


CURRICULUM VITAE - PREETI DHARMARHA

Title	Dr.	First Name	PREETI	Last Name	DHARMARHA	Photograph
Name		Preeti Dharmarha				
Designation		Associate Professor				
Address		Department of Mathematics, Hansraj College, University of Delhi. Delhi 110 007				
Phone No Office		011 – 2766 7548				
Residence		011 – 4552 4942				
Mobile		+91 98101 64942				
Email		drpreetidharmarha@hrc.du.ac.in				
Web-Page						
Educational Qualifications M. Sc., M. Phil., Ph. D.						
Degree & Course		Institution			Year	
Ph.D.*		Delhi University			2010	
M.Phil.**		Delhi University			1990	
PG: M.Sc. (Mathematics)		Delhi University (Hansraj College)			1986, Rank 1	
UG: B.Sc. (Hons.) Mathematics		Delhi University (Hansraj College)			1984, Rank 1	
Any other qualification		1. UGC-NET with JRF 2. Certificate in French Language			1987 1986(With Distinction)	
<p>1. *Title: Ph.D. Thesis: A study of Weighted Weyl Spectra of Operators</p> <p>2. **Title: M.Phil. Dissertation: A study of Commutants of Analytic Toeplitz Operators</p>						
Career Profile: Started as Ad-Hoc Lecturer in Department of Mathematics, Hansraj College, University of Delhi in 1987. Continuing since then and currently working as Associate Professor.						
Teaching Experience:						
S. No.	Nature of Post	Designation		From - To		
1.	Part Time	Lecturer		20.10.1987 to 17.11.1987		

2.	Ad hoc	Lecturer	18.11.1987 to 17.03.1988
3.	Temporary	Lecturer	19.01.1988 to 23.10.1989
4.	Permanent	Lecturer	24.10.1989
5.	Permanent	Senior Lecturer	08.11.1994
6.	Permanent	Reader	27.07.1998
7.	Permanent	Associate Professor	01.01.2006

Subjects Taught:

Undergraduate:

1. B. A./ B. Sc. (Hons.) Mathematics

- i. Metric Spaces (Semester, FYUP and CBCS Mode)
- ii. Complex Analysis (Semester, FYUP and CBCS Mode)
- iii. Bio Mathematics (Semester mode)
- iv. Discrete mathematics (Annual Mode and Semester Mode)
- v. Analysis – IV (Riemann Integration) (Annual Mode)
- vi. Analysis – I (Annual Mode)
- vii. Calculus (Annual Mode)
- viii. Algebra – I (Semester Mode)
- ix. Real Analysis (Semester Mode)

2. B. Com. (Hons.)

- i. Business Mathematics (Annual Mode)

3. B. Sc. (H) (Chemistry)

- i. Calculus (Semester mode)
- ii. Coordinate Geometry and Algebra (Annual Mode)

4. B.Sc. (Physical sciences)

- i. Real Analysis (Semester mode)
- ii. Calculus (Annual Mode)

5. B.Sc.(H) Physics

- i. PHHT-413, Paper-15: Mathematics-II (Sem. Mode)

Postgraduate:

M.A/ M.Sc. Mathematics

- i. Topology-I ((Department of Mathematics, University of Delhi, 2018-19, Sem. II)
- ii. Differential Geometry (Department of Mathematics, University of Delhi, 2017-18, Sem. IV)

IT usage and Software: Basics of MS word, MS Excel, MS PPT, Maxima, Mathematica and LaTeX & HTML

Ph.D:

Reading Course: Math16-30 'Banach Algebra Techniques in Operator Theory to **Ph.D. scholars** in the Department of Mathematics, University of Delhi in 2016-17.

