

Curriculum Vitae

Full Name	MADALA Rama Koteswara Krishna Rao (normally written as M.R.K. Krishna Rao)
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Career	2020 – Till Date: Professor, Gayatri Vidya Parishad College of Engineering for Women, Vizag, India. 2008 - Till Date: Director, Lakshmi Enterprises (AUST) Pty Ltd. 2002 - 2008. Associate Professor in Computer Science at King Fahd University of Petroleum and Minerals, Saudi Arabia. 1999 - 2001. Foreign Professor at University of Tsukuba, Japan. 1999 Feb-Jun. Lecturer at James Cook University, Australia. (also as Senior Lecturer 2001 – 2002) 1996 - 1998. Senior Research Fellow at Griffith University, Australia. 1994 – 1996 (on leave from Tata Institute). Guest Researcher at Max-Planck Institut fuer Informatik, Saarbruecken, Germany. 1988 - 1996. Research scholar and Fellow at Tata Institute of Fundamental Research, Bombay, India. 1987 - 1988. Teaching Assistant at National Institute of Technology (formerly, Regional Engineering College), Warangal
Education	Ph.D., Computer Science (1993): Tata Institute of Fundamental Research (TIFR), Bombay, India Thesis title: Termination Characteristics of Logic Programs B.Tech., Computer Science (1987): National Institute of Technology (formerly, Regional Engineering College), Warangal, India After my undergraduate studies , I appeared for Tata Institute’s Ph.D. entrance examination (written test + interview) and outperformed postgraduates from prestigious institutes in India like IITs , thereby securing admission to Ph.D. program without going through a master’s program.
Awards	The Association for Logic Programming (ALP) has awarded Best Theory Paper of the conference award to our paper <i>Rewriting Concepts in the Study of Termination of Logic Programs</i> at ALPUK'92, London, 1992. Got 3rd rank at MATHEMATICS OLYMPIAD at Degree level in India in 1987

Research Interests	<p>Theory of Computation, Artificial Intelligence, Machine Learning, Curriculum design, Teaching innovations.</p> <p>Number of reads at Research Gate: 9,239 as of 6th Sept 2021. (https://www.researchgate.net/profile/Mrk-Krishna-Rao/stats)</p>
Teaching Expertise	<p>Artificial Intelligence, Discrete Mathematics, Data Structures, Algorithms, Machine Learning, Data mining, Theory of Computation, Software Engineering, Formal Methods, Systems Analysis and Design, Professional Ethics.</p>
References	<p>Prof. PVSL Jagadamba hod.cse@gvpcew.ac.in Department of Computer Science and Engineering G.V.P College of Engineering for Women Visakhapatnam, India</p> <p>Prof. Abdul Sattar a.sattar@griffith.edu.au School of Computing and Information Technology, Griffith University, Nathan, Qld 4111, Australia</p> <p>Prof. R.K. Shyamasundar shyamasundar@gmail.com Department of Computer Science and Engineering Indian Institute of Technology Bombay Powai, Mumbai, INDIA 400076</p> <p>Prof. Thomas Zeugmann thomas@ist.hokudai.ac.jp Division of Computer Science Graduate School of Information Science and Technology Hokkaido University N-14, W-9, Sapporo 060-0814, JAPAN</p> <p>Prof. Jan Willem Klop jwk@cs.vu.nl, j.w.klop@vu.nl Department of Theoretical Computer Science Vrije University, De Boelelaan 1081a 1081 HV Amsterdam, The Netherlands</p> <p>Prof. Danny De Schreye Danny.DeSchreye@cs.kuleuven.be Department of Computer Science Katholieke Universiteit Leuven, Celestijnenlaan 200 A, B-3001 Heverlee, Belgium</p>

