

# DR. ABHAY KUMAR

Mailing Address: Assistant Professor, Department of Mathematics, HNB Garhwal University, Srinagar-246174, Uttarakhand

Email-abhaykumar288@gmail.com

(Mob)-9599219237

My homepage- <https://sites.google.com/view/drabhaykumar>

## OBJECTIVE

- To work where honesty, loyalty, good relationship and strong care are valued and bring out fruitful things for organization and society.

## EDUCATIONAL QUALIFICATIONS.

- B.A. in Mathematics (with 77.62%) from Patna College, Patna University in the year 2009.
- M.A. in Mathematics (with 70.75%) from Trimula Tripathi Devsthanam Sri Venkateswara College, University of Delhi in the year 2011.
- Cleared UGC-JRF with rank 88 in the year 2012.
- M.Phil in Mathematics (with 84.20 %) from University of Delhi in the year 2014, under the supervision of Dr R.R.Saxena, DDU College, University of Delhi.
- Ph.D. in Mathematics on the title “Supercyclicity of  $C_0$ -Semigroups” (Functional Analysis) from University of Delhi under the supervision of Prof. Sachi Srivastava, Deptt. Of Mathematics, University of Delhi, South Campus.

## Publications/Preprints:

[1] Abhay Kumar, and Sachi Srivastava, Supercyclic  $C_0$ -semigroups, stability and somewhere dense orbits, Journal Mathematical Analysis and Applications, 476, (2), (2019), 539-548. [Link](#)

[2] Abhay Kumar, Supercyclicity and stability for solution semigroups for some PDEs in certain weighted Banach spaces, Yearly Academic Journal, Vol. 16, (2017), 24-28 (Proceedings of the National Seminar on Recent Development in Mathematics organized by the Department of Mathematics, Kalindi College, University of Delhi, Delhi during January 12-13, 2017.)

[3] Abhay Kumar, and Sachi Srivastava, Supercyclicity Criteria for  $C_0$ -Semigroups, Advances in Operator Theory, 5, (2), (2020), 1646-1666. [Link](#)

[4] Abhay Kumar, Hypercyclicity and Supercyclicity of Unbounded Operators, Advances in Operator Theory, 7, (4), (2022), 1-20. [Link](#)

[5] Abhay Kumar, Supercyclic Composition  $C_0$ -Semigroups, Journal of Analysis, (2022), 1-16 [Link](#)

[6] Abhay Kumar, Convex-cyclicity and K-transitivity of Semigroups of Operators on Finite and Infinite Dimensional Spaces (Accepted for publication in JIMS)

### **Achievements**

- **Cleared UGC-JRF with AIR 88 in the year 2012.**

### **Participated/organized conferences/workshops:**

- Participated in the MATLAB and Simulink Academic Tour 2013 of Math Works at Cluster Innovation Centre, University of Delhi on September 23, 2013.
- Participated in the Internet seminar on Evolution Equation 2013/14: Positive Operator Semigroups and its Applications.
- Participated in the International conference "The Legacy of Srinivasa Ramanujan" held during December 17<sup>th</sup>-22<sup>nd</sup> at Department of Mathematics, University of Delhi, 2012.
- Participated in the workshop on information literacy and competency organized by University of Delhi Library System held on 17<sup>th</sup> January, 2013.
- Participated in the National Seminar for Research Scholars held during September 20<sup>th</sup>-21<sup>st</sup> at Department of Mathematics, University of Delhi, 2013.
- Participated in the workshop on information literacy and competency organized by University of Delhi Library System held on 4<sup>th</sup> December 2014.
- Participated in the workshop on Indian Women and Mathematics held at Department of Mathematics, University of Delhi, during April 2-4, 2015.

