Curriculum Vitae Vishvesh Kumar

Contact Information

Full Name: Vishvesh Kumar

Permanent Address:

Village- Khandeh, Post- Khandeh
District- Hamirpur, Uttar Pradesh,
India, Pin- 210507

Current Address:

Department of Mathematics: Analysis, logic and discrete mathematics
Ghent University
Krijgslaan 281, Building S8
B 9000 Ghent
Belgium

Mobile: (+32) 465458618
Email: vishveshmishra@gmail.com, Kumar.Vishvesh@UGent.be

Date of Birth: June 1, 1991
Place of Birth: Khandeh, Uttar Pradesh, India
Country of citizenship: India

Research Gate: https://www.researchgate.net/profile/Vishvesh_Kumar
MATHSCINET:
https://mathscinet.ams.org/mathscinet/search/publications.html?pg1=INDI&s1=1276046

Education

2014- 2019	Ph.D. in Mathematics at IIT-Delhi, India. Supervisors: Dr. N. Shravan Kumar and Dr. Ritumoni Sarma. **Date of Thesis defence (Viva voce) - 01/04/2019.**
2012-2014	Master of Science in Mathematics from IIT- Bombay, Mumbai, India. First division, CPI: 7.91/10.
2008-2011	Bachelor of Science in Mathematics from CSJM University, Kanpur, India. First division, Mark percentage: 67.56%.
2006-2008	Intermediate from D.A.V. Inter College, Mahoba (Uttar Pradesh), India. First division, Mark percentage: 71.80%.
2004-2006	High school from D.A.V. Inter College, Mahoba (Uttar Pradesh), India. First division, Mark percentage: 70.17%.

Post-Doctoral /Research Experience

May 2019-Till now	Post-Doctoral Fellow in Ghent University, Belgium. Mentor: Prof. Michael Ruzhansky
Feb 2019- May 2019	Post-Doctoral Fellow in NISER Bhubaneswar, India Mentor: Prof. V. Muruganandam

Academic Achievements

August-2016	Awarded Senior research fellowship (SRF) by CSIR (India) in Mathematical Science.
June-2014	Qualified Graduate Aptitude Test for Engineering (GATE) in Mathematics with All India Rank- 84.
June- 2013	Awarded Junior research fellowship (JRF) by CSIR (India) in Mathematical Science with All India Rank- 24.
2012-2014	Awarded NBHM M.Sc. fellowship by National Board of Higher Mathematics (NBHM), DAE, India.
March-2012	Qualified Joint Admission test (IIT-JAM) for M.Sc. in Indian Institute of Technology (IIT) with All India Ranks- 03.

Research Interest

My research interest lies in harmonic analysis on locally compact groups/ hypergroups/ homogeneous spaces and pseudo-differential operators.

In future, I would also like to explore operator algebra and quantum groups.

Publications

- Published/Accepted

1- Vishvesh Kumar, Orlicz spaces and amenability of hypergroups, **Bull. Ira. Math. Soc**. (2019). DOI: https://doi.org/10.1007/s41980-019-00310-7

2- Vishvesh Kumar and N. Shravan Kumar, Vector valued Fourier analysis on hypergroups. **Operator and Matrices** (accepted) (2019).

3- Duvan Cardona and Vishvesh Kumar, L^p-boundedness and L^p-nuclearity of multilinear pseudo-differential operators on Z^n and the torus T^n . **Journal of Fourier analysis and applications** (accepted) (2019)
DOI: 10.1007/s00041-019-09689-7

4- Pseudo-differential operators on homogeneous spaces of compact and Hausdorff groups. ***Forum Mathematicum,*** (2019), **DOI:** https://doi.org/10.1515/forum-2018-0155

5- Vishvesh Kumar and M. W. Wong, C*-algebra, H*-algebra and trace ideals of pseudo-differential operators on locally compact, Hausdorff and abelian groups, **Journal of Pseudo differential operators and applications**, (2019). DOI: https://doi.org/10.1007/s11868-019-00280-8

6- Vishvesh Kumar, Kenneth A. Ross and Ajit Iqbal Singh, Hypergroup deformations of semigroups. **Semigroup Forum,** (2019). DOI: https://doi.org/10.1007/s00233-019-10003-6

7- Vishvesh Kumar, Kenneth A. Ross and Ajit Iqbal Singh, Ramsey theory for hypergroups. **Semigroup Forum**, (2019). DOI: https://doi.org/10.1007/s00233-019-10009-0

8- Vishvesh Kumar, Kenneth A. Ross and Ajit Iqbal Singh, An addendum to "Hypergroup deformations of semigroups", **Semigroup Forum,** (2019). DOI: https://doi.org/10.1007/s00233-019-10023-2

9- Vishvesh Kumar, R. Sarma and N. Shravan Kumar. Orlicz spaces on hypergroups. ***Publications Mathematicae Debrecen***, 94/(1-2) 31–47 (2019).

10- Vishvesh Kumar and Ritumoni Sarma, Hausdorff-Young inequality for Orlicz spaces on compact hypergroups, ***Colloquium Mathematicum***, (2019) (accepted).

11- Vishvesh Kumar, Shravan Kumar and Ritumoni Sarma, Unbounded translation invariant operators on commutative hypergroups, **Methods of Functional analysis and Topology**, (2019) (accepted).

