

Curriculum Vitae

Srimathy Srinivasan

Contact Information

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Appointments

- Visitor/Lecturer University of Colorado, Boulder (2019 - Present)
- Postdoctoral Member, Institute for Advanced Study, Princeton, New Jersey (September 2016 - August 2019)

Education

- **PhD**, Mathematics, August 2016, University of Maryland, College Park (Thesis: Motivic Decomposition of Projective Pseudo-Homogeneous Varieties)
- **M.S**, Electrical Engineering, July 2009, Indian Institute of Technology, Madras, India (Thesis: Codes on Planar Graphs)
- **B.E**, Electronics & Communications, July 2006, Madras Institute of Technology, India (Thesis: Performance Analysis of VCSEL based 2.4 GHz ROF Link)

Research Interests

Algebraic geometry, coding theory

Awards and Grants

- NSF grant (2016 - 2019)
- Travel award, Institute for Advanced Study, 2016-2019
- Awarded Ralph Pass III Fellowship by the Department of Mathematics, University of Maryland, 2013
- Department of Mathematics, University of Maryland, Summer Fellowship, 2014
- Winner of Monroe Martin talks at the University of Maryland, 2012
- Awardee under National Scholarship Scheme

Publications

1. A finiteness theorem for special unitary groups of quaternionic skew-hermitian forms with good reduction
Documenta Mathematica, Vol. 25, 2020, pp. 1171-1194

2. A short proof that all linear codes are weakly algebraic-geometric using Bertini theorems of B.Poonen
Discrete Mathematics, Vol. 343, Issue 6, June 2020
3. Correction to: Motivic Decomposition of Projective Pseudo-homogeneous Varieties
Transform. Groups 24 (2019), no. 4, 1309–1311
4. Motivic Decomposition of Projective Pseudo-homogeneous Varieties,
Transform. Groups 22 (2017), no. 4, 1125–1142
5. (with Andrew Thangaraj) Codes on Planar Graphs,
Advances in Mathematics of Communications, pages 131 - 163, Vol. 6, Issue 2, May 2012
6. (with Andrew Thangaraj) Codes That have Tanner Graphs with Non-Overlapping Cycles,
International Symposium on Turbo Codes and Related Topics, Lausanne, Switzerland, September 2008

Preprints

1. Azumaya algebras with involution and classical semisimple group schemes, June 2020 (under review).
Arxiv: <https://arxiv.org/abs/2006.01699>
2. (with David Grant and John D. Massman, III), "Differential Codes on Higher Dimensional Varieties Via Grothendieck's Residue Symbol", September 2020
Arxiv: <https://arxiv.org/abs/2009.09311>, (submitted)

Invited talks

- "A finiteness theorem for special unitary groups of quaternionic skew-hermitian forms with good reduction", Banff workshop on Arithmetic aspects of algebraic groups, BIRS, Canada, Sep 8-9, 2020
- "Good reduction of unitary groups of quaternionic skew-hermitian forms", AMS Spring Southeastern Sectional Meeting, University of Virginia, Charlottesville, VA March 13-15, 2020.
- "Good reduction of unitary groups of quaternionic skew-hermitian forms", University of Colorado, Boulder, January 28, 2020.
- "Motivic Decomposition of Projective Pseudo-homogeneous varieties", School on Curves and groups in families, Rennes, France, May 13-17 2019.
- "Motivic Decomposition of Projective Pseudo-homogeneous varieties", Algebra Seminar, UPenn, April 15 2019.
- "Algebraic Groups in Positive Characteristic", October 2017, Institute for Advanced Study, Princeton
- "Motivic Decomposition of Projective Pseudo-homogeneous Varieties", October 2016 Institute for Advanced Study, Princeton

- “Motivic Decomposition of Projective Pseudo-homogeneous Varieties”, Algebra-Number Theory Seminar, University of Maryland
- “Algebraic Geometric Codes”, Monroe Martin Talk, University of Maryland
- “Codes on Deligne Lusztig Varieties”, Student Algebra and Number Theory Seminar, University of Maryland
- “Constructibility and solvability”, Wireless IITM group, Indian Institute of Technology, Madras

Teaching

- MATH 2130, Linear Algebra for non-math majors, Spring 2020, Fall 2020
- MATH 2130, Linear Algebra for non-math majors, Fall 2019
- MATH 240, Linear Algebra, Fall 2015 (TA)
- MATH 241, Calculus III, Spring 2014(TA)
- MATH 241, Calculus III, Fall 2013 (TA)
- MATH 240, Linear Algebra, Summer 2013
- MATH 240, Linear Algebra, Spring 2013 (TA)
- MATH 140, Calculus I, Summer 2012
- MATH 141, Calculus II, Fall 2011 (TA)
- MATH 140, Calculus I, Fall 2009 (TA)

Service

- Mentor for the Undergraduate Directed Reading Program at the University of Maryland.
- Helped organize Algebra and Number Theory day at the University of Maryland.