Dr. Abhishek Juyal

Personal Data

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Affiliation

Position	**Assistant Professor**, Hemvati Nandan Bahuguna Garhwal University **June 27, 2022 - till date.**

Research Interests

Analytic Number Theory, Elliptic Curves.

Experience

1 Sep, 2021 - 24 Jun, 2022	Post Doctoral Fellow, Indian Statistical Institute, Bengaluru.
8 Jul, 2019 - 31 Aug, 2021	Post Doctoral Fellow, Institute of Mathematical Sciences, Chennai.
4 Dec, 2018 - 3 Jul, 2019	Post Doctoral Fellow, Harish Chandra Research Institute, Allahabad.

Education

Aug, 2014-Sep 2018	Ph.D., Mathematics, Motilal Nehru National Institute of Technology, Allahabad. **Advisors** : Prof. Shiv Datt Kumar and Prof. Kalyan Chakraborty (HRI). **Thesis Title** : "A Study of Some Problems on Diophantine Equations, Elliptic Curves and Lambert Series."
Aug 2013-July 2014	(Pre-Ph.D. Course Work) Harish Chandra Research Institute, Allahabad. **Courses**: Algebra-I, II, Analysis-I, II, Topology-I, II, Differential Manifold, Representation Theory of finite groups.
Aug 2011-July 2013	M.Sc., Applied Mathematics, Indian Institute of Technology, Roorkee
Aug 2009-July 2011	M.Sc., Mathematics, Banaras Hindu University, Varanasi, India.
Aug 2006-July 2009	B.Sc., D.B.S College, Dehradun, India.

Refereed Publications

1. Ajai Choudhry, and **Abhishek Juyal**, "*Rational points in arithmetic progressions on the unit circle*", J. Integer Seq., 2016, Vol. 19, Article 16.7.4.

2. Pradeep Das, **Abhishek Juyal**, and Dustin Moody, "*Integral Isosceles Triangle-Parallelogram and Heron triangle-Rhombus Pairs with a Common Area and Common Perimeter*", J. Number theory, 180 (2017), 208-218.

3. **Abhishek Juyal**, Shiv Datt Kumar, "*On the family of elliptic curve $y^2 = x^3 - m^2x + p^2$*", Proc. Indian Acad. Sci. (Math. Sci.) (2018) 128:54.

4. Kalyan Chakraborty, **Abhishek Juyal**, Shiv datt Kumar, and Bibekananda Maji, "*An asymptotic expansion of a Lambert series associated to a cusp form*", International Journal of Number Theory, 14 (2018), 289-299.

5. Abhash Kumar, **Abhishek Juyal**, Manish Pandey, "*On simultaneous non-vanishing of twisted L-functions associated to newforms on $\Gamma(N)$*", Journal of the Ramanujan Mathematical Society, 34, N0. 2 (2019), 245-252.

6. **Abhishek Juyal**, Shiv Datt Kumar, and Dustin Moody, "*Elliptic curves arising from triangular numbers*", Integers, Paper No. A10, 11 pp.

7. Mithun Kumar Das, **Abhishek Juyal**, *Trigonometric sums, higher dimensional Dedekind sums and twisted mean values of Dirichlet L-series*, Journal of the Ramanujan Mathematical Society. 35, N0. 4 (2020), 327-340.

8. **Abhishek Juyal**, Bibekanand Maji, Sumukha S, *An exact formula for a Lambert series associated to a cusp form and the Möbius function*", Ramanujan Journal, 57, 769-784, (2022).

9. **Abhishek Juyal**, Sudhansu Sekhar Rout, *Mordell-Weil bases for the elliptic $y^2 = x^3 - m^2x + m^2$*", Czechoslovak Mathematical Journal, 71, (146), 1133-1147, (2021).

10. **Abhishek Juyal**, Dustin Moody, "*On the family of elliptic curves $X + 1/X + Y + 1/Y + t = 0$*", INTEGERS, 2021, Paper No. A18, 13 pp.

11. **Abhishek Juyal**, Dustin Moody, "*Pairs of Heron and right triangles with a common area and a common perimeter*", to appear in the Publicationes Mathematicae Debrecen.

12. **Abhishek Juyal**, Dustin Moody, Bidisha Roy, "*On ranks of quadratic twists of a Mordell curve*", to appear in Ramanujan Journal.

13. **Abhishek Juyal**, Bibekananda Maji, Sumukha Sathyanarayana, "*An asymptotic expansion for a Lambert series associated to the symmetric square L-function*", to appear in International journal of number theory.

SCHOLARSHIPS/HONORS/AWARDS

2020	NBHM-PDF scholarship, National Board for Higher Mathematics (NBHM), The Dept. of Atomic Energy, Govt. of India.
2019	Received an offer of Post-Doctoral Fellowship by ISI Delhi, 2019, (Not Availed).
2013	NBHM-Ph.D scholarship, National Board for Higher Mathematics (NBHM)., The Dept. of Atomic Energy, Govt. of India.
2013	All india rank 72 in CSIR-NET(JRF), National Eligibility Test (NET) award, Council of Scientific and Industrial Research(CSIR), Government of India.
2012	All India Rank 41 in GATE, Graduate Aptitude Test in Engineering(GATE), organized by Indian Institute of Technology Bombay, Bombay, India.
2012	Qualified Uttarakhand State Eligibility Test (USET).
2012	Awarded Merit-cum-mean Scholarship in IIT Roorkee.
2011	Secured All India Rank 71 in IIT-JAM.
2009	Secured All India Rank 74 in BHU-PET

TEACHING EXPERIENCE

2017	Took tutorial at ISI Bengaluru.
2015-2017	Took tutorials of B.Tech students of Mathematics-I(MA1101) and Mathematics-II(MA1201) in MNNIT Allahabad.

Talks & Seminars

4-17 Sep, 2017	International conference on class group of number fields and related topics, HRI Allahabad "*Integral isosceles triangle-parallelogram and Heron triangle-rhombus pairs with a common area and common perimeter*"
12-15 Dec, 2017	83rd Annual Conference of Indian Mathematical Society-an International Meet "*On the family of elliptic curves $y^2 = x^3 - m^2 x + p^2$*", S V University, Tirupati.
20 Jul, 2018	Institute of Mathematics and Applications, Bhubneshwar "*Diophantine Equations Arise From Elliptic Curves*"
12 Feb, 2019	HRI Allahabad. Delivered a talk on my Ph.D work.

CONFERENCES/WORKSHOPS Attended

17-30 Nov, 2014	Basic training programme in mathematics for undergraduate students of U.P. and Uttarakhand, Brahmand College Kanpur, India.
12-15 Dec, 2017	"83rd Annual Conference of Indian Mathematical Society-an International Meet", S V University, Tirupati.
5-14 Jan, 2016	"School and Workshop on Modular Forms and Black Holes", held at NISER Bhubneshwar, India.
4 Aug-3 Sep, 2016	GIAN School on "A Short Course on Modular Forms", IISER Bhopal, India.
6-7 Sep, 2016	"Two days Number theory Meet", Harish-Chandra Research Institute, Allahabad.
4 -7 Sep, 2017	"International conference on class groups of number fields and related topics", Harish-Chandra Research Institute, Allahabad.
23-31 Mar, 2019	"School on group cohomology", Harish-Chandra Research Institute, Allahabad.
16-19 Oct, 2019	"International conference on class groups of number fields and related topics", Harish-Chandra Research Institute, Allahabad.
11-17 Dec, 2019	"NCM workshop on Modular forms and Galois representations", IISER Tirupati.