International Publications

1. M.R.K. Krishna Rao, D. Kapur and R.K. Shyamasundar (1991), A Transformational methodology for proving termination of logic programs, Proc. of Computer Science Logic, CSL'91, Lecture Notes in Computer Science **626**, pp. 213-226, Springer-Verlag.
2. R.K. Shyamasundar, M.R.K. Krishna Rao and D. Kapur (1992), Rewriting concepts in the study of termination of logic Programs, Proc. of ALPUK'92 conf. (edited by K. Broda), Workshops in Computing series, pp. 3-20, Springer-Verlag.
This paper got the **Best Theory Paper** of the conference award.
3. M.R.K. Krishna Rao (1992), Occur-check in Well-moded Logic Programs, Proc. 7th Intl. Meeting of Young Computer Scientists, IMYCS'92, pp. 265-275, Gordon and Breach Science Publishers.
4. M.R.K. Krishna Rao, P.K. Pandya and R.K. Shyamasundar (1993), Verification tools in the development of provably correct compilers, Proc. of 5 th Symp. on Formal Methods Europe, FME'93, Lecture Notes in Computer Science **670**, pp. 442-461, Springer-Verlag.
5. M.R.K. Krishna Rao, D. Kapur and R.K. Shyamasundar (1993), Proving termination of GHC programs, Proc. of 10th International Conference on Logic Programming, ICLP'93, pp. 720-736, MIT Press.
6. M.R.K. Krishna Rao (1993), Search and Backtracking Strategies in Termination Analysis of Logic Programs, Proc. of 5th Asian Logic Conference, Singapore.
7. M.R.K. Krishna Rao and R.K. Shyamasundar (1993), Termination Analysis of Logic Programs: Techniques and Applications in AI, Proc. of International Computing Congress, ICC'93, pp. 81-88, McGraw-Hill.
8. M.R.K. Krishna Rao (1993), Completeness of hierarchical combinations of term rewriting systems, Proc. of 13th conference on Foundations of Software Technology and Theoretical Computer Science, FST&TCS'93, Lecture Notes in Computer Science **761**, pp. 125-138, Springer-Verlag.
9. M.R.K. Krishna Rao (1994), Simple termination of hierarchical combinations of term rewriting systems, Proc. of Theoretical Aspects of Computer Science, TACS'94, Lecture Notes in Computer Science **789**, pp. 203-223, Springer-Verlag.
10. M.R.K. Krishna Rao (1995), Semi-completeness of hierarchical and super-hierarchical combinations of term rewriting systems, Proc. of Theory and practice of Software Development, TAPSOFT'95, Lecture Notes in Computer Science **915**, pp. 379-393, Springer-Verlag.
11. M.R.K. Krishna Rao (1995), Modular proofs for completeness of hierarchical term rewriting systems, *Theoretical Computer Science* **151**, pp. 487-512.
12. M.R.K. Krishna Rao (1995), Graph reducibility of term rewriting systems, Proc. of Mathematical Foundations of Computer Science, MFCS'95, Lecture Notes in Computer Science **969**, pp. 371-381, Springer-Verlag.
13. M.R.K. Krishna Rao and R. K. Shyamasundar (1995), Unification-free execution of well-moded Prolog programs, Proc. of International Static Analysis Symposium, SAS'95, Lecture Notes in Computer Science **983**, pp. 243-260, Springer-Verlag.
14. M.R.K. Krishna Rao (1995), Incremental learning of logic programs, Proc. of

Algorithmic Learning Theory, ALT'95, Lecture Notes in Artificial Intelligence **997**, pp. 95-109, Springer-Verlag.