Contribution to Curriculum Development:

1. **Course Convenor:** Online Certificate course (SLC Course 01)- Duration:30 Hours: Introduction to Computer Algebra System (CAS): Maxima (An Open Source Software), June 28- July 18, 2020); Student Learning Centre: Hansraj College.
2. Worked with Department of Mathematics, Delhi University as member for **UG Syllabus Revision Committee under CBCS -2018**
3. Worked as Committee Member for the following papers of **B.Sc.(H) Maths (LOCF) in Delhi University (2018-19):**

S.No	Sem.	Course	Paper Code/ Title of the Paper	Credits
3.1.	II	B.Sc.(H) Mathematics	BMATH203: Real Analysis	6
3.2	III	B.Sc.(H) Mathematics	BMATH307: Multivariate Calculus (with practicals)	6
3.3	V	B.Sc.(H) Mathematics	BMATH511: Metric Spaces	6
3.4	VI	B.Sc.(H) Mathematics	BMATH613: Complex Analysis	6
3.5	V	B.Sc.(H) Mathematics	DSE-2(ii): Discrete mathematics	6
3.6	VI	B.Sc.(H) Mathematics	DSE-3(iii): Biomathematics	6

- 4 Worked as Core Committee Member-**syllabus formulation** for the paper '**Discrete Mathematics**' of B.Sc.(H) Mathematics (**FYUP**) in 2013-14
- 5 Member: Committee of Courses, Faculty of Mathematical Sciences
- 6 Worked as Core Committee Member-**syllabus formulation** for the paper '**Discrete Mathematics**' of B.Sc.(H) Mathematics (Unit system) in 1993-94 (Conv: Dr. Premnath, Ref.to old records of the Department of Mathematics, DU)

Administrative experience:

S. No.	Nature of assignment	Status	Year
1.	Finance Department (College)	Bursar	2020-2022
2.	Internal Complaints Committee of the College:	Presiding Officer	2019-20, 2020-21

3.	IQAC	Member	2015-till date
4.	Admission: University Ward Quota	Convenor	2020-21
5.	College Moderation Committee	Convenor	2020-21
6.	NIRF	Nodal Officer	2018-19, 2019-20
7.	NAAC	Coordinator	2015-17
8.	Steering Committee for NAAC	Convenor	2015-17
9.	Board of Directors, Faculty Development Centre, Hansraj College under PMMMMNMTT (MHRD)	Member	2018-19
10.	Library Committee	Convenor	2016-17, 2017-18
11.	Grievance Redressal Committee	Convenor	2017-18
12.	College Student Union	Election Officer	2011-2012, 2016-17
13.	Student Union Advisory Committee	Convenor	2016-17
14.	Examinations, Hansraj College	Superintendent	2000, 2002 and 2010
15.	Staff Council, Hansraj College: (Ref: Staff Council Documents)	Secretary	1999 - 2000
16.	Hansraj College Alumni Association	Secretary	2015-18 (nominated by Principal, Hans College),
17.	College Building Committee	Member	2017-18, 2018-till date
18.	IQAC	Member	2015-till date
19.	Admissions (Sciences)	Convenor	2014-15
20.	Department of Mathematics	Teacher-in-Charge	1995-96, 2008-09 and 2015-16
21.	Environment Awareness Committee	Convenor	2009-2010, 2010-2011 and 2013-2014.
22.	Publications Committee	Convenor	2013-2014
23.	Hansraj@Antardhwani	Convenor	2013-14, 2014-15

24.	Hansraj College Alumni Association	Member: Executive Committee	2012-2015 (nominated by Principal, Hansraj College)
25.	Hansraj College Alumni Association	Treasurer	2006-2014, 2009-2012 (nominated by Principal, Hansraj College)
26.	Society for General Awareness	Convenor	2015-16, 2016-17, 2017-18
27.	Student Welfare Committee	Convenor	(Ref: Old Staff Council Documents)
28.	Student Welfare Committee	Member	(Ref: Old Staff Council Documents)
29.	Academic Affairs Committee	Member	(Ref: Old Staff Council Documents)

Academic Profile:

Areas of Interest / Specialization:

1. Functional Analysis
2. Operator Theory

Publications:

Title	Publication type, year, referred or not	Journal ISSN/ ISBN No., Year	Sole/ Co-author
A note on (m,n) -paranormal operators	Research Paper Open Access, Peer Reviewed, Mathematical Reviews (USA), Zentralblatt für Mathematik(Germany) UGC Listed	Electronic Journal of Mathematical Analysis and Applications ISSN 2090-729X/ Vol. 9(1) January, 2021 Pg. 274-283	One of two authors

