C. R. Ramakrishnan

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Education:

- Ph.D., Computer Science, Stony Brook University, Stony Brook, New York. (1995).
- M.Sc.(Tech) Computer Science, M.Sc.(Hons) Physics, Birla Institute of Technology and Science, Pilani, India. (1987).

Employment:

- Professor, Department of Computer Science, Stony Brook University.
  (Sept. 2013 – present)
- Associate Professor, Department of Computer Science, Stony Brook University.
  (Sept. 2003 – Aug. 2013)
- Assistant Professor, Department of Computer Science, Stony Brook University.
  (Sept. 1997 – Aug. 2003)
- Post-Doctoral Research Associate, Department of Computer Science, Stony Brook University.
  (Sept. 1995 – Aug. 1997)

Research Interests:

Quantum Computing and Networks, Logic Programming, Formal Methods, Programming Languages.

Honors and Distinctions:

- National Science Foundation Faculty Early Career Award, (Sept 1999–Aug 2003).
- National Science Foundation Postdoctoral Research Associateship in Experimental Computer Science. (Sept 1995 –Aug 1997)
- Catacosinos Fellowship for Excellence in Computer Science. (Sept 1993 – May 1994, SUNY at Stony Brook)
- Institute Merit Scholarship. (Aug 1982 – May 1987, BITS, Pilani, India)

Leadership Roles:

- **Graduate Program Director:** (Jan 2017 – Aug 2024)

  Responsible for the overall management of Computer Science MS and PhD programs (with total headcount enrollments of over 500 students each Fall).

  Main accomplishments:

  - Introduced *bridge* courses for non-CS majors to enter CS graduate programs
  - Streamlined MS requirements to make the program flexible without losing rigor
  - Introduced incentives for MS students to take up TA roles for credit, significantly improving the overall student-TA ratio for all CS classes (undergraduate and graduate)
  - Implemented systems for fairer management of enrollments in the presense of chronically full graduate classes
  - Obtained two GAANN grants and administered the fellowship program to support domestic PhD students

- **ABET Coordinator:** (2007–2012)

  Responsible for managing the assessment and continuous improvement process in the CS BS program, leading to continued accreditation of the BS program.

- **NRT Fellowship Program:** (2021–present)

  This NSF Research Traineeship program, "Detecting and Addressing Bias in Data, Humans, and Institutions", uses a cohort-based model to cross-train PhD students from computer/data science and those from human-centered STEM fields such as psychology, sociology, etc., to enable them to pursue convergent research. The program spans Computer Sceience and Applied Math & Statistics in the College of Engineering, and Economics, Linguistics, Neurobiology and Behavior, Political Science, Psychology, and Sociology in the College of Arts & Sciences. It gets students in either side of the computer/data vs. human-centered divide to become fluent in the other side by completing advanced graduate certificates and participating in immersive research practica. An important side effect of this program is to increase the diversity of students taking computer science classes, in terms of gender, and race, as well as thought and prior training.

- **Strength in Quantum Computing:** (2018–present)

  Among the first Computer Science faculty to participate in Quantum Computing proposals (starting with NSF QLCI planning grant in 2019) in collaboration with faculty in physics. Worked to bring NSF's Quantum Faculty Fellow award in 2020 (PI: Samir Das).

  - Member of SBU Tiger Team on Quantum Information Science & Technology, 2023
  - Co-Lead of a working group for SUNY STRIVE Task Force on Quantum

Professional Activities:

1. Invited Talks:

   (a) *Declarative Probabilistic Programming*, AppLP workshop at ICLP 2016, New York, NY, Oct 2016.

   (b) *Verification and Probabilistic Logic Programming*, ICLP 2016 Autumn School, New York, NY, Oct 2016.

   (c) *Probabilistic Tabled Logic Programming with Application to Model Checking*, ICLP 2013, Istanbul, Turkey, August 2013.

   (d) *Model Checking and Logic Programming*, On the Frontiers of Science: Leading Young Investigators and the National Science Foundation, Columbia University, New York, NY, Dec. 2000.

   (e) *Tabled Logic Programming and Applications*, Summer School in (Constraint) logic programming, New Mexico State University, Las Cruces, NM, Aug. 1999.

   (f) *Tabled Logic Programming and Applications*, Summer School in (Constraint) logic programming, New Mexico State University, Las Cruces, NM, Aug. 1999.

