

VENKATA GANDIKOTA

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EDUCATION

Ph.D. Computer Science <i>Purdue University, West Lafayette, IN</i> <i>Advisor:</i> Elena Grigorescu	<i>May 2017</i>
M.S. Computer Science <i>Purdue University, West Lafayette, IN</i>	<i>Dec 2012</i>
M.Sc. Mathematics <i>BITS Pilani - Goa Campus, India</i>	<i>May 2010</i>
B.E. Computer Science <i>BITS Pilani - Goa Campus, India</i>	<i>May 2010</i>

PROFESSIONAL EXPERIENCE

Postdoctoral Fellow (<i>Host:</i> Xin Li) <i>Johns Hopkins University, Baltimore, MD.</i>	<i>Oct 2017 - Present</i>
Intern (<i>Mentor:</i> Daniel Dadush) <i>Centrum Wiskunde & Informatica, Amsterdam, The Netherlands.</i>	<i>Aug 2016 - Nov 2016</i>
Intern (<i>Mentor:</i> Vijay Arya) <i>IBM Research Labs, Bangalore, India.</i>	<i>May 2012 - Aug 2012</i>
Intern (<i>Mentor:</i> Geetha Manjunath) <i>HP Labs, Bangalore, India.</i>	<i>Aug 2009 - May 2010</i>

RESEARCH INTERESTS

- Error Correcting Codes
- Computational Problems on Lattices
- Sublinear-time Algorithms

PUBLICATIONS

Conference Publications:

1. *Lattice-Based Locality Sensitive Hashing is Optimal*, Karthik Chandrasekaran, Daniel Dadush, Venkata Gandikota, Elena Grigorescu. Proceedings of Innovations in Theoretical Computer Science (ITCS), 2018.
2. *Maximally Recoverable Codes: the Bounded Case*, Venkata Gandikota, Elena Grigorescu, Clayton Thomas, Minshen Zhu. Proceedings of Allerton Conference on Communication, Control, and Computing, 2017.
3. *NP-Hardness of Reed-Solomon Decoding and the Prouhet-Tarry-Escott Problem*, Venkata Gandikota, Badih Ghazi, Elena Grigorescu. IEEE Symposium on Foundations of Computer Science (FOCS) 2016.
4. *Nearly Optimal Sparse Group Testing*, Venkata Gandikota, Elena Grigorescu, Sidharth Jaggi, Samson Zhou. Proceedings of Allerton Conference on Communication, Control, and Computing, 2016.
5. *Local Testing of Lattices*, Karthik Chandrasekaran, Mahdi Cheraghchi, Venkata Gandikota, Elena Grigorescu. Foundations of Software Technology and Theoretical Computer Science (FSTTCS) 2016.
6. *Deciding Orthogonality in Construction-A Lattices*, Karthik Chandrasekaran, Venkata Gandikota, Elena Grigorescu. Foundations of Software Technology and Theoretical Computer Science (FSTTCS) 2015.
7. *On the NP-hardness of Bounded Distance Decoding of Reed-Solomon Codes*, Venkata Gandikota, Badih Ghazi, Elena Grigorescu. IEEE International Symposium on Information Theory (ISIT) 2015.

8. *Relaxed Locally Correctable Codes in Computationally Bounded Channels*, Jeremiah Blocki, Venkata Gandikota, Elena Grigorescu, Samson Zhou. (Submitted).

Journal Publications:

1. Deciding Orthogonality in Construction-A Lattices. Chandrasekaran K., Gandikota V., Grigorescu E. *SIAM Journal of Discrete Mathematics*, 1244-1262 (2017).
2. Semantic Similarity of Web Sites. Manjunath G., Gandikota V.S.S., Ghatpande S.S., Narasimha M., *International Journal of Engineering and Innovation Technology*, Vol 2, Issue 2, 184-192 (2012).

Ph.D. Dissertation:

- Local and Global Computation on Algebraic Data

TEACHING EXPERIENCE

- TA for Undergraduate Numerical Methods, Discrete Mathematics, Cryptography.
- TA for Undergraduate Systems Programming, Java Programming, Python Programming.
- Taught recitations / labs, proposed homework, exams and taught some lectures.

POSTER PRESENTATIONS AND TALKS

- *Lattice-based Locality Sensitive Hashing is Optimal.*
 - ITCS, Cambridge, MA. Jan 2018.
 - Poster Session, ITCS, Cambridge, MA. Jan 2018.
- *NP-Hardness of decoding Reed Solomon Codes.*
 - Johns Hopkins University, Baltimore, MD. Nov 2017.
 - Microsoft Research, Bangalore, India. Dec 2015.
 - Centrum Wiskunde & Informatica (CWI), Amsterdam. Nov 2016.
 - Purdue University, West Lafayette, IN. June 2015.
- *Testing Membership in Lattices.*
 - FSTTCS, Chennai, India. Dec 2016.
 - Poster Session, Workshop on Local Algorithms (WoLA), Cambridge, MA. Oct 2016.
 - Poster Session, Workshop on Algorithmic Coding Theory, Providence, RI. June 2016.
 - Poster Session, Midwest Theory Day, Bloomington, IN. April 2016.
 - Sigma-Xi Poster Competition, West Lafayette, IN. Feb 2016.
 - Poster Session, Sublinear-time Algorithms Workshop, Baltimore, MD. Jan 2016.
 - Indian Institute of Science (IISc), Bangalore, India. Dec 2015.
 - Purdue University, West Lafayette, IN. Aug 2015.
- *Deciding Orthogonality in Construction-A Lattices.*
 - FSTTCS, Bangalore, India. Dec 2015.
- *Bridging Computation on Codes and Lattice.*
 - Purdue University, West Lafayette, IN. Dec 2015.

AWARDS AND HONOURS

- Graduate School Summer Research Grant in 2013.
- Travel Grant awarded for FOCS 2016.
- Travel Grant awarded for STOC 2013, 2014 and 2016.
- Travel Grant awarded for CCC 2013.

OTHER ACTIVITIES

- Reviewer or external reviewer for IEEE Transactions on Information Theory (ITIT), IEEE Computational Complexity Conference (CCC), Theory of Computation (ToC), International Conference on Randomization and Computation (RANDOM).
- Organized CS Theory Reading Group at Purdue University from 2013 - 2016.