A note on $(m,n)^*$ -paranormal operators	Research Paper Indexed in Mathematical Reviews (USA), Zentralblatt für Mathematik (Germany), Referativnyi Zhurnal , Current Mathematical Publications And Scopus	Novi Sad Journal of Mathematics 2020 (Nov. 1) (Draft Version -online) 1450-5444 https://doi.org/10.30755/NSJOM.10257	One of two authors
(m,n) -paranormal operators and $(m, n)^*$ -paranormal operators	Research paper Peer reviewed Mathematical Reviews (USA), Zentralblatt für Mathematik(Germany) KCI, SCOPUS, and Emerging Sources Citation Index. UGC Listed	Communications of the Korean Mathematical Society 35(2020), No.1, pp.151-159 pISSN: 1225- 1763/eISSN: 2234- 3024	One of two authors
बाएं भारित स्पेक्ट्रम (On left weighted spectrum)	Research Paper UGC Listed	Vigyan Garima Sindhu, CSTT Vol.108 (Jan-March, 2019) ISSN: 2320-7736, pp.262-267	One of two authors
V-Shaped Toeplitz Operators	Research Paper, (Online Version) UGC Listed (Earlier List)	International Journal Of Pure and Applied Mathematics, ISSN: 1311-8080, (2017), Vol. 114.	One of two authors
A generalization of class W of operators	Research Paper (Available on Website of IMBIC)	Proceedings of IMBIC, Volume 7 (2018) , ISBN 978- 81-925832-6-6.	Sole author
On Left Weighted Weyl's Theorem	Research paper Peer reviewed Mathematical Reviews (USA) Current Mathematical Publications (USA) Zentralblatt MATH (Germany) UGC Listed	Bulletin of the Allahabad Mathematical Society (2007), Vol. 23, Part 2, 285-292. ISSN: 0971-0493	Sole author

Weighted Weyl Spectrum;	Research paper UGC Listed	Ganita, Vol. 58, No. 1 (2007), 67-74. ISSN:0046-5402	Sole author
On Joint Weighted Spectrum,	Research Paper Peer reviewed UGC Listed	Bull. Cal. Math. Soc., 99, (5) (2007), 539-546. ISSN: 008-0659	One of two authors
Operators satisfying $\operatorname{Re} \sigma_{\alpha}(T) = \sigma_{\alpha}(\operatorname{Re} T)$	Research Paper UGC Listed (earlier List)	International Journal of Pure and Applied Mathematics, Bulgaria, Vol. 34, No. 2 (2007), 197-202. ISSN:1311-8080	One of two authors
Weighted Weyl spectrum II	Research Paper Peer reviewed Mathematical Reviews(USA), Science Citation Index-Expanded®, Zentralblatt für Mathematik(Germany) KCI, and SCOPUS UGC Listed	Bulletin of Korean Mathematical Society 43 (2006), No. 4, 715-722. ISSN: 1015-8634	One of two authors
Ongoing Research Work:			
Spectral mapping theorem and Weyl's theorem for (m, n)-paranormal operators	Research Paper	Under review	One of two authors
Spectral mapping theorem and Weyl's theorem for (m, n)-paranormal operators	Research Paper	Under review	One of two authors
On Weighted Browder Spectrum.	Research Paper	Under review	One of two authors
On Pseudo- Weighted Browder Spectrum	Research Paper	Under review	One of two authors
On Some Properties of V-Shaped Toeplitz Operators-1	Research Paper	Under review	One of two authors

Contribution to Journal/book/ Online Content:

1. **Aankalan, The Annual Journal of Department of Mathematics, Hansraj College, Volume 1, 2020 , Head , Advisory Editorial Board**

2. **Chapter in an Edited Book:** A generalization of class W of operators, Proceedings of IMBIC(2018), Vol.7, ISBN 978-81-925832-6-6, pp.157-164.

