

# Curriculum Vitae

M. Praveen

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<b>Affiliation</b>	Assistant Professor Chennai Mathematical Institute ( <a href="#">CMI</a> ) H1, SIPCOT IT Park, Siruseri Kelambakkam 603103, India E-mail: <a href="mailto:praveenm@cmi.ac.in">praveenm at cmi dot ac dot in</a> Home page: <a href="http://www.cmi.ac.in/~praveenm">http://www.cmi.ac.in/~praveenm</a>	
<b>Research Interests</b>	Computational complexity of modelling and verifying concurrent infinite state systems, logic and parameterized complexity.	
<b>Education</b>	PhD in Theoretical Computer Science at <a href="#">The Institute of Mathematical Sciences, Homi Bhabha National Institute</a> , India. Advisor: <a href="#">Prof. Kamal Lodaya</a> . Thesis: <a href="#">Parameterized complexity of some problems in concurrency and verification</a> .	August 2008 to October 2011.
	MSc in Theoretical Computer Science at <a href="#">The Institute of Mathematical Sciences, Homi Bhabha National Institute</a> , India. Advisor: <a href="#">Prof. Kamal Lodaya</a> . Thesis: <a href="#">Complexity of the reachability problem in subclasses of Petri nets</a> .	August 2006 to July 2008.
	BE in Electronics and Communications Engineering at <a href="#">R.V.College of Engineering</a> , Bangalore University, India.	August 1997 to October 2001.
<b>Experience</b>	Assistant Professor at Chennai Mathematical Insititute, India.	February 2014 till date.
	Postdoctoral researcher at <a href="#">Laboratoire Bordelais de Recherche en Informatique</a> , France. Funded by the <a href="#">French national research agency (ANR) non-thematic program</a> project <a href="#">REACHARD</a> .	January 2013 to December 2013.
	<a href="#">ERCIM</a> postdoctoral researcher at <a href="#">Inria Saclay - Île de France</a> (with <a href="#">DAHU</a> research team working at the <a href="#">Laboratoire Spécification et Vérification</a> campus), ENS Cachan, France.	January 2012 to December 2012.
	Research Intern at <a href="#">Microsoft Research</a> , Bangalore, India.	October 2011 to December 2011.
	Software engineer at Mindtree Consulting Pvt . Ltd., Bangalore, India.	April 2002 to July 2006.

## Awards and Recognitions

1. [Excellent student paper award](#) at the International Symposium on Parameterized and Exact Computation, 2010. Selected among the papers authored by PhD students submitted to the symposium. Awarded by the [program committee](#) of the symposium, for the quality of the paper. Year of award 2010.
2. Marie Curie fellowship, [co-funded](#) by the European Research Consortium in Informatics and Mathematics ([ERCIM](#)). A one year fellowship awarded for carrying out postdoctoral research at a European research institute. Awarded by ERCIM for the year 2012. I used this fellowship for my postdoctoral work at [Laboratoire Spécification et Vérification](#), ENS Cachan, France during January-December 2012.

## Articles in Journals

1. Gilles Geeraerts, Alexander Heußner, M. Praveen, and Jean-François Raskin.  $\omega$ -petri nets: Algorithms and complexity. *Fundam. Inform.*, 137(1):29–60, 2015.
2. M. Praveen. Does treewidth help in modal satisfiability? *ACM Transactions on Computational Logic*, 14(3):1–32, 2013.
3. M. Praveen. Small vertex cover makes Petri net coverability and boundedness easier. *Algorithmica*, 65(4):713–753, 2013.

## Articles in Conference Proceedings

1. M. Praveen and B. Srivathsan. Defining relations on graphs: How hard is it in the presence of node partitions? In *Proceedings of the 34th ACM Symposium on Principles of Database Systems*, PODS 2015. Full version [here](#).
2. Jérôme Leroux, M. Praveen, and Grégoire Sutre. Hyper-ackermannian bounds for pushdown vector addition systems. In *Proceedings of the 29th Annual ACM/IEEE Symposium on Logic in Computer Science*, LICS 2014. Full version [here](#).
3. Stéphane Demri, Diego Figueira, and M. Praveen. Reasoning about data repetitions with counter systems. In Orna Kupferman, editor, *Proceedings of the 28th Annual ACM/IEEE Symposium on Logic in Computer Science*, LICS 2013.
4. Gilles Geeraerts, Alexander Heußner, M. Praveen, and Jean-Francois Raskin.  $\omega$ -Petri nets. In José Manuel Colom and Jörg Desel, editors, *Proceedings of the 34th international conference on application and theory of Petri nets and concurrency*, volume 7927 of *Lecture Notes in Computer Science*, Springer Berlin Heidelberg, 2013. Full version [here](#).
5. Rémi Bonnet, Alain Finkel, and M. Praveen. Extending the Rackoff technique to Affine nets. In Deepak D’Souza, Telikepalli Kavitha, and Jaikumar Radhakrishnan, editors, *Proceedings of the IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science*, volume 18 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 301–312. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2012. Full version [here](#).
6. Kamal Lodaya and M. Praveen. Parameterized complexity results for 1-safe Petri nets. In Joost-Pieter Katoen and Barbara König, editors, *Proceedings of the 22nd International Conference on Concurrency Theory*, volume 6901 of *Lecture Notes in Computer Science*, pages 358–372. Springer Berlin Heidelberg, 2011. Full version [here](#).

7. M. Praveen. Small vertex cover makes Petri net coverability and boundedness easier. In Venkatesh Raman and Saket Saurabh, editors, *Proceedings of the International Symposium on Parameterized and Exact Computation*, volume 6478 of *Lecture Notes in Computer Science*, pages 216–227. Springer Berlin Heidelberg, 2010. Got the excellent student paper award of this symposium. Full version [here](#).
8. M. Praveen. Does treewidth help in modal satisfiability? In Petr Hliněný and Antonín Kučera, editors, *Proceedings of the 35th International Symposium on Mathematical Foundations of Computer Science*, volume 6281 of *Lecture Notes in Computer Science*, pages 580–591. Springer Berlin Heidelberg, 2010. Full version [here](#).
9. Kamal Lodaya and M. Praveen. Modelchecking counting properties of 1-safe nets with buffers in paraPSPACE. In Ravi Kannan and K. Narayan Kumar, editors, *Proceedings of the IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science*, volume 4 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 347–358. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2009. Full version [here](#).
10. Kamal Lodaya and M. Praveen. Analyzing reachability for some Petri nets with fast growing markings. In Vesa Halava and Igor Potapov, editors, *Proceedings of the 2nd workshop on reachability problems*, volume 223 of *Electronic Notes in Theoretical Computer Science*, pages 215–237. Elsevier, 2008. Full version [here](#).

## Projects

1. Indo-Swedish research project on verification of concurrent software. 2015-18.
2. Indo-French project on Automated Verification of Concurrent Software (AVeCSO). 2015-18.