   (g) *Model Checking based on Logic Programming*, GULP International Summer School on Logic Programming Perspectives in Hot Research Areas, Maratea, Italy, Sept. 1998.

   (h) *Logic Programming and Model Checking*, In Joint Intl. Symposium PLILP/ALP'98, Pisa, Italy, Sept. 1998.

2. Invited Tutorials:

   (a) *Verification using Tabled Logic Programming*, in International Conference on Concurrency Theory (CONCUR'2000), State College, Pennsylvania, August 2000.

   (b) *Model Checking in XSB*, in Joint International Conference and Symposium on Logic Programming (JICSLP'98), Manchester, UK, June 1998.

3. Conference Organization:

   (a) *Program co-chair,* International SPIN Symposium on Model Checking Software (SPIN), Stony Brook, New York, July 2013.

   (b) *Program co-chair,* Thirteenth International Conference on Tools and Algorithms for Construction and Analysis of Systems (TACAS), Budapest, Hungary, April 2008.

   (c) *Guest Editor,* Special Issue on Verification and Computational Logic, Theory and Practice of Logic Programming.

   (d) *Program co-chair,* Fourth International Symposium on Practical Applications of Declarative Languages, Portland, Oregon, Jan. 2002.

   (e) *Program Committee Member* for:

      i. IEEE Quantum Computing and Engineering (QCE), Montreal, Canada, Sept. 2024.

      ii. International Conference on Logic Programming (ICLP), Melbourne, Australia, August 2017.

iii. Logic-Based Program Synthesis and Transformation (LOPSTR), Edinburgh, Scotland, Sept 2016.

iv. Probabilistic Logic Programming Workshop (PLP), London, UK, Sept. 2016.

v. Probabilistic Logic Programming Workshop (PLP), Cork, Ireland, Aug. 2015.

vi. ACM Symposium on Practical Applications of Declarative Programming (PADL), Portland, OR, Jan. 2015.

vii. Probabilistic Logic Programming Workshop (PLP), Vienna, Austria, July 2014.

viii. ACM Symposium on Practical Applications of Declarative Programming (PADL), San Diego, CA, Jan. 2014.

ix. International Conference on Logic Programming (ICLP), Istanbul, Turkey, August 2013.

x. Tools and Algorithms for Construction and Analysis of Systems (TACAS), Saarbrucken, Germany, March 2011.

xi. ACM Symposium on Practical Applications of Declarative Programming (PADL), Austin, TX, Jan. 2011.

xii. Tools and Algorithms for Construction and Analysis of Systems (TACAS), Phapos, Cyprus, March 2010.

xiii. Tools and Algorithms for Construction and Analysis of Systems (TACAS), York, UK, March 2009.

xiv. Verification, Model Checking and Abstract Interpretation (VMCAI), Savannah, GA, Jan. 2009.

xv. Logic-Based Program Synthesis and Transformation (LOPSTR), Valencia, Spain, July 2008.

xvi. Logic-Based Program Synthesis and Transformation (LOPSTR), Kongens Lyngby, Denmark, Aug. 2007.

xvii. Tools and Algorithms for Construction and Analysis of Systems (TACAS), Braga, Portugal, 2007.

xviii. Workshop on Software Verification and Validation, Seattle, WA, 2006.

xix. Logic-Based Program Synthesis and Transformation (LOPSTR), London, UK, Sept. 2005.

xx. Workshop on Software Verification and Validation, Manchester, UK, Oct. 2005.

xxi. Logic-Based Program Synthesis and Transformation (LOPSTR), Verona, Italy, Aug. 2004.

xxii. ACM Symposium on Practical Aspects of Declarative Languages (PADL), Dallas, Texas, June 2004.

xxiii. Workshop on Software Verification and Validation, Mumbai, India, Dec. 2003.

xxiv. ACM Symposium on Principles and Practice of Declarative Programming (PPDP), Uppsala, Sweden, Aug. 2003.

xxv. Workshop on Verification and Computational Logic, Pittsburg, PA, Oct. 2002.

xxvi. Logic Programming Sythesis and Transformation (LOPSTR), Madrid, Spain, Sept. 2002.

xxvii. Fifth NASA Langly Formal Methods Workshop, Willamsburg, VA, June 2000.

(f) *Co-organizer,* Workshop on Verification and Computational Logic, Firenze, Italy, Sept. 2001, and London, UK, July 2000.

