

Dr. PANKAJ

Curriculum Vitae



Contact Details

Office Address: **Assistant Professor**
Department of Mathematics
Govt. College Chamba
Himachal Pradesh-176314, India.

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Himachal Pradesh-176318, India.

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Personal Details

Birth 1996/10/13, Chamba-town
Gender Male
Marital Status Unmarried
Nationality Indian
Language English, Hindi

Education

2013-2016 **B.Sc.(Hons. Mathematics)**
Himachal Pradesh University, Summer Hill, Shimla-171005
First class

2016-2018 **M.Sc. in Mathematics**
Himachal Pradesh University, Summer Hill, Shimla-171005
First class *Gold Medalist*

2018-2019 **M.Phil. in Mathematics**
Himachal Pradesh University, Summer Hill, Shimla-171005
Supervisor: Dr. Madhu Dadhwal
Topic: Algebra
Dissertation Title: A Study of Partitioning Ideals, Quasi-Ideals and Euclidean Norm in Ternary Semirings.
First class

2019-2023 **Ph.D. in Mathematics**

Himachal Pradesh University, Summer Hill, Shimla-171005

Supervisor: Dr. Madhu Dadhwal

Topic: Algebra

Thesis Title: *Distinguishing Labelling and some Codes over Wreath Products, Binary Tetrahedral Group and Heisenberg Group.*

Completed

Awards/Honours and Fellowships

2013-2018 Received Inspire Scholarship funded by DST India

2017-2018 Department Representative SCA(Campus) in the Department of Mathematics & Statistics, Himachal Pradesh University, Shimla-5

Oct-2018 Qualified State Eligibility Test (SET) for Lectureship

Nov-2018 Received Gold Medal (for standing first in order of merit in M.Sc.)

2018-2019 Received HPU-JRF funded by Himachal Pradesh University, Shimla-5

Dec-2018 Qualified Joint CSIR-UGC National Eligibility Test (NET) for

Junior Research Fellowship (JRF) and Lectureship **AIR-82**

Mar-2019 Qualified Graduate Aptitude Test for Engineering (GATE) **AIR-534**

2019-2021 Received Junior Research Fellowship funded by CSIR-HRDG India

2021-2023 Received Senior Research Fellowship funded by CSIR-HRDG India

Research Interest

Algebra, Combinatorics, Coding Theory

Teaching/Research Experience

Teaching Experience: July 2023 Onward

Research Experience: September 2018 Onward

Research Publications

1. Madhu Dadhwal and **Pankaj**, On distinguishing labelling of sets under the wreath product action, *Indian Journal of Pure and Applied Mathematics*, (Springer) 54, 920-935, 2023.
DOI: <https://doi.org/10.1007/s13226-022-00314-w>
2. Madhu Dadhwal and **Pankaj**, Group codes over binary tetrahedral group, *Journal of Mathematical Cryptology*, 16, 310-319, 2022.
DOI: <https://doi.org/10.1515/jmc-2022-0009>
3. Madhu Dadhwal and **Pankaj**, On distinguishing labeling of groups for the conjugation action, *Malaya Journal of Matematik*, 11(01), 94-106, 2023. DOI: <http://doi.org/10.26637/mjm1101/007>
4. Madhu Dadhwal, **Pankaj** and R. P. Sharma, On Euclidean Norm and Factorization in Ternary Semi-domains, *Aryabhatta Journal of Mathematics & Informatics*, 14(1), 13-26, 2022.
DOI: <https://doi.org/10.5958/2394-9309.2022.00053.1>

5. **Pankaj**, Rohit Sharma and Madhu Dadhwal, On distinguishing labelling of sets under the direct product action, published as **a chapter in a book** “Recent Advances in Mathematical Sciences”, Ideal International E-Publication: Pvt. Ltd, 1-8, 2023. www.isca.co.in.
6. Madhu Dadhwal and **Pankaj**, On distinguishing labelling of sets under the wreath product action of \overrightarrow{A}_n (*published online*) in *Indian Journal of Pure and Applied Mathematics*, (Springer) 2024.
DOI: <https://doi.org/10.1007/s13226-024-00535-1>
7. Madhu Dadhwal and **Pankaj**, A study of group codes over hyperoctahedral group (*Communicated*).
8. Madhu Dadhwal and **Pankaj**, Group codes over Heisenberg group H_{ep} (*Communicated*).

