




Faculty Details Proforma for DU Web-site

Title	Dr.	First Name	Hemant	Last Name	Singh	Photograph
Designation	Assistant Professor					
Address	Department of Mathematics, University of Delhi, Delhi					
Phone No Office	011- 27666658					
Residence	+91-9717448990					
Mobile	+91-9312340064					
Email	hemantsingh@maths.du.ac.in hksinghdu@gmail.com					
Web-Page						
Educational Qualifications						
Degree	Institution				Year	
Ph.D.	University of Delhi				2010	
M.Sc.	I. I. T. Delhi				2000	
B.Sc.	V. B. S. Purvanchal University, UP				1997	
Career Profile						
<ol style="list-style-type: none">1. Assistant Professor, Department of Mathematics, University of Delhi, Delhi (January 22, 2014 to till date)2. Assistant Professor, Department of Mathematics, Keshav Mahavidalaya, University of Delhi, Delhi (September 22, 2010 to January 22, 2014)						
Administrative Assignments						
<ul style="list-style-type: none">• Warden, D. S. Kothari Hostel, University of Delhi, Delhi w.e.f. 1st May, 2015.• The Nodal Officer of the D. S. Kothari Hostel, University of Delhi for assessment and accreditation by NAAC, 2015.• Convener of the Undergraduate Examination Committee and Members of the (1) Internal Assessment Committee, (2) Admission Committee, (3) Data Analysis Committee, and (4) NAAC/IQAC/Annual Report Committee						
Areas of Interest / Specialization						

Algebraic Topology
Subjects Taught
<ol style="list-style-type: none"> 1. M. Phil.: Singular Homology (Reading Course). 2. Postgraduate Level: Algebraic Topology, Topology, Module Theory, Field Theory, Advanced Group Theory, Differential Geometry. 3. Undergraduate Level: Linear Algebra, Abstract Algebra, Calculus, Real Analysis, Mechanics, Probability Theory.
Research Guidance
<p>Supervision of Doctoral Thesis, under progress:</p> <ol style="list-style-type: none"> 1. Singh, Konthoujam Somorjit, "Borsuk-Ulam type theorems and finite groups acting freely on spaces of cohomology type (a,b)" <i>Thesis Submitted.</i> 2. Kumari, Anju (2018), "Some Problems in Cohomological Aspects of Transformation Groups" <p>Supervision of M. Phil. Thesis, under progress:</p> <ol style="list-style-type: none"> (1) Kumar, Gaurav (2) Dimpri <p>Supervision of M. Phil. Thesis:</p> <ol style="list-style-type: none"> (1) Kumari, Anju (2017) (2) Garg, Sourabh (2017)
Publication Profile:
<ol style="list-style-type: none"> 1. Hemant Kumar Singh (with Somorjit K. Singh), Indices of a Finitistic Space with mod 2 cohomology $\mathbb{R}p^n \times S^2$, <i>Indian Journal of Pure of Applied Mathematics</i>, 50(1), 23-34, 2019. 2. Hemant Kumar Singh (with Somorjit K. Singh), Parametrized Borsuk-Ulam theorems for free involutions on $\mathbb{F}P^m \times S^3$, <i>Topology and its Applications</i>, 241, 20-37, 2018. 3. Hemant Kumar Singh (with Somorjit K. Singh and Tej B. Singh), Borsuk-Ulam Theorems and Their Parametrized for $\mathbb{F}P^m \times S^3$, <i>Bulletein of Brazellian Mathematical Society (New Series)</i>, 49, 179-197, 2018. 4. Hemant Kumar Singh (with Somorjit K. Singh and Tej B. Singh), Free Actions of Finite Groups on Spaces of Cohomology Type (0,b), <i>Glasgow Mathematical Journal</i>, 60 (3), 673-680, 2018