(g) *Publicity Chair,* International Conference on Logic Programming, Las Cruces, NM, 1999.

(h) *Poster Chair,* International Logic Programming Symposium, Port Jefferson, NY, 1997.

(i) *Co-organizer,* International Workshop on Tabling in Logic Programming, Leuven, Belgium, 1997.

4. Refereeing:

Reseach Grants:
Panel member for CNS, IIS and EIA divisions of CISE directorate, and ENG directorate of the National Science Foundation; External reviewer for several proposals for the EIA division of CISE.

Journals:
ACM Transactions on Embedded Systems, ACM Transactions on Software Engineering, Formal Methods in System Design, Formal Methods Letters, Fundametae Informatica, IEEE Transactions on Parallel and Distributed Systems, Information and Computation, Journal of Logic Programming, Journal of Functional and Logic Programming, Software and Tools for Technology Transfer, Theoretical Computer Science, and Theory and Practice of Logic Programming.

Conferences:
ACM Symposium on Principles of Programming Languages (POPL'00, '07), Computer Aided Verification (CAV'05), Concurrency Theory (CONCUR'02, '08), European Symposium on Programming (ESOP'01), IEEE Symposium on Logic in Computer Science (LICS'07), IEEE Symposium on Security and Privacy (S&P'06), International Conference on Algebraic Methodology and Software Technology (AMAST'95), International Conference on Automated Deduction (CADE'99), International Conference on Foundations of Software Technology and Theoretical Computer Science (FST&TCS '95, '99, '00, '04, '11, '12), International Conference on Logic Programming (ICLP'04, '05, '06, '07,'12,'13,'15), International Conference on Practical Applications of Declarative Languages (PADL'99), International Conference on Principles and Practice of Declarative Languages (PPDP'00), International Conference on Rewriting Techniques and Applications (RTA'93, RTA'95), International Conference on Tools and Algorithms for Construction and Analysis of Systems (TACAS'98), Joint International Conference/Symposium on Logic Programming (JICSLP'98), Logic for Programming Artificial Intelligence and Reasoning (LPAR'07), Mathematical Foundations of Computer Science (MFCS'07), International Symposium on Theoretical Aspects of Computer Science (STACS '09), Usenix Security Symposium (USS'05), Verification, Model Checking and Abstract Interpretation (VMCAI'03, VMCAI'07).

Courses Taught:

- *Undergraduate:* Advanced Programming (Computer Science III), Principles of Programming Languages, Compiler Design.

- *Graduate:* Principles of Programming Languages, Computing with Logic, Compiler Design, Programming Abstractions.
- *Graduate Seminars:* Program Analysis, Logic in Computer Science, Advanced Logic Programming, Model Checking and Abstraction, Computer Security.

Thesis Supervision:

- ***PhD Thesis Advisor For:***
  - Prasad Rao (Stony Brook, 1997)
  - Xiaoqun Du (Stony Brook, 2000)
  - Abhik Roychoudhury (Stony Brook, 2000)
  - Yifei Dong (Stony Brook, 2002)
  - Samik Basu (Stony Brook, 2002)
  - L. Robert Pokorny (Stony Brook, 2005)
  - Giridhar Pemmasani (Stony Brook, 2005)
  - Beata Sarna-Starosta (Stony Brook, 2005)
  - Ping Yang (Stony Brook, 2006)
  - Diptikalyan Saha (Stony Brook, 2006)
  - Anu Singh (Stony Brook, 2009)
  - Asiful Islam (Stony Brook, 2012)
  - Andrey Gorlin (Stony Brook, 2016)
  - Arun Nampally (Stony Brook, 2019)
  - Sarthak Ghosh (Stony Brook, 2020)
  - Ranjani Sundaram (Stony Brook, expected 2025)
- ***PhD Thesis Committee Member For:***
  - Baoqiu Cui (Stony Brook, 2000)
  - Ernie Johnson (Stony Brook, 2002)
  - Supratik Mukhopadhayay (Max Plank Institute, Germany, 2001)
  - Parthasarathi Roop (University of Sydney, Australia, 2001)
  - Prashant Pradhan (Stony Brook, 2001)
  - Hasan Davulcu (Stony Brook, 2002)
  - Guizhen Yang (Stony Brook, 2002)
  - Tan Li (Stony Brook, 2003)
  - Saikat Mukherjee (Stony Brook, 2005)
  - Dezhuan Zhang (Stony Brook, 2006)
  - Rahul Agarwal (Stony Brook, 2006)