15. M.R.K. Krishna Rao (1996), A refutably inferable class of logic programs, Proc. of 6th Asian Logic Conference.
16. M.R.K. Krishna Rao (1996), Some characteristics of strong innermost normalization, Proc. of AMAST'96, Lecture Notes in Computer Science **1101**, pp. 406-420, Springer-Verlag.
17. M.R.K. Krishna Rao (1996), Relating confluence, innermost-confluence and outermost-confluence properties of term rewriting systems, *Acta Informatica* **33**, pp. 595-606.
18. M.R.K. Krishna Rao (1996), Modularity of termination in term graph rewriting, Proc. of Rewriting Techniques and Applications, RTA'96, Lecture Notes in Computer Science **1103**, pp. 230-244, Springer-Verlag.
19. M.R.K. Krishna Rao (1996), Completeness results for basic narrowing in non-copying implementations, Proc. of Joint International Conference and Symposium on Logic Programming, JICSLP'96, pp. 393-407, MIT Press.
20. M.R.K. Krishna Rao (1996), A class of Prolog programs inferable from positive data, Proc. of Algorithmic Learning Theory, ALT'96, Lecture Notes in Artificial Intelligence **1160**, pp. 272-284, Springer-Verlag.
21. M.R.K. Krishna Rao (1996), Learning Prolog programs from examples, Proc. of Knowledge Based Computer Systems, KBCS'96, pp. 19-30.
22. M.R.K. Krishna Rao, D. Kapur and R.K. Shyamasundar (1997), Proving termination of GHC programs, *New Generation Computing* **15**, pp. 293-338.
23. M.R.K. Krishna Rao (1997), A Framework for incremental learning of logic programs, *Theoretical Computer Science* **185**, pp. 193-213.
24. M.R.K. Krishna Rao, D. Kapur and R.K. Shyamasundar (1997), A Transformational methodology for proving termination of logic programs, *The Journal of Logic Programming* **34**, pp. 1-41.
25. M.R.K. Krishna Rao and A. Sattar (1998), Learning from entailment of logic programs with local variables, Proc. of Algorithmic Learning Theory, ALT'98, Lecture Notes in Artificial Intelligence **1501**, pp. 143-157, Springer-Verlag.
26. M.R.K. Krishna Rao (1998), Modular Aspects of Term Graph Rewriting, *Theoretical Computer Science* **208**, pp. 59-86.
27. M.R.K. Krishna Rao and A. Sattar (1998), Learning linearly-moded programs from entailment, Proc. of Pacific Rim International Conference on Artificial Intelligence, PRICAI'98, Lecture Notes in Artificial Intelligence **1531**, pp. 482-493, Springer-Verlag.
28. M.R.K. Krishna Rao and A. Sattar (1999), Learning logic programs with local variables from positive examples, Proc. of Australian Joint Conference on Artificial Intelligence, AI'99, Lecture Notes in Artificial Intelligence **1747**, pp. 469-471, Springer-Verlag.
29. K. Ramesh and M.R.K. Krishna Rao (1999), Rewriting Techniques in Telecommunication Protocol Verification, Proc. of International Computing Congress, ICC'99, pp. 62-71, McGraw-Hill.
30. M.R.K. Krishna Rao (2000), Some characteristics of strong innermost normalization, *Theoretical Computer Science* **239**, pp. 141-164.
31. M.R.K. Krishna Rao (2001), Some classes of Prolog programs inferable from positive data, *Theoretical Computer Science* **241**, pp. 211-234.
32. M.R.K. Krishna Rao and A. Sattar (2002), Polynomial-time learnability of

logic programs with local variables from entailment, *Theoretical Computer Science* **268**, pp. 179-198.