3. **Finite Mathematics for Business, Economics, Life Science and Social Sciences** (Barnett, Ziegler and Byleen), published by Pearson (2015): ISBN-9781292062297,

4. **Questions in Analysis** for B.Sc.(Hons.) Mathematics in 2008-2009: ILL (DU)Website (ISSN 2349-154X).

Research Guidance:

Level of Guidance	No. of Candidates	Status	Title
1. M.Phil.	One	Completed	Classes of Operators satisfying Weyl Type Theorems
2. Ph.D.	Three	Ongoing	1. On some paranormal operators 2. A generalisation of Browder Spectrum

Papers presented in Conferences/ Workshops/ Symposium:

Title/ Subject of the paper with year of publication	Title/ Subject of Conference/ Seminar/ Workshop	Organizing Institution (with City and Country)	National/ International
A generalization of class W of operators	MSAST, with workshop on Mathematical and Statistical Applications in Life Sciences and Engineering, Dec.21-23, 2018,	IMBIC and MAKUT, Kolkata, West Bengal	International

On Left Weighted Spectrum (2008)	International Conference on Operator Theory and Related Areas (ICOTRA)	Delhi, India	International
Riemann Integration (1998)	Refresher Course in Mathematics (Maths-14), ,	CPDHE, University of Delhi	State Level
Resource Person/ Invited Talks at Conference/ Workshops/ Seminars:			
Title/ Subject	Conference/ Seminar/ Workshop	Organizing Institution (With City and Country)	Date and Duration
Metric Spaces	National: Virtual Workshop on Collating Mathematics Resources for Teachers in Higher Education	National Institute of Educational Planning and Administration (NIEPA)	October 7, 2020 (25 Mins.)
Left Weighted Weyl Spectrum and Left Weighted Weyl Theorem	International Conference on Mathematical Analysis and its Applications (ICMAA-2019)	Department of Mathematics, South Asian University, New Delhi	December 14 th , 2019 (30 mins.)
Weighted Essential Spectrum and a class of operators	National Conference on Advances in Mathematical Analysis and its Applications (NCAMAA-2019)	Department of Mathematics, PGDAV College, University of Delhi, New Delhi	November 9 th , 2019 (30 mins.)
A Generalization of Left Essential Spectrum	21st Annual Conference of Vijnana Parishad of India Modelling, Optimization and Computing for Technological and Sustainable Development (MOCTSD-2019), National	Department of Mathematics, SRM institute of Science and Technology, Ghaziabad (U.P.)	April, 2019 (30 mins.)

Class $W\alpha$ of Operators	National Seminar on Mathematical Modelling, Optimization and Scientific Computing	Department of Mathematics, Hindu Girls College, Sonapat in collaboration with Global Society of Mathematical and Allied Sciences	23rd Feb. 2019 (30 mins.)
Left Spectrum of weight- α	National Workshop on Modelling, Optimization and Data Analytics	IIT Roorkee, Roorkee,	15 th Oct.2018 (30 mins.)
Compactness and Connectedness	DU Pre- Entrance Summer School-2018	University of Delhi, Delhi	07/06/2018 (90 mins.)
Completeness, Total boundedness and Separability	DU Pre- Entrance Summer School-2018	University of Delhi, Delhi	06/06/2018 (90 mins.)
Metric Spaces	DU Pre- Entrance Summer School-2018	University of Delhi, Delhi	05/06/2018 (90 mins.)
More about Weighted Weyl Spectrum (abstract publication) (Vol. 1, 110)	Fourth International Conference of Applied Mathematics and Computers (FICAMC)	Plodiv, Bulgaria	2007 (30 mins.)

Session Chaired at a conference: International Conference on Mathematical Analysis and its Applications (ICMAA-2019) organized by Department of Mathematics, South Asian University, New Delhi, Dec.2019

Conferences Attended:

1. International Conference on Mathematical Analysis and its Applications (ICMAA-2019), Department of Mathematics, South Asian University, New Delhi, Sponsoring Agency: SAU, CSIR, SERB , Dec. 2019
2. National Conference on Advances in Mathematical Analysis and its Applications (NCAMAA-2019), Department of Mathematics, PGDAV College, University of Delhi, New Delhi, Sponsoring Agency: SERB-DST, Nov. 2019
3. 12th International Conference MSAST, Dec.21-23, 2018, with workshop on Mathematical and Statistical Applications in Life Sciences and Engineering; jointly organised by IMBIC and MAKUT, Kolkata, West Bengal
4. National Workshop on Modelling, Optimization and Data Analytics, (14-15 October 2018), IIT Roorkee, Roorkee.
5. Annual Conference of Indian Women and Mathematics, IISc., Bengaluru, 2017
6. 14th Discussion Meeting on Harmonic Analysis, Department of mathematics,

University of Delhi, 2015.

