-26) Scheme for Promotion of Academic and Research Collaboration (SPARC) Indian Scholar (2024-26) INSPIRE Scholarship (SHE) (2016-21) National Means-Cum-Merit Scholarship Scheme Examination (NMMS) (2012-16) | |
| PREPRINTS / PUBLICATIONS | M. Bhat, E. Carlini, S. K. Masuti. <i>Waring rank of quasi-monomial complete intersections</i> . In preparation. (2026). M. Bhat, E. Carlini, S. Dubey, S. K. Masuti. <i>Waring decompositions of the product of two quadrics: the small rank cases</i> . arXiv:2511.23035. (2025). M. Bhat, S. Dubey, S. K. Masuti. <i>Symmetric decomposition of the Hilbert function of an ideal</i> . arXiv:2503:21173. (2025). M. Bhat, S. Dubey, S. K. Masuti, T. Okuma, J. K. Verma, K. Watanabe, and K. Yoshida. <i>On Gorensteinness of associated graded rings of filtrations</i> . Communications in algebra. 1-21, DOI: 10.1080/00927872.2026.2619454. | |
| TALKS / POSTERS | <i>Indo-European Conference on Mathematics, Pune, India, January 2026.</i> <i>International conference on commutative algebra to the memory of Jürgen Herzog, VI-ASM Hanoi, Vietnam, July 2025.</i> <i>Modules and Rings: Recent Developments in Commutative Algebra, University of Genoa, Italy, June 2025.</i> | |

¹<https://bhat-meghana.github.io/>

Ramanujan Mathematical Society Conference 2024, Christ University, Bangalore, India, December 2024

International conference on local rings and singularities, IIT Bombay, India, June 2024

Seminars of Algebra, Algebraic Geometry and their applications, Politecnico Di Torino, Italy, April 2024

One day symposium on Algebra and Geometry, IIT Dharwad, April 2024

RESEARCH VISITS Politecnico Di Torino, Italy (Host: Prof. E. Carlini, funded by SERB-SPARC grant of Prof. Shreedevi Masuti), April-May 2024, April- June 2025, November-December 2025

IIT Bombay, India (Host: Prof. Jugal Verma), June 2023

CONFERENCES / WORKSHOPS *Introductory workshop : Commutative algebra*, SL Math Institute Berkeley (MSRI), USA, January 2024

School and workshop on Commutative Algebra and Algebraic Geometry in Prime Characteristics and Workshop on Commutative Algebra and Algebraic Geometry in Prime Characteristics, ICTP Italy, May 2023

Conference on Commutative Algebra and Algebraic Geometry (CoCAAG-2023), IIT Hyderabad, India February 2023

Sagedays 114, The Institute of Mathematical Sciences, Chennai, July 2022

TEACHING EXPERIENCE TA for Calculus (B.Tech.), Autumn 2025, Autumn 2024

TA for Linear Algebra, Differential Equations-I (B.Tech.), Spring 2024

TA for Complex Analysis, Differential Equations-II (B.Tech.), Autumn 2023

TA for Calculus-I,II, Linear Algebra (B.Tech.), Spring 2023

TA for Linear Algebra, Differential Equations-I (B.Tech.), Spring 2022

TA for Complex Analysis, Differential Equations-II (B.Tech.), Autumn 2021

Instructor for the course Operations research (M.Sc.), KCD College Dharwad, Jan-March 2024

Mentor for the Online Foundation Course in Mathematics held online by MTTS (OFCM-2025), (OFCM-2023) and (OFCM 2020).

COMPUTING SKILLS Basics of programming [Language: C]
Computer algebra systems (Macaulay2, Singular, CoCoA)
Math typesetting in \LaTeX

EXTRA CURRICULAR Helped to conduct Initiation into Mathematics Programme for UG students (2026)
Post-Graduate Senate representative (2023-25)
Departmental Post-Graduate Committee student member (2023-25)

Post-Graduate Academic Performance Evaluation Committee student member (2023-25)

Student organizer of the SPICMACAY (Society for Promotion of Indian Classical Music and Culture Amongst Youth) convention held at IIT Dharwad (2024)