12- Vishvesh Kumar, Shravan Kumar and Ritumoni Sarma, Characterization of multipliers on hypergroups, **Acta Mathematica Vietnamica**, (2019) (accepted).

13- Vishvesh Kumar, R. Sarma and N. Shravan Kumar. Orlicz Algebras on Homogeneous Spaces of Compact Groups and Their Abstract Linear Representations. ***Mediterr. J. Math***. 15(4) (2018). https://doi.org/10.1007/s00009-018-1225-6

14- R. Sarma, N. Shravan Kumar and Vishvesh Kumar. Multipliers on Vector-valued L^1 - spaces for Hypergroups. ***Acta Math. Sin. (Engl. Ser.)*** 34(7) 1059-1073 (2018). https://doi.org/10.1007/s10114-018-7303-7

15- D. Cardona and Vishvesh Kumar. Multilinear analysis for discrete and periodic pseudo-differential operators in L^p- spaces, ***Rev. Integr. temas Mat,*** 36(2) 151-164 (2018).

Communicated Papers

16- Hilbert-Schmidt and trace class pseudo-differential operators on the abstract Heisenberg group (Aparajita Dasgupta).
arXiv link: https://arxiv.org/abs/1902.09869

17- The nuclear trace of periodic pseudo-differential operators with applications to index theory (with Duvan Cardona).
arXiv link: https://arxiv.org/abs/1901.10010

18- Orlicz Modules over coset spaces of Compact subgroups in Locally compact groups.
arXiv link: https://arxiv.org/abs/1905.05971

19- Topological transitive sequence of cosine operators on Orlicz spaces (with I. Akbarbaglu and M. R. Azimi).
arXiv link: https://arxiv.org/abs/1809.06085

20- Frames and Riesz Basis for Paley-Wiener Spaces on LCA groups (with N. Shravan Kumar).

21- Continuity of operators intertwining with convolution operators on hypergroup algebra (Ritumoni Sarma).

22- Chaotic dynamics of Fourier multipliers on Chebli-Tricheme hypergroups. (submitted)

23- Aparajita Dasgupta and Vishvesh Kumar, Ellipticity and Fredholmness of pseudo-differential operators on Zn, (submitted). arXiv: https://arxiv.org/abs/1910.05582

Conferences/Workshops/ Schools

Dec-2018 Advance Instructional School (AIS) on harmonic analysis, NISER Bhubaneshwar, India.

Jun-2018 Conference ``Abstract Harmonic analysis (AHA)-2018", National Sun Yat-sen University, Kaohsiung, Taiwan.

Mar -2018 ATM Workshop ``Modern aspects of Function Theory, Operator Theory & Operator Algebras'' at Indian Statistical Institute (ISI), Bangalore.

Apr -2017 International Conference in Mathematics and its applications, Ramjas

College, New Delhi.
Dec -2016 Advance Instructional School (AIS) on harmonic analysis, KSOM Kozhikode.
Oct -2016 Workshop on geometry and analysis on CR manifolds, HRI Allahabad.
Dec -2015 14th Discussion meeting on Harmonic Analysis, Delhi University New Delhi.
Dec -2015 International workshop on operator spaces, Delhi University New Delhi.
Dec -2015 India International Science Festival, IIT Delhi, New Delhi.
May -2015 Annual Foundation School (AFS) (ii), Shiv Nadar University, Greater Noida.
Dec -2014 Annual Foundation School (AFS) (i), Kumaun University, Almora campus.
May -2010 Mathematics Training and Talent Search Program (MTTS), HRI Allahabad.

Invited/Contributory Talks

- Invited talk "Pseudo differential operators on locally compact, Hausdorff and abelian groups" in ISAAC 2019, University of Aveiro, Aveiro, Portugal in July 2019.
- Invited talk "Hypergroup deformation and Ramsey hypergroups" at NISER, Bhubaneshwar, January 2019.
- Contributory talk "Hypergroup deformation and Ramsey hypergroups" in AHA-2018 at National Sun Yat-sen University, Kaohsiung, Taiwan in June 2018.

Teaching Experience

I was teaching assistant (TA) for following courses during my study in IIT Delhi:

- Linear algebra and differential equations (MTL-101) (For B. Tech. 1st year).
- Calculus (MTL-100) (For B. Tech. 1st year).
- Linear algebra (for M.Sc. (Mathematics)).

Languages

Hindi (Native), English (Fluent).

Reviewer

Zentralblatt MATH, Revista Integración, temas de matemáticas, Filomat.

References

1- Prof. Ajit Iqbal Singh
INSA Emeritus Scientist
The Indian National Science Academy
New Delhi- 110002, India
Email: ajitis@gmail.com

2- Dr. N. Shravan Kumar
Assistant Professor
Department of Mathematics
Indian Institute of Technology Delhi
New Delhi-110016, India

Email: shravankumar@maths.iitd.ac.in, meetshravankumar@gmail.com

3- Dr. Ritumoni Sarma
Assistant Professor
Department of Mathematics
Indian Institute of Technology Delhi
New Delhi-110016, India
Email: ritumoni@gmail.com, ritumoni@maths.iitd.ac.in