

# Geevarghese Philip

## Profile

I am currently in the third year of my PhD in Theoretical Computer Science (2008 - ) at the Institute of Mathematical Sciences (IMSc), Chennai, India. My advisor is Venkatesh Raman. Prior to this, I did my M.Sc in Theoretical Computer Science (2006 - 2008) at IMSc.

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## Research Interests

My primary research interests are in Parameterized Algorithms and Complexity. My work involves finding improved upper and lower bounds for the **fixed-parameter tractability and kernelization** of various parameterized NP-hard problems. I am also interested in other ways of coping with NP-hard problems, especially **approximation algorithms** and **exact (exponential-time) algorithms**.

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## Publications

(Electronic versions available on my [web page](#).)

- [1] G. Philip, V. Raman, and S. Sikdar. Solving Dominating Set in Larger Classes of Graphs: FPT Algorithms and Polynomial Kernels. In A. Fiat and P. Sanders, editors, *Proceedings of ESA 2009*, volume 5757 of *Lecture Notes in Computer Science*, pages 694–705, 2009.
- [2] N. Misra, G. Philip, V. Raman, and S. Saurabh. The effect of girth on the kernelization complexity of Connected Dominating Set. In K. Lodaya and M. Mahajan, editors, *IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science, FSTTCS 2010, December 15-18, 2010, Chennai, India*, volume 8 of *LIPICs*, pages 96–107. Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, 2010.
- [3] G. Philip, V. Raman, and Y. Villanger. A Quartic Kernel for Pathwidth-One Vertex Deletion. In *Graph Theoretic Concepts in Computer Science - 36th International Workshop, WG 2010, Zarós, Crete, Greece, June 28-30, 2010 Revised Papers*, volume 6410 of *Lecture Notes in Computer Science*, pages 196–207, 2010.
- [4] A. M. Ambalath, R. Balasundaram, C. R. H., V. Koppala, N. Misra, G. Philip, and M. S. Ramanujan. On the Kernelization Complexity of Colorful Motifs. In V. Raman and S. Saurabh, editors, *Parameterized and Exact Computation - 5th International Symposium, IPEC 2010, Chennai, India, December 13-15, 2010. Proceedings*, volume 6478 of *Lecture Notes in Computer Science*, pages 14–25. Springer, 2010.
- [5] H. Fernau, F. V. Fomin, D. Lokshtanov, M. Mnich, G. Philip, and S. Saurabh. Ranking and drawing in subexponential time. *IWOCA 2010*, 2010.
- [6] H. Fernau, F. V. Fomin, G. Philip, and S. Saurabh. The Curse of Connectivity: t-Total Vertex(Edge) Cover. In M. T. Thai and S. Saurabh, editors, *Proceedings of COCOON 2010*, volume 6196 of *LNCS*, pages 34–43. Springer, 2010.
- [7] N. Misra, G. Philip, V. Raman, S. Saurabh, and S. Sikdar. FPT Algorithms for Connected Feedback Vertex Set. In S. F. Md. Saidur Rahman, editor, *Proceedings of WALCOM 2010*, volume 5942 of *Lecture Notes in Computer Science*, pages 269–280, 2010.
- [8] F. V. Fomin, D. Lokshtanov, N. Misra, G. Philip, and S. Saurabh. Hitting Forbidden Minors: Approximation and Kernelization. Accepted at STACS 2011, 2011.

## Personal Data

<i>Gender</i>	MALE
<i>Nationality</i>	INDIAN
<i>Marital Status</i>	MARRIED

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