33. M.R.K. Krishna Rao (2003), Improving Research Supervision and Training: an Australian Experience, Proc. of Academic Development Workshop.
34. M.R.K. Krishna Rao (2003), On learning term rewriting systems from entailment, Proc. of ACS/IEEE International Conference on Computer Systems and Applications, AICCSA'2003, pp. 94-102.
35. M.R.K. Krishna Rao (2003), Blooms Taxonomy and Examinations in Higher Educations, Proc. of Higher Education in Gulf countries.
36. M.R.K. Krishna Rao (2003), Multiple Choice Questions versus Problem Solving Questions in Science and Technology Undergraduate Examinations, Proc. of Higher Education in Gulf countries.
37. M.R.K. Krishna Rao (2003), Polynomial-Time Learnability from Entailment, Proc. of International Conference on Logic Programming, ICLP'2003, Lecture Notes in Artificial Intelligence **2916**, pp. 489-491, Springer-Verlag.
38. M.R.K. Krishna Rao (2004), Maslow's Hierarchy of Needs as a Basis for Faculty Motivation Survey, Proc. of Academic Development Workshop.
39. M.R.K. Krishna Rao (2004), Inductive Inference of Term Rewriting Systems from Positive Data, Proc. of Algorithmic Learning Theory, ALT'2004, Lecture Notes in Artificial Intelligence **3244**, pp. 69-82, Springer-Verlag.
40. M.R.K. Krishna Rao and M. Shafique (2004), Active Learning and Student Motivation, Proc. of Higher Education in Gulf countries.
41. M.R.K. Krishna Rao (2004), Coordination of Multiple-Section courses and Common Examinations, Proc. of Higher Education in Gulf countries.
42. M.R.K. Krishna Rao (2004), Learnability of Simply-Moded Logic Programs from Entailment, Proc. of Asian Computing Science Conference, ASIAN'2004, Lecture Notes in Computer Science **3321**, pp.128-141, Springer-Verlag.
43. M.R.K. Krishna Rao (2004), Infusing Critical Thinking Skills into Course Content: How and Why?, Proc. of Academic Development Workshop.
44. M.R.K. Krishna Rao (2004), Learning Rewrite Systems from Examples, Proc. of Knowledge Based Computer Systems Conference, KBCS'2004.
45. A. Suhaim and M.R.K. Krishna Rao (2005), Data mining techniques in soil analysis, Proc. of Indian International Conference on Artificial Intelligence (IICAI-05), pp. 44-53.
46. M.R.K. Krishna Rao (2005), Input-termination of logic programs, Proc. of LOPSTR'2004, Lecture Notes in Computer Science **3573**, pp.215-230, Springer-Verlag.
47. M.R.K. Krishna Rao (2005), Infusing critical thinking skills into content of AI course, ACM Special Interest Group on Computer Science Education (*SIGCSE*) *Bulletin*, Vol **37**, issue 3, pp. 173-177.
48. M.R.K. Krishna Rao, S. Junaidu, T. Maghrabi, M. Shafique, M. Ahmad and K. Faisal (2005), Principles of curriculum design and revision: a case study in implementing computing curricula CC2001, ACM Special Interest Group on Computer Science Education (*SIGCSE*) *Bulletin*, Vol **37**, issue 3, pp. 256-260.
49. M.R.K. Krishna Rao (2005), Learning recursive Prolog programs with local variables from examples, Proc. of ICML'05 workshop on Approaches and Applications of Inductive Programming.
50. M.R.K. Krishna Rao (2005), A class of Prolog programs with non-linear

outputs inferable from positive data, Proc. of Algorithmic Learning Theory, ALT'2005, Lecture Notes in Artificial Intelligence **3734**, pp.312-317, Springer-Verlag.

51. M.R.K. Krishna Rao (2006), Learnability of term rewrite systems from positive examples, Proc. of Computing: The Australasian Theory Symposium, CATS'2006, Australian Computer Society (ACS) Conferences in Research and Practice in Information Technology (CRPIT) volume **51**, pp. 133-137.
52. M.R.K. Krishna Rao (2006), Storytelling and puzzles in a software engineering course, ACM Special Interest Group on Computer Science Education (*SIGCSE*) *Bulletin*, Vol **38**, issue 1, pp. 418 - 422.
53. M.R.K. Krishna Rao, M. Shafique, K. Faisal, A. Bagais (2006), Infusing Critical Thinking Skill Compare and Contrast into Content of Data Structures Course, Proc. of International Conference on Frontiers in Education: Computer Science and Computer Engineering, FECS'06.
54. M. Shafique, M.R.K. Krishna Rao (2006), Infusing Parts-whole Relationship Critical Thinking Skill into Basic Computer Science Education, Proc. of International Conference on Frontiers in Education: Computer Science and Computer Engineering, FECS'06.
55. M.R.K. Krishna Rao (2008), Some classes of term rewriting systems inferable from positive data, *Theoretical Computer Science* **397**, pp. 129-149.
56. Shahid Hussain, M. R. K. Krishna Rao: Learning Hereditary and Reductive Prolog Programs from Entailment. ICIC (2) 2009: 546-555.