  - Liqiang Wang (Stony Brook, 2006)
  - Zan Sun (Stony Brook, 2006)
  - Katia Hristova (Stony Brook, 2007)
  - Jalal Mahmud (Stony Brook, 2008)
  - Chang Zhao (Stony Brook, 2009)
  - Hui Wan (Stony Brook, 2010)
  - Puneet Gupta (Stony Brook, 2011)
  - Faisal Ahmad (Stony Brook, 2012)
  - Yury Puzis (Stony Brook, 2012)
  - Spyros Hadjichristodoulou (Stony Brook, 2014)
  - Vikas Ashok Ganjugunte (Stony Brook, 2018)
  - Richard Defrancisco (Stony Brook, 2019)
  - Hae-Na Lee (Stony Brook, 2023)
  - Mohammad Gadheribaneh (Stony Brook, 2023)
  - Caitao Zhan (Stony Brook, 2024)

- ***MS Project Advisor For:*** Shu-Fa Hsu (1998), Yan Zhang (1999), Ali Alai-Tafti (1999), V.N. Venkatakrishnan (1999), Miti Adiecha (2002), Harpreet Singh (2005), Mandeep Singh Grang (2011), Muthukumar Suresh (2015).

Research Grants:

Federal Grants

1. "NQVL: QSTD: Pilot: SCY-QNet: Wide-Area Quantum Network to Demonstrate Quantum Advantage", National Science Foundation (2106447), $1,000,000; 09/24 – 08/25; Senior person, PI: Eden Figueroa.

2. "Caregiver-Robot Symbiosis to Individualize Caregiving Robot Assistants for People with ALS", Department of Defense (HT94252410098), $(1,489,508); 02/24 – 01/27; PI: IV Ramakrishnan; Co-PIs: Nilanjan Chakraborty, C. R. Ramakrishnan.

3. "Collaborative: FET: Medium: Robust Quantum Networks via Efficient Entanglement Distribution", National Science Foundation (2106447), $749,771; 09/21 – 08/25; PI: Himanshu Gupta; Co-PIs: Eden Figueroa, C. R. Ramakrishnan, Tzu-Chieh Wei.

4. "QCLI-CG: Center for a Quantum-Engineered Distributed Computing and Communication Testbed", National Science Foundation (1936948), $150,000, 09/19 – 08/20; PI: Eden Figueroa; Co-PIs: Tzu-Chieh Wei, C. R. Ramakrishnan, Vladimir Korepin, Dominic Schneble.

5. "GAANN Fellowships in Cybersecurity and Artificial Intelligence", Department of Edication, $$768,495; 10/18 – 09/24: PI: C. R. Ramakrishnan; Co-PI: Aruna Balasubramanian.

6. "BIGDATA: F: DKM: DKA: Big Data Modeling and Analysis with Depth and Scale", National Science Foundation (IIS 1447549), $1,500,000, 8/14–7/18; PI: C. R. Ramakrishnan; Co-PIs: Annie Liu, Maureen O'Leary, I.V. Ramakrishnan, Scott Smolka, David S. Warren.

7. "II-New: Secure and Efficient Cloud Infrastructure and Accessibility Services", National Science Foundation (CRI-1405641), $221,812, 09/14 - 08/17; PI: Mike Ferdman; Co-PIs: Don Porter, C. R. Ramakrishnan, I. V. Ramakrishnan.

8. "Center for Dynamic Data Analysis: A Multi-University Industry/University Collaborative Research Center", National Science Foundation (IIP 1069147), $275,000, 4/11–3/16, PIs: Ari Kaufman, C. R. Ramakrishnan, I. V. Ramakrishnan, Klaus Mueller, Lori Scarlatos.

9. "Probabilistic Tabled Logic Programming", National Science Foundation (0831298), $ 500,000, 08/10–08/13, PIs: C. R. Ramakrishnan, I. V. Ramakrishnan, Scott A. Smolka and David S. Warren.

10. "CT-T: Proactive Techniques for Preserving System Integrity: A Basis for Robust Defense Against Malware", National Science Foundation (0831298), $1,000,000, 08/08–08/12, PIs: R. Sekar, C. R. Ramakrishnan and Scott Stoller.

