

Balagopal Komarath <bkomarath@rbgo.in>

I am a researcher who works in computational complexity theory. Most of my work involves proving lower bounds against *natural* algorithms for computational problems.

Publications

Markus Bläser, Balagopal Komarath, and Karteek Sreenivasaiah. “Graph pattern polynomials” *FSTTCS 2018: 18:1-18:13*

Chistian Ikenmeyer, Balagopal Komarath, Christoph Lenzen, Vladimir Lysikov, Andrey Mokhov, and Karteek Sreenivasaiah. “On the complexity of hazard-free circuits” *STOC 2018: 878-889*

Balagopal Komarath, Jayalal Sarma, and K.S. Sunil. “Comparator circuits over finite bounded posets” *Inf. Comput. 261(Part): 160-174 (2018)*

Balagopal Komarath, Jayalal Sarma, and Saurabh Sawlani. “Pebbling meets coloring: Reversible pebble game on trees” *J. Comput. Syst. Sci. 91: 33-41 (2018)*

Balagopal Komarath, Jayalal Sarma, and K.S. Sunil. “On the complexity of L-reachability” *Fundam. Inform. 145(4): 471-483 (2016)*

Kristoffer Hansen, Balagopal Komarath, Jayalal Sarma, Sven Skyum, and Navid Talebanfard. “Circuit complexity of properties of graphs with constant planar cutwidth” *MFCS (2) 2014: 336-347*

Balagopal Komarath and Jayalal Sarma. “Pebbling, entropy and branching program size lower bounds” *TOCT 7(2): 8:1-8:21 (2015)*

Work

Postdoctoral Researcher, Computational Complexity, Saarland University, Germany (2016 –)

Research Assistant, Department of Computer Science & Engineering, IIT Madras, India (2011 – 2016)

Teaching Assistant, Department of Computer Science & Engineering, IIT Madras, India (2009 – 2011)

Software Engineer, Tata Elxsi Pvt. Ltd. (2007 – 2009)

Teaching

Instructor, *Complexity Theory*, Saarland University, Summer Term 2018

I served as a teaching assistant for many courses offered by the theory group at IIT Madras. A complete list is available on my page at IIT Madras¹.

Education

PhD, Department of Computer Science & Engineering, IIT Madras, 2016

Master of Technology, Department of Computer Science & Engineering, IIT Madras, 2011

Bachelor of Technology, Department of Computer Science & Engineering, GEC Thrissur, 2007

Awards & Scholarships

IBM Best Doctoral Dissertation, CSE, IIT Madras (2015 – 2016)

TCS Research Fellowship, 2012

¹<https://www.cse.iitm.ac.in/~theory/memberdetails.php?memberid=7>