Publications and Preprints in Mathematics

Publications :

Sukumar Das Adhikari

1. Sukumar Das Adhikari and Purusottam Rath, *Davenport constant with weights and some related questions* Integers, **6** paper A 30, (2006).

2. S. D. Adhikari and Y. G. Chen, *Davenport constant with weights and some related questions - II*, J. Combinatorial Theory, Ser. A, doi: 10.1016/j.jcta.2007.03.004 (2007).

3. Sukumar Das Adhikari and Purusottam Rath, *Zero-sum problems in combinatorial number theory*, The Riemann Zeta Function and Related Themes: Papers in Honour of Professor K. Ramachandra, Proceedings of international conf. held at National Institute of Advanced Studies (Bangalore, 13-15 December 2003), (Eds. by R. Balasubramanian and K. Srinivas), Ramanujan Mathematical Society Lecture Notes Series, **Number 2**, 1– 14, (2006).

4. S. D. Adhikari, R. Balasubramanian, F. Pappalardi and P. Rath, *Some zero-sum constants with weights*, Proc. Indian Acad. Sci. (Math. Sci.), to appear.

5. Sukumar Das Adhikari, Stephan Baier and Purusottam Rath, *An extremal problem in lattice point combinatorics*, Diophantine Equations, N. Saradha Ed., Tata Institute of Fundamental Research, to appear.

6. S. D. Adhikari, R. Balasubramanian and P. Rath, *Some combinatorial group invariants and their generalizations with weights*, CRM Proceedings and Lecture Notes, Granville, Nathanson, Solymosi Eds., to appear.

Kalyan Chakraborty

1. Kalyan Chakraborty, Florian Luca and Anirban Mukhopadhyay, *Exponents of class groups of real quadratic fields*, International Journal Of Number Theory, **To Appear**, (2007)

2. Kalyan Chakraborty *On the Diophantine equation $x + y + z = xyz = 1$* , Annales Univ. Sci. Budapest. Sect. Comp., 27, **To Appear**, (2007)

Chandan Singh Dalawat

1. *Congruent numbers, elliptic curves, and the passage from the local to the global,* to appear in the Proceeding of the Ramanujan Mathematical Society workshop, Hyderabad, 3–5 July 2005.

Satya Deo

1. Satya Deo and J.K.Maitra *Freeness of homogenized spline module from a divided domain to a subdivided domain,* Frontiers in Interpolation and Approximation **Editor, N.K.Govil et al**, Francis and Taylor, (2006)

2. Satya Deo and J.K.Maitra, *Hilbert Series of free spline modules,* Journal of Indian Math Soc **73**, page number, (2006)

3. Satya Deo, *Algebraic Topology- a Primer*, **TRIM Series of Hindustan Book Agency, New Delhi, IInd Edition, 2006**

Rukmini dey

1. Rukmini Dey, *Geometric quantization of the moduli space of the self-duality equations on a Riemann surface*

   Reports on Mathematical Physics **Vol. 57 no. 2**, pg. 179-188 (2006)

   math-phy/0605026

2. Rukmini Dey, *Geometric prequantization of the moduli space of the vortex equations on a Riemann surface*

   Journal of Mathematical Physics, **vol. 47, issue 10**, page 103501

   math-phy/0605025

Gyan Prakash

1. R. Balasubramanian and Gyan Prakash, *Asymptotic formula for sum-free sets in abelian groups*, Acta Arithmetica, **Vol. 127, No. 2**, 115-124, 2007.

N. Raghavendra

1. Indranil Biswas and N. Raghavendra, The Atiyah-Weil criterion for holomorphic connections, Accepted for publication in the *Indian Journal for Pure and Applied Mathematics.*

B. Ramakrishnan

1. (with B. Sahu) On the Fourier Expansions of Jacobi Forms of Half-Integral Weight, Int. J. Math. Math. Sci. Vol 2006.

Ritumoni Sarma

1. Ritumoni Sarma, *On Virtual 3-Generation of S-Arithmetic Subgroups of SL_2,* Asian Journal of Mathematics **Vol. 10, No. 4,** pp. 749-756.

R. Thangadurai

1. W. D. Gao and R. Thangadurai, *On zero-sum Sequences of prescribed length,* Aequationes Math., **72**, 201-212, (2006)

2. R. Thangadurai, *A variant of Davenport's Constant,* Proc. Indian. Acad. Sci. (Math. Sci.), **117**, 1-11, (2007)

3. W. D. Gao, Q. H. Hou, W. A. Schmid and R. Thangadurai, *On short zero-sum subsequences - II,* Integers, **7** A-21, 22pp, (2007)

Manoj Kumar Yadav

1. E. C. Dade and Manoj K. Yadav, *Finite groups with many product conjugacy classes,* Israel J. Math. **154**, 29-49, (2006)

Brundaban Sahu

1. B.Sahu and B. Ramakrishnan, *On the Fourier Expansions of Jacobi Forms of Half-Integral Weight,* Int. J. Math. Math. Sci. Vol 2006.