11. "NOSS: Airborne Video Sensor Networks for Surveillance and Emergency Response", National Science Foundation (0721701), $600,993, 9/07–8/10, PIs: Himanshu Gupta, Goldie Nejat, C. R. Ramakrishnan, Dimitris Samaras

12. "NOSS: Declarative Framework for Learning and Evaluating Probabilistic Models of Events in Sensor Networks", National Science Foundation (CNS 0721665), $507,283, 9/07–8/10, PIs: Himanshu Gupta, Samir Das, C. R. Ramakrishnan, I. V. Ramakrishnan, David S. Warren.

13. "A Framework for Analyzing and Ensuring Trust in Service-Oriented Architectures", Office of Naval Research (MURI) #N00014-07-1-0928, $2,083,561, 6/07–5/12, PIs: Scott Stoller, C. R. Ramakrishnan and R. Sekar.

14. "Center for Information Protection: A Multi-University Industry/University Collaborative Research Center", National Science Foundation (IIP 0733935), $100,000, 9/07–8/09, PIs: R. Sekar, Tzi-Cker Chiueh, Scott Stoller, Erez Zadok, Radu Sion, C. R. Ramakrishnan and Rob Johnson.

15. "CT-ISG: Deductive Spreadsheets for Security Policy Specification and Analysis", National Science Foundation (CNS 0627447), $399,929, 9/06–8/09. PIs: C. R. Ramakrishnan, I. V. Ramakrishnan, Scott Stoller and David S. Warren.

16. "A Plan for Developing a Multi-University Industry/University Collaborative Research Center on Cyber Security", National Science Foundation, $10,000, 9/06–1/07. Principal Investigators: R. Sekar, Tzi-Cker Chiueh, Rob Johnson, C. R. Ramakrishnan, Radu Sion, Scott D. Stoller, and Erez Zadok.

17. "A Deductive Engine for the Semantic Web", National Science Foundation (IIS-0311512), $298,640, 7/03–6/06. Principal Investigators: Michael Kifer, Annie Liu, C. R. Ramakrishnan, and I. V. Ramakrishnan.

18. "ITR: Model Checking for Detecting Computer System Vulnerabilities" National Science Foundation (CCR-0205376), $924,750, 7/02–6/06. PIs: C. R. Ramakrishnan, I. V. Ramakrishnan, R. Sekar, Scott A. Smolka, Scott Stoller.

19. "Model Carrying Code: A New Paradigm for Mobile Code Security", Office of Naval Research, $1,548,926, 8/01–7/04. PIs: R. Sekar, C. R. Ramakrishnan, I. V. Ramakrishnan, Scott A. Smolka.

20. "Logic-Based Modeling, Analysis, and Implementation of Workflow Management Systems", National Science Foundation (IIS-0072927), $479,852, 10/00–9/03. PIs: Michael Kifer, C. R. Ramakrishnan, I. V. Ramakrishnan.

21. "Demand Propagation in Tabled Logic Programming", National Science Foundation (EIA-9901602), CISE Postdoctoral Associateship in Experimental Computer Science. $66,000, 9/99–8/01. PIs: Michael Kifer, C. R. Ramakrishnan, I. V. Ramakrishnan, David S. Warren.

22. "CAREER: Tabled Logic Programming for Verification and Program Analysis", National Science Foundation (CCR-9876242), Faculty Early Career Award, $203,416, 8/99–7/03. PI: C. R. Ramakrishnan

23. "SAMSON: Scalable Active Memory on the Net", National Science Foundation Research Instrumentation Program (EIA-9818342), $140,000, 1/99–12/01. C. R. Ramakrishnan among 9 PIs.

24. "Beyond Finite State Model Checking in LMC", National Science Foundation (EIA-9805735), CISE Postdoctoral Associateship in Experimental Computer Science. $66,000, 9/98–8/00. PIs: C. R. Ramakrishnan, I. V. Ramakrishnan, Scott A. Smolka, David S. Warren.

25. "Tabled Logic Programming in the Large", National Science Foundation (CCR-9711386), $96,864, 9/97–8/99. PIs: C. R. Ramakrishnan, I. V. Ramakrishnan, David S. Warren.