- Organized the workshop on LaTeX and HTML at Department of Mathematics, Janki Devi Memorial College, University of Delhi, during 7-8 October 2016.
- Participated in the workshop on MS Excel for compiling attendance and internal assessment organized by Department of Mathematics, Janki Devi Memorial College, University of Delhi, on 27 October 2016.
- Volunteered in the “33<sup>rd</sup> Annual Conference of the Ramanujan Mathematical Society” held at Department of Mathematics, University of Delhi during June 1-3, 2018.
- Participated in the International Meet on Analysis at Department of Mathematics, University of Delhi, during on November 24, 2018.
- Participated as a member of advisory committee in the International Conference held at Department of Mathematics, Magadh University, Bodh-Gaya during September 18-19, 2018.
- Participated in the 79<sup>th</sup> Orientation Programme, held from 17/07/2018 to 13/08/2018, has obtained Grade A at UGC HRDC Patna University.
- Participated in the 7<sup>th</sup> Refreshor Course in Mathematical Sciences, held from 29/12/2020 to 11/01/2021, has obtained Grade A+ at UGC HRDC Deen Dayal Upadhyay Gorakhpur University.
- Participated And Successfully Completed Ten Days Faculty Development Program on HTML Organized by Department of Physics, M. V. College, Buxar in Association With IIT Bombay Through Spoken Tutorial, Remote Training Program During COVID 19 Outbreak from 15<sup>th</sup> May to 24<sup>th</sup> May 2020.
- Successfully completed TWELVE DAY FACULTY DEVELOPMENT PROGRAMME (22nd May to 02nd June, 2020) on SCILAB (Scientific Laboratories) organized by IQAC, A.N. College, Patna in association with Indian Institute of Technology, Bombay through Spoken Tutorials, Remote Learning (An Initiative of National Mission on Education through ICT, MHRD. Govt. of India).
- Complete One week (Online) Faculty Development Programme on ‘Mathematical Analysis and its Applications’(26th July – 31<sup>st</sup> July 2021) organised by Vivekananda College, University of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi
- Participated in faculty development programme (FDP) on Python 3 organised by the University Department of Mathematics, TMBU, Bhagalpur from 8-14th June, 2020.
- Participated and successfully completed One Week Faculty Development Program on GeoGebra organized by Department of Mathematics, R. K. College in association with Spoken Tutorial Software Training Project developed by Indian Institute of Technology - Bombay, an initiative of National Mission on Education Through ICT, MHRD, Govt. of India from 6th to 12th May, 2020.

- Completed successfully Two-week “Faculty Development Program (FDP)” on HTML and ExpEYES software organized by Department of physics of S.V.P. College, Bhabhua, Bihar in association with IIT – Bombay through Spoken Tutorial, remote training (An initiative of National Mission on Education through ICT, MHRD, Govt. of India) from 14th May to 27th May, 2020.
- Successfully completed ONE WEEK FACULTY DEVELOPMENT PROGRAMME (11<sup>th</sup> May to 17<sup>th</sup> May, 2020) on LaTeX & Xfig organized by IQAC, A.N. College, Patna in association with Indian Institute of Technology, Bombay through Spoken Tutorials, Remote Learning (An Initiative of National Mission on Education through ICT, MHRD. Govt. of India).

### Research Paper Presentation:

- Presented a paper entitled “Supercyclicity and stability for solution semigroups to some PDEs in certain weighted Banach spaces” in the National Seminar on Recent Developments in Mathematics held at Department of Mathematics, Kalindi College, University of Delhi during January 12-13, 2017.
- Presented a paper entitled “Spectrum and the angle criterion for supercyclic semigroups of operators” in the International Conference on Mathematics and Applications held at Department of Mathematics, Ramjas college during April 26-28, 2017.
- Presented a paper entitled “Supercyclic  $\mathbb{C}_0$ -semigroups and somewhere dense orbits” in the Research scholar seminar & annual conference of the society of Mathematical Sciences held at Department of Mathematics, University of Delhi during May 01-02, 2017.
- Presented a poster entitled “Supercyclicity of  $\mathbb{C}_0$ -Semigroups” in the international workshop on recent advances in Operator Semigroups held at Department of Mathematics, University of Delhi during December 18-21, 2017.
- Presented a paper entitled “Spectrum and the Godefroy and Shapiro Criterion for Hypercyclicity” in the International Conference held at Department of Mathematics, Magadh University Bodh-Gaya during September 18-19, 2018.

### Software Exposure

- Operating system : Windows, Linux etc.
- Software : Mathematica, Maxima, Maple, MS Office, HTML, and LaTeX etc.

### Experience:

- [1] Took tutorials of Complex Analysis at Department of Mathematics, University of Delhi, South Campus;
- [2] Former Assistant Professor (Ad-hoc basis) at Janki Devi Memorial College, University of Delhi;
- [3] Assistant Professor (Permanent basis) at S.D. College (Sheodeni College), Kaler, Magadh University, from November 2017 to 09-07-2022.
- [4] Assistant Professor (Permanent basis) at HNB Garhwal University, Srinagar, Uttarakhand from 10-07-2022 to present.

### **Personal Details**

- Languages known : English, Hindi
- D.O.B. : 04-12-1985

[My Homepage](#)

<https://sites.google.com/view/drabhaykumar>