Preprints :

Punita Batra

- Tanusree Pal, Punita Batra *Irreducible integrable representations of graded multi loop Lie Algebras,* http://arxiv.org/abs/0706.0448v1

Kalyan Chakraborty

- Kalyan Chakraborty, Florian Luca and Anirban Mukhopadhyay, *Class numbers of number fields with many distinct prime factors*, (Preprint).

Satya Deo

- Satya Deo, David Gauld and Mathiew Baillif, *Mapping Class Groups of some nonmetrizable manifolds,*

- Satya Deo and V.V.Awasthi, *Homology and Dimension -further pathological examples*

- Satya Deo and K. Varadarajan *A note on Weakly Co-hopfian and generalized Hopfian modules*

Rukmini dey

- Rukmini Dey, *HyperKähler prequantization of the Hitchin systems and Chern-Simons gauge theory with complex gauge group* (in preparation, draft in math-phy/06050270)

Ratnakumar Peetta Kandy

- Ratnakumar P.K., *On Schrödinger propagator for the special hermite operator,* preprint, (submitted for publication)

- Ratnakumar P.K., *On Schrödinger propagator for differential operators with discrete spectrum,* (in preparation)

- Ratnakumar P.K., Ritumoni Sarma, *A cosine formula for the geometry of rank one symmetric spaces,* (in preparation)

Gyan Prakash

- R. Balasubramanian, Gyan Prakash and D.S. Ramana, *Sum-free subsets of finite abelian groups of type III,* in preparation.

- Jean-Marc Deshouillers and Gyan Prakash, *Large zero-free and incomplete subsets of* $\mathbf{Z}/p\mathbf{Z}$*,* in preparation.

- Gyan Prakash and D.S. Ramana, *The Large Sieve Inequality for Quadratic Polynomial Amplitudes,* http://arxiv.org/abs/0705.1739.

- Gyan Prakash and D.S. Ramana, *Baier's Variant of the Large Sieve Inequality for Quadratic Polynomial Amplitudes,* in preparation.

B. Ramakrishnan

- (with B. Sahu) Differential operators on Jacobi forms of several variable

- (with S. Gun, M. Manickam) A Characterization of the space of new forms of half-integral weight and a conjecture of Zagier.

- (with M. Manickam and V. Kumar Murty) Twisted averages of *L*-functions.

D. Surya Ramana

- D.S. Ramana,*Arithmetical applications of an identity for the Vandermonde determinant,* http://arxiv.org/abs/0705.1739.

- D.S. Ramana, *Arcs of Conics Containing Three Integer Points,*in preparation .

- R. Balasubramanian, Gyan Prakash and D.S. Ramana, *Sum-free subsets of finite abelian groups of type III,* in preparation .

- Gyan Prakash and D.S. Ramana, *The Large Sieve Inequality for Quadratic Polynomial Amplitudes,* http://arxiv.org/abs/0705.1739 .

- Gyan Prakash and D.S. Ramana, *Baier's Variant of the Large Sieve Inequality for Quadratic Polynomial Amplitudes,* in preparation .

Ritumoni Sarma

- Ritumoni Sarma, *Virtual 3-generation for S-arithmetic groups* (in preparation).

- Ratnakumar P.K. and Ritumoni Sarma, *A cosine formula for the rank one symmetric spaces* (in preparation).

R. Thangadurai

- S. Gun, F. Luca, P. Rath, B. Sahu and R. Thangadurai, *Distribution of residues modulo p*, Submitted for Publication.

- R. Thangadurai, *Distribution of quadratic non-residues which are not primitive roots modulo p - II*, in preparation.

- P. Moree and R. Thangadurai, *Distribution of quadratic non-residues which are not primitive roots modulo p - III*, in preparation.

Manoj Kumar Yadav

- Manoj K. Yadav, *On automorphisms of finite p-groups,* J. Group Theory, to appear

- Manoj K. Yadav, *On automorphisms of some finite p-groups,* Proc. Indian Acad. Sci., Math. Sci., to appear

Veerendra Vikram Awasthi

- Veerendra Vikram Awasthi and Satya Deo, *An Inverse system of nonempty objects with empty limit,* (communicated).

- Veerendra Vikram Awasthi and Satya Deo, *Homology and Dimension - Further pathological examples,* (under submission).

Tanusree Pal

- Tanusree Pal and Punita Batra, *Irreducible Integrable Representations of Graded Multi-loop Lie Algebras. ,* arXiv:0706.0448v1 [math.RT]

Brundaban Sahu

- B. Sahu, B. Ramakrishnan, *Differential operators on Jacobi form of several variable*

- B. Sahu, S. Gun, Florian Luca, P. Rath and R. Thangadurai, *Distribution of Residues Modulo p.*