5. Hemant Kumar Singh (with Somorjit K. Singh and Tej B. Singh), The Set of Balanced Points of Maps on Cohomology Lens Spaces, *Houston Journal of Mathematics*, 44 (3), 1051-1061, **2018**.
6. Hemant Kumar Singh (with Somorjit K. Singh and Tej B. Singh), A Borsuk-Ulam type theorem for the product of projective space and 3-sphere, *Topology and its Applications*, 225, 112-129, **2017**.
7. Hemant Kumar Singh (with Jaspreet Kaur and Tej B. Singh), Circle group action on the product of two projective spaces, *Topology Proceedings*, 48, 163-172, **2016**.
8. Hemant Kumar Singh (with Jaspreet Kaur), On the existence of free action of S^3 on certain finitistic mod p cohomology spaces, *J. Indian Math. Soc.* 82(3-4), 97-106, **2015**.
9. Hemant Kumar Singh (with Tej B. Singh), The Cohomology of Orbit Spaces of Certain Free Circle Group actions, *Proceedings of the Indian Academy of Sciences-Mathematical Sciences*, 122(1), 79-86, **2012**.
10. Hemant Kumar Singh (with Pedro L. Q. Pergher and Tej B. Singh), On Z_2 and S^1 Free Actions on Spaces of Cohomology type (a, b) , *Houston Journal of Mathematics*, 36(1), 137-146, **2010**.
11. Hemant Kumar Singh (with Tej B. Singh), Fixed Point Free Involutions on Cohomology Projective Spaces, *Indian Journal of Pure of Applied Mathematics*, 39(3), 285-291, **2008**.
12. Hemant Kumar Singh (with Tej B. Singh), On the Cohomology of Orbit Spaces of Free Z_p -Actions on Lens Spaces, *Proceedings of the Indian Academy of Sciences-Mathematical Sciences*, 117(3), 287-292, **2007**.

Conference Organization/ Presentations (in the last three years)

CONFERENCE PRESENTATIONS:

Invited Talk :

1. Delivered a talk entitled "**Group Actions on Spaces of Cohomology Type $(0, b)$** " in the International Conference on Mathematics and Applications organised by Department of Mathematics and Statistics, Ramjas College, University of Delhi during 26-28 April, 2017.

2. Delivered a talk entitled "**Finite Group Actions on Spaces of Cohomology Type $S^n \times S^{2n}$ and $S^n \vee S^{2n} \vee S^{3n}$** " in a symposium of the 82nd annual conference of THE INDIAN MATHEMATICAL SOCIETY or organised by Department of Mathematics, University of Kalyani, Kalyani, West Bengal during 27-30 December, 2016.
3. Delivered a talk entitled "**Action of Sphere Groups on Certain Spaces**" in the National Workshop on Analysis, Differential Equations and Applications (NWADA-2016) organised by Department of Mathematics and Statistics, Mohanlal Sukhadia University during 25-27 February, 2016.

Contributed Talk :

4. Delivered a talk entitled "**On S^0 , S^1 and S^3 actions on Spheres, Projective spaces, Lens spaces and Spaces of type (a,b)** " in the 30th Annual Conference of Ramanujan Mathematical Society at Indian Institute of Science Education and Research, Mohali during 15-17 May, 2015.
5. Delivered a talk entitled "**On the Orbit Spaces of Certain Transformation Groups**" in the Topology Discussion Meeting- 2013, at The Institute of Mathematical Sciences, Chennai during 2-4 May, 2013.

Resource Person:

1. Delivered series of six lectures in National Center for Mathematics (NCM) sponsored "**Advanced Instructional School on Differential Topology**" held at North Eastern Hill University, Shillong during July 2-21, 2018.