26. "LMC: A System for the Specification and Evaluation of Logic-Based Model Checking", National Science Foundation (EIA-9705998), $1,223,697, 8/97–7/01. PIs: Y. S. Ramakrishna, C. R. Ramakrishnan, I. V. Ramakrishnan, Scott A. Smolka, Terrance Swift, David S. Warren.

27. "An Integrated Compilation System for Logic Programming, Deductive Databases and Non-Monotonic Reasoning", National Science Foundation (EIA-9504275), CISE Postdoctoral Associateship in Experimental Computer Science, $66,000, 3/95–8/97. PI: David S. Warren, Postdoctoral Researcher: C. R. Ramakrishnan.

Federal Training Grants

1. "GAANN Fellowships in Cybersecurity and Artificial Intelligence", Department of Education (P200A210068), $760,950 (including institutional match), 10/21–9/24, PI: C. R. Ramakrishnan, Co-PI: Aruna Balasubramanian.

2. "NRT-HDR: Detecting and Addressing Bias in Data, Humans, and Institutions", National Science Foundation (2125295), $2,999,896, 09/21 – 08/26; PI: Susan Brennan; Co-PIs: Jeffrey Heinz, Bonita London, C. R. Ramakrishnan, Wei Zhu.

3. "GAANN Fellowships in Cybersecurity and Artificial Intelligence", Department of Education (P200A180053), $785,495 (including institutional match), 10/18–9/23, PI: C. R. Ramakrishnan, Co-PI: Aruna Balasubramanian.

Industry Grants

1. "SPIR: Reverse Matching: From Product Descriptions to Search Phrases", Cash Your Clicks, $2,167, 2/05–8/05, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

2. "SPIR: Product Pages Production Process", Cash Your Clicks, $2,167, 2/05–8/05, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

3. "SPIR: User-friendly Data Management Tool", Cash Your Clicks, $4,333, 2/05–8/05, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

4. "SPIR: Optimizing the Page Ranks of Product Pagents for Search Engines", Cash Your Clicks, $4,333, 2/05–8/05, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

5. "Data Management Tool Version 1 for Ptool", Cash Your Clicks, $6,570, 9/04–12/04, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

6. "SPIR: Automated Publishing Tool", Cash Your Clicks, $7,500, 9/04–6/05, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

7. "SPIR: Matching Search Phrases to Product Descriptions", Cash Your Clicks, $5,051, 2/04–12/04, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

8. "SPIR: Database for Publishing Tool", Cash Your Clicks, $6,144, 2/04–12/04, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

9. "SPIR: Data Management Process for Publishing Tools", Cash Your Clicks, $7,560, 2/04–6/05, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

10. "SPIR: User Interface for Publishing", Cash Your Clicks, $3,652, 2/04–6/05, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

11. "SPIR: A Tool for Product Promotion on the Web", Cash Your Clicks, $7,998, 6/03–8/03, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

12. "SPIR: Product Promotion on the Web", Cash Your Clicks, $1,500, 3/03–7/03, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

13. "SPIR: A Tool for Product Promotion on the Web", Cash Your Clicks, $8,001, 1/03–6/03, PI: C. R. Ramakrishnan, Funded via the College of Engineering and Applied Sciences' SPIR program.

14. "UltraLog", XSB Inc., $20,000, 07/02–12/02, PIs: C. R. Ramakrishnan, I. V. Ramakrishnan, David S. Warren. Funded via the College of Engineering and Applied Sciences' SPIR program.

15. "SPIR: Specifying Security Relevant Behaviors of Linux Applications", Immunet Security Solutions Inc., $2,878, 02/02–06/02. PI: C. R. Ramakrishnan. Funded via the College of Engineering and Applied Sciences' SPIR program.

16. "SPIR: Development of a Psychiatric Diagnosis System — II", Medicine Rules Inc., $6,216, 1/01–5/02, PI: C. R. Ramakrishnan. Funded via the College of Engineering and Applied Sciences' SPIR program.

17. "SPIR: Development of a Psychiatric Diagnosis System — I", Medicine Rules Inc., $6,452, 8/98–6/99. PI: C. R. Ramakrishnan. Funded via the College of Engineering and Applied Sciences' SPIR program.