Conferences/Workshops/Seminars/Other Activities Attended

1. **“International Conference on Algebra and Continuum Mechanics-2018 (ICACM-2018)”** sponsored by UGC Special Assistance Programme (DRS Phase-II), organized by Department of Mathematics and Statistics, Himachal Pradesh University, Shimla-171005, November 23-25, 2018.
2. National Workshop on **“Sustainable Development Goals”** on the auspicious occasion of Statistics Day, Organized by Department of Interdisciplinary Studies, Department of Mathematics & Statistics, Department of Economics and Statistics of Government of Himachal Pradesh, June 29, 2019.
3. **Presented a paper** entitled **“On Euclidean Ternary Semirings”** in **“International Conference on Recent Advances in Algebra, Analysis and Applications-2019 (ICRAAAA-2019)”**, organized by Department of Mathematics and Statistics, Mohanlal Sukhadhiya University, Udaipur-313001 (RAJ.), December 20-22, 2019.
4. Workshop on **“Writing a Research Paper/Article: Concept, Structure and Style”** organized by Students for Holistic Development of Humanity (SHoDH) & Sunil Upadhyaya Educational Trust, December 27-28, 2019. (**stood first in “Best Abstract Writing Competition”**)
5. **“Online National Workshop on Basics of Documentation using Latex”** organized by Department of Mathematics, Stella Maris College (Autonomous), Chennai, Tamil-Nadu, India, April 24,25,29 & 30, 2020.
6. Participated and successfully completed **“Summer School on Mathematics”** organized by The Indian Mathematics Consortium (TIMC), Kalna College, West Bengal, India, 12 June 2020 to 12 July 2020.

7. International Workshop on “**Srinivasa Ramanujan: The Man Beyond Infinity**” organized by Srinivasa Ramanujan Department of Mathematics Center for Vadic Mathematical Studies, Central University of Himachal Pradesh, Dharamshala, Kangra, December 22, 2020.
8. “**Online Sagemath Workshop**” organized by Department of Mathematics, Indian Institute of Technology Jodhpur (IITJ), February 15-18, 2021.
9. Online Workshop on “**Recent Trends in Domination and Graph labelling (RTDGL 2021)**” organized by Department of Mathematics, Ramanujan college, University of Delhi in collaboration with Academy of Discrete Mathematics and Applications (ADMA), May 27-31, 2021.
10. Presented a paper entitled “**On Euclidean Ternary Semirings and Factorizations in Ternary Semidomains**” in “**International Conference on Recent Trends in Mathematics (ICRTM-2021)**”, organized by Himachal Mathematics Society (HIMS), December 6-7, 2021.
11. Presented a paper entitled “**On Distinguishing Number for Conjugation Action**” in “**International Conference on Recent Trends in Mathematical Sciences (ICRTMS-2021)**”, organized by Himachal Ganita Parishad (HGP), December 11-12, 2021.
12. Presented a paper entitled “**Group Codes over Hyperoctahedral Groups**” in “**International Conference on Recent Strategies in Mathematics and Statistics (ICRSMS 2022)**”, organized by Department of Mathematics, Stella Maris College, Chennai, in collaboration with Department of Mathematics, Indian Institute of Technology, Madras (IITM), Chennai, May 19-21, 2022.
13. Workshop on “**Frontier Areas in Materials Research**” organized as an initiative from the Editorial Board of Bulletin of Materials Science, Published by Indian Academy of Science (IASc) under Department of Science and Technology (DST), Government of India, in collaboration with Department of Physics, Himachal Pradesh University, Shimla-05, September 9-10, 2022.
14. Presented a paper entitled “**Group Codes over Binary Tetrahedral Group**” in “**International Conference on Graphs, Networks and Combinatorics (ICGNC 2023)**”, organized by Department of Mathematics, Ramanujan College, University of Delhi, January 10-12, 2023.
15. Presented a paper entitled “**On Distinguishing Labelling of Sets under the action of \overline{A}_n** ” in “**International Conference on Recent Advances in Mathematical Sciences (ICRAMS- 2023)**”, organized by Department of Mathematics & Statistics, Himachal Pradesh University in collaboration with Himachal Mathematics Society (HIMS), March 29-30, 2023.

Memberships

Life member of Himachal Mathematics Society (HIMS)

Life member of Himachal Ganita Parshad (HGP)

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Life member of Vigayan Samiti Himachal (VIGYASA)

*VIGYASA/2022-
23/0010*

Software Skills

Scientific Workplace, L^AT_EX, Python, GAP(Groups, Algorithms and Programming), SageMath