7. National Conference on Advances in Mathematics sponsored by NBHM at Hansraj College, University of Delhi; 2014.
8. National Symposium on Functional Analysis, Optimization and Their Applications (FAOTA's), Delhi, India
9. International Conference on Operator Theory and Related Areas (ICOTRA), Delhi, India, 2008
10. Fourth International Conference of Applied Mathematics and Computers, Plodiv, Bulgaria, 2007
11. National Symposium on Recent Advances in Optimization Theory and Application (RAOTA-2006), Delhi, India

Workshops Attended:

1. Virtual Workshop on Collating Mathematics Resources for Teachers in Higher Education, National Institute of Educational Planning and Administration (NIEPA). October 6-7, **2020**.
2. Five days' National Webinar: Financial Mathematics: Pedagogy and Career Perspectives, Department of Mathematics, Lady Shri Ram College For Women, July 27-31, **2020**.
3. Two weeks Faculty Development Program (Online): Biomathematics, Department of Mathematics, PGDAV College with Mahatma Hansraj Faculty Development Centre under PMMMMNMT; Oct. 15- 28, **2020**.
4. One week Faculty Development Program: Open Source Tools for Research; Teaching Learning Centre, Ramanujan College (under PMMMMNMTT) (Online); June8-June 14, **2020**.
5. Two weeks Faculty Development Program: Managing Online classes & Co-creating MOOCS:2.0, Teaching Learning Centre, Ramanujan College (under PMMMMNMTT) (Online); May 18- June 3, **2020**.
6. One week Faculty Development Program: E-Learning, MOOCS and ICT Tools for Blended Learning, GAD Teaching Learning Centre, S.G.T.B. Khalsa College, Univ. of Delhi, Delhi; July02-July07, **2018**.
7. International Workshop on Operator Spaces, Department of Mathematics, University of Delhi; **2015**.
8. Workshop on Role of Technical Dictionary in Higher Education organized by Commission for Scientific and Technical Terminology, **2015**.
9. National Workshop on e- Content Development for Enhancing Pedagogical Skills for Teachers in Higher Education: a complete e- content Productions Experiment at Christ University, Bangalore, organized by CEDBEC, Bangalore; Sept. 9- 11, **2014**.
10. Workshop on Building Mathematical Ability, organized by CPDHE (UGC-ASC); **2013**

11. Workshop on Free/ open Source Software, "Maxima", ANDC, Delhi University, **2012**
12. National Workshop on "Differential Equations Computing and Modelling", Department of Mathematics, Delhi University, **2010**
13. Mathematica Workshop, South Campus, Delhi University, **2010**
14. National Workshop on Analysis, **2007**
15. Instructional Workshop on Fractal Geometry and Non-linear Dynamic Systems, Delhi, Delhi University, **2004**
16. Windows 95, MS Word and Power Point Workshop, Computer Centre, Delhi University, **2001**
17. Internet Concepts and Applications, Computer Centre, Delhi University, **1999**
18. Three Weeks Professional Development Programme in Analysis (Code: Math-14), CPDHE, Delhi University, **1998**
19. Three Weeks Professional Development Programme in Discrete Mathematics (Code: Math-4), CPDHE, Delhi University, **1993**
20. Three Weeks Professional Development Programme on Numerical analysis & Computer Programming and Differential Equations (Code: Math-2), CPDHE, Delhi University, **1992**

Organization of a Conference/ Workshop/Seminars

National Level:

1. **National Seminar** on Draft New Education Policy:2019

NIRF Related:

2. Quest for Quality: Ranking and Accreditation (Online), May 23, 2020.

ICC related:

3. Role of ICC and Prevention, Prohibition and Redressal of Sexual Harassment at Workplace (Online)\, May22, 2020.
4. Organized one-day workshop on Prevention of Sexual Harassment at Workplace (for non-teaching staff of the college), June 2019.