Publications:

Books/Collections

- Ezio Bartocci, C. R. Ramakrishnan, *Special issue on Model Checking of Software - Selected papers of the 20th International SPIN Symposium on Model Checking of Software.* International Journal on Software Tools for Technology Transfer (STTT) 18(4): 355-357, 2016.
- Ezio Bartocci, C. R. Ramakrishnan, *Model Checking Software - 20th International Symposium, SPIN 2013*, Stony Brook, NY, USA, July 8-9, 2013.
- C. R. Ramakrishnan, Jakob Rehof, *Tools and Algorithms for the Construction and Analysis of Systems, 14th International Conference(TACAS)*, Lecture Notes in Computer Science 4963, Springer, 2008.
- Shriram Krishnamurthi, C. R. Ramakrishnan, *Fourth International Symposium on Practical Aspects of Declarative Languages (PADL)*, Lecture Notes in Computer Science 2257, Springer, 2002.

Refereed Journal Articles

- Mohammad Ghaderibaneh, Caitao Zhan, Himanshu Gupta, C. R. Ramakrishnan: *Efficient Quantum Network Communication using Optimized Entanglement Swapping Trees*, IEEE Transactions on Quantum Engineering (TQE), vol. 3, pp. 1-20, 2022.
- Arun Nampally, Timothy Zhang, C. R. Ramakrishnan. *Constraint-Based Inference in Probabilistic Logic Programs*, Theory and Practice of Logic Programming (TPLP), 18(3-4): 638-655, 2018.
- Muhammad Asiful Islam, C. R. Ramakrishnan, I. V. Ramakrishnan, *Inference in probabilistic logic programs with continuous random variables*, Theory and Practice of Logic Programming (TPLP), 12(4-5): 505-523, 2012.
- Andrey Gorlin, C. R. Ramakrishnan, Scott A. Smolka, *Model checking with probabilistic tabled logic programming*, Theory and Practice of Logic Programming (TPLP), 12(4-5): 681-700, 2012.
- Amit Sasturkar, Ping Yang, Scott D. Stoller, C. R. Ramakrishnan, *Policy analysis for Administrative Role-Based Access Control*, Theor. Comput. Sci. 412(44): 6208-6234, 2011.
- Scott D. Stoller, Ping Yang, Mikhail I. Gofman, C. R. Ramakrishnan, *Symbolic reachability analysis for parameterized administrative role-based access control*, Computers & Security 30(2-3): 148-164, 2011.
- Anu Singh, C. R. Ramakrishnan, Scott A. Smolka, *A Process Calculus for Mobile Ad Hoc Networks*, Science of Computer Programming, 2010.
- Hai-Feng Guo, Miao Liu, Partha S. Roop, C. R. Ramakrishnan, I. V. Ramakrishnan, *Precise specification matching for adaptive reuse in embedded systems*, Journal of Applied Logic **5**(2), pages 333–355, available at URL `http://dx.doi.org/10.1016/j.jal.2005.12.016`, 2007.

- Samik Basu, C. R. Ramakrishnan, *Compositional Analysis for Verification of Parameterized Systems*, Theoretical Computer Science **354**(2), pages 211–229, available at URL `http://dx.doi.org/10.1016/j.tcs.2005.11.016/`, 2006.

- Abhik Roychoudhury, C. R. Ramakrishnan, *Unfold/Fold Transformations for Automated Verification of Parameterized Concurrent Systems*, Program Development in Computational Logic 2004, pages 261–290, 2004.

- Abhik Roychoudhury, K. Narayan Kumar, C. R. Ramakrishnan, I. V. Ramakrishnan, *An unfold/fold transformation framework for definite logic programs*, ACM Transactions on Programming Languages and Systems (TOPLAS) **26**(3), pages 464–509, 2004.

- Ping Yang, C. R. Ramakrishnan, Scott A. Smolka, *A Logical Encoding of the pi-Calculus: Model Checking Mobile Processes Using Tabled Resolution*, International Journal on Software Tools for Technology Transfer (STTT) **6**(1), pages 38–66, available at URL `http://springerlink.metapress.com/openurl.asp?genre=article&id=doi:10.1007/s10009-003-0136-3`, 2004.

- C. R. Ramakrishnan, R. Sekar, *Model-Based Analysis of Configuration Vulnerabilities*, Journal of Computer Security (JCS) **10**(1 / 2), pages 189–209, 2002.

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- Ranjani Sundaram, Himanshu Gupta, C. R. Ramakrishnan: Distribution of Quantum Circuits Over General Quantum Networks. QCE 2022: 415-425.

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