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Education

- **Ph.D.** In Computer Science (3rd year), **Carnegie Mellon University**, Aug 2014 - (Ongoing).

Advisor: Venkatesan Guruswami.

Research Interests: Approximation, Sum of Squares (Lasserre) Hierarchy, Spectral Algorithms, Complexity Theory.

- **B.Sc.** In Math & CS, University of Illinois at Urbana-Champaign, Aug 2011 - May 2014 (Honors and Highest distinction)

Internships:

- Visiting researcher at U. C. Berkeley hosted by Prasad Raghavendra. October 2017 – January 2018.
- Toyota Technological Institute - Summer 2017. Mentored by Madhur Tulsiani.
- Toyota Technological Institute - Summer 2016. Mentored by Madhur Tulsiani.

Publications and Articles:

- Inapproximability of Matrix Norms. With Mrinalkanti Ghosh, Venkatesan Guruswami, Euiwoong Lee and Madhur Tulsiani. In Submission.
- Weak Decoupling, Polynomial Folds and Approximate Optimization over the Sphere. With Mrinalkanti Ghosh, Venkatesan Guruswami, Euiwoong Lee and Madhur Tulsiani. FOCS 2017. <https://arxiv.org/abs/1611.05998>
- Certifying Random Polynomials Over the Sphere via Sum of Squares Hierarchy. With Venkatesan Guruswami and Euiwoong Lee. RANDOM 2017. <https://arxiv.org/abs/1605.00903>
- Approximate Hypergraph Coloring under Low-discrepancy and Related Promises. With Venkatesan Guruswami and Euiwoong Lee. APPROX 2015. <http://vspvijay.com/hcup.pdf>
- Separating a Voronoi Diagram via Local Search. With Sarel Har-Peled. SoCG 2016. http://vspvijay.com/s_voronoi.pdf
- Extending Parikh's Theorem to Weighted and Probabilistic Context-Free Grammars. With Spencer Gordon and Mahesh Viswanathan. QEST 2017.

Invited Talks:

- Berkeley Theory Lunch January 2018. On the approximability of p-to-q norms.
- Simons Workshop Fall 2017: Hierarchies, Extended Formulations and Matrix Analytic Techniques. On approximate optimization over the sphere.
- CMU Theory Lunch Spring 2017. On Approximate optimization over the sphere.
- CMU Theory Lunch Fall 2015. On Approximate Hypergraph Coloring under Promise.

Awards and Honors:

- Spring 2014: Recipient of C. W. Gear outstanding undergraduate award.
- Spring 2013: Recipient of James N. Snyder award for outstanding scholastic achievement.
- Spring 2012: Recipient of P.U.R.E (Promoting Undergraduate Research in Engineering) audience choice award.
- Fall 2011 – Spring 2014: Graduated with James Scholars Honors and Highest distinction.