Library related:

5. Four Day Training Programme on KOHA (ILMS) for Library Staff in 2016.

Subject (Mathematics) related:

6. Shanti Narayan Mathematics Conclave: Launch of first edition of "Aankalan" – Department of Mathematics, Hansraj College,; Keynote speaker: Dr. S. R. Arora (Ex. Principal Hansraj College), Guest of Honour: Mr. Sanjiv Narayan, Feb. 27, 2020.

7. Seminar: Foreign education and admission process, Department of Mathematics, Hansraj College; Speaker: Dr. Anusha Srivastava- Columbia University (USA), November 9, 2019.
8. Hands on Session cum Workshop: Applications of Linear algebra, Department of Mathematics, Hansraj College; Speaker: Prof. Shobha Bagai (Dean: Admissions, Prof. CIC,DU) , September 23, 2019.
9. As a member of Finance Committee in International Conference on Operator Theory and Related Areas, Department of Mathematics, Delhi University
10. National Conference on Advances in Mathematics organized by NBHM at Hansraj College, University of Delhi; 2014.
11. Organized the following seminars in the department:
12. Seminar on Acturial Sciences
13. Seminar titled “Mathematics in Indus Valley Civilization” by Prof. Dinesh Singh
14. Inter College Seminar on “Management for Mathematics students” by Dr. N. K. Oberoi, 2008
15. Seminar on Logic by Prof. S. C. Arora
16. Inter College Seminar titled “Mathematics and Politics” by Dr. Sudeshna Basu from George Washington University, USA; 2013 on World Ozone day
17. Inter College Seminar titled “Symmetry on Mathematics” by Dr. Kalyan Bidhan Sinha from Statistics and Mathematics Unit, Delhi Centre, Indian Statistical Institute, 2014.

Environment related:

Organized the following for **the Environment Awareness Committee of the College:**

18. A talk by Magsaysay Award Winner Water Man of India, Dr. Rajendra Singh.
19. A seminar on e-waste Management.
20. A seminar on paper recycling.
21. Panellist, Inter College discussion on “Ozone depletion & its effects on day to day life” sponsored by Millennium India Education Foundation, held at Hansraj College, Delhi University, 2013 on World Ozone day.
22. Debate on “Science is for the Scientist, Lets’ not confuse” judged by Finance Officer of Delhi University and Prof. Subhadra Channa, Department of Anthropology, Delhi University.

Awards Received:

1. Excellence in Teaching Award by Hansraj College on successful completion of 30 years of service in 2018
2. Appreciation Award by DAV College Managing Committee for the contribution towards first cycle of NAAC for the College in 2017 as Steering Committee Convenor

(College scored 3.62 with A+)

3. Appreciation Award by Hansraj College for the contribution towards first cycle of NAAC for the College in 2017 as Steering Committee Convenor (College scored 3.62 with A+)

Association with Professional Bodies

1. Life Member: Indian Mathematical Society, Hyderabad (Membership No.: L/2016/2)
2. Life Member: Ramanujan Mathematical Society, Chennai (Membership No.: 1217)
3. Life Member: Mathematics Teachers Association, TIFR, Mumbai (Membership No.: MTA00066)
4. Life Member: Vijnana Parishad of India (Membership No.: 265)
5. Board Member for International Journal of Multidisciplinary Research and Modern Education, published by R&D Modern Research Publication, Perambalur, Tamilnadu, India: ISSN (online) 2454-6119
6. Honorary Member: Academic Council, Swami Vivekananda Subharti University (SVSU), Meerut.

Selection Committee Membership:

1. Member, Selection Committee for DAV Colleges(outside Delhi)
2. Member, Selection Committee for DAV Schools for PGT and TGT appointments (Delhi).

Date: January 14, 2021

Place: New Delhi



(PREETI DHARMARHA)