CONFERENCE/REFRESHER COURSE ORGANIZATION:

1. Co-Convener of the Refresher Course in Mathematics/ Operational Research/ Statistics and Computer Science at Centre for Professional Development in Higher Education (CPDHE), UGC-HRDC, University of Delhi, Delhi during May 31- June 14, 2019.
2. Organized "33rd Annual Conference of the Ramanujan Mathematical Society" held at the Department of Mathematics, University of Delhi during June 1-3, 2018.
3. Coordinator of Symposium on "Topology and Geometry" in 33rd Annual Conference of the Ramanujan Mathematical Society held at the Department of Mathematics, University of Delhi during June 1-3, 2018.
4. Convener of the "International Conference on Topology and Geometry" held during November 23-24, 2017.
5. Organized two week National Center for Mathematics Workshop (NCMW) on "Topology of Manifolds and Group Actions" held during November 9-22, 2017.
6. Organized Research Scholar's Seminar & Annual Conference of the Society of Mathematical Sciences (Delhi) at the Department of Mathematics, University of Delhi during 1-2 May, 2017.
7. Organized Research Scholar's Seminar at the Department of Mathematics,

University of Delhi during 23-24 February, 2015.

UPCOMING CONFERENCE/WORKSHOP ORGANIZATION:

1. Going to organized two week National Center for Mathematics Workshop (NCMW) on "Sheaf Theory, Sheaf Cohomology and Spectral Sequences" to be held during November 18-30, 2019.

Undergraduate Syllabus Revision under Learning Outcomes- based Curriculum Framework (LOCF):

Worked as **Coordinator** of papers of new B.Sc.(H) Mathematics course and curricula under Learning Outcomes- based Curriculum Framework (LOCF) in academic session 2018-19. This new curricula and courses are implemented from academic session 2019-20 in the University of Delhi.

Research Projects (Major Grants/Research Collaboration)

1. Grant of Rs 1,40,000 (One Lacs Forty Thousand Only) under R & D scheme 2015-16 of the University of Delhi.
2. Sanctioned grant of Rs 6,60,000/- (Six Lacs Sixty Thousand Only) under Mathematical Research Impact-Centric Support (MATRICS) Scheme of Science and Engineering Research Board (SERB), Department of Science and Technology, Government of India (File No.: **MTR/2017/000386** dated **June 21, 2018**)
3. Sanctioned grant of Rs **17,51,970/-** (Seventeen Lacs Fifty One Thousand Nine Hundred and Seventy Only) under EMR Scheme of Science & Engineering Research Board (Department of Science & Technology, government of India)- (**File No.: EMR/2017/002192** dated **September 6, 2018**)

Awards and Distinctions

1. CSIR-UGC (NET + JRF) Qualified in Mathematical Sciences, 2000.
2. GATE-2000 Qualified in Mathematics (Percentile:96.02, All India Rank:30)

Association With Professional Bodies

LIFE MEMBERS OF

1. THE INDIAN MATHEMATICAL SOCIETY (S-11-379).
2. THE INDIAN SCIENCE CONGRESS ASSOCIATION (L-18806).
3. RAMANUJAN MATHEMATICAL SOCIETY (879).

ANNUAL/INDIVIDUAL MEMBER OF

4. AMERICAN MATHEMATICAL SOCIETY (Member ID:SNHMKA).

Other Activities

1. Attended UGC-Sponsored "**Refresher Course**" in Mathematical Sciences (Maths/Stats/OR/Computer) held at *Centre for Professional development in Higher Education, University of Delhi, Delhi* during 24th November, 2014 to 13th December, 2014.
2. Attended the international workshop and conference entitled "**Teichmuller Theory and Interfaces with Ergodic Theory and Group Actions**" held at *School of Physical Sciences, Jawaharlal Nehru University, New Delhi* during October 28 to November 1, 2013.
3. Attended 99th four week UGC sponsored "**Orientation Programme**" at *Academic Staff College, Jamia Millia Islamia, New Delhi* during 18th January to 17th February, 2012.
4. Attended the international conference on "**The Legacy of Srinivasa Ramanujan**" held at *University of Delhi, Delhi* during 17-22 December, 2012.



Signature of Faculty Member