Gregory R. Andrews

Curriculum Vitae

December 2011

Personal Data

Work: Department of Computer Science, Gould-Simpson 721, The University of Arizona, Tucson AZ 85721-0077

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Education

Stanford University, B.S. Mathematics, April 1969

University of Washington, Ph.D. Computer Science, August 1974; Advisor: Alan C. Shaw

Professional Experience

Cornell University
  Assistant Professor, 1974-79

University of Arizona
  Associate Professor, 1979-87
  Professor, 1987-2009
  Professor Emeritus, since 2010
  Department Head, 1986-93, 2006-08
  Affiliate Member, Applied Mathematics Program, since 1993
  Member, BIO5 Institutute, since 2007

University of Washington
  Visiting Associate Professor, 1983-84

National Science Foundation
  Division Director, Experimental and Integrative Activities, 2003
  Division Director, Computer and Network Systems, 2003-05

Research Interests

Concurrent programming, parallel and distributed computing, operating systems, program analysis and optimization

Honors and Awards

Letter of Commendation for Teaching Effectiveness, Cornell University, 1977

Distinguished Teaching Award, College of Science, The University of Arizona, 1986

Thacher Distinguished Speaker, University of Kentucky, 1996

Fellow, Association for Computing Machinery (ACM), 1998

Career Distinguished Teaching Award, College of Science, The University of Arizona, 2002

Distinguished Lecturer, University of California at Davis, 2002

Alumni Achievement Award, Department of Computer Science and Engineering, University of Washington, 2010

Research and Equipment Grants

Faculty Associate, Programming Languages and Systems, NSF, 1974-76 ($156,000)

Faculty Associate, Security Measures in Information Systems, NSF, 1974-77 ($195,000)

Co-PI, Computer Science Research Equipment, NSF, 1977-78 ($103,800)

PI, Specification and Analysis of Multiprogramming Systems, NSF, 1977-80 ($58,900)

Co-PI, Computer Science Research Equipment, NSF, 1980-81 ($52,940)

PI, Synchronizing Resources: An Approach to Programming Concurrent Systems, NSF, 1980-82 ($75,067)

Co-PI, Active Data Structures, U.S. Army Electronics Command, 1980-82 ($98,518)

Co-PI, Computer Science Research Equipment, NSF, 1981-82 ($158,596)

PI, The Design and Analysis of Distributed Programs, NSF, 1982-84 ($197,521)

Co-PI, The Saguaro Distributed Operating System, AFOSR, 1984-89 ($614,811)

PI, Research Equipment for Saguaro, AFOSR, 1985 ($138,734)

Co-PI (Project Director 1986-89), A Programming Systems Laboratory, NSF Coordinated Experimental Research Program, 1984-89 ($3,634,000)

Co-PI, Concurrent and Fault-Tolerant Programming, NSF, 1984-87 ($292,654)

Co-PI, Topics in Concurrent Programming, NSF, 1987-91 ($453,354)

Co-PI, A Tool-Based Software Laboratory for Distributed and Parallel Computing, NSF, 1989-91 ($209,002).

Co-PI (Project Director 1989-93), A Laboratory for Programming Languages and Software Systems, NSF Institutional Infrastructure Program, 1989-94 ($1,925,908)

PI, An Approach to Architecture-Independent Parallel Programming, NSF, 1991-94 ($238,355); REU supplement, 1992 ($12,500)

PI, An Approach to Architecture-Independent Parallel Programming, AT&T Foundation, 1992-93 ($15,000)

PI, Software Support for Portable Parallel Computing, NSF, 1994-98 ($210,441)

Contributing Investigator, A Laboratory for Scalable Systems, NSF Research Infrastructure Program, 1995-2000 ($999,995)

Co-PI, Optimizing Program Performance at Link and Run Time, NSF, 1998-2001 ($345,444); REU supplements, 1999 and 2001 ($25,000 total)

Co-PI (Project Director 2000-02, 2005-06), Optimization of Distributed and Networked Systems: A Spectrum of Techniques, NSF Research Infrastructure Program, 2000-05 ($1,004,979); REU supplements, 2001, 2002, 2003, and 2004 ($50,000 total)

Co-PI, Software Improvement Through Binary Rewriting, NSF Information Technology Research Program, 2001-04 ($372,900); REU supplements: 2002, 2003, and 2004 ($37,500 total)

Co-PI, Link-Time Optimization for the Itanium Architecture, HP/Intel Itanium-Based Systems Grants Program, 2001 ($15,990)

Co-PI, A Holistic Approach to Compiler-Assisted Optimization of Software Systems, NSF, 2004-09 ($550,000); REU supplement 2005 ($6000), 2006 ($12,000), 2007 ($12,000)

Co-PI, A Framework for Optimizing Embedded Systems, NSF, 2006-10 ($300,000); REU supplement 2007 ($12,000)

Co-PI, The iPlant Collaborative: A Cyberinfrastructure-Centered Community for a New Plant Biology, NSF, 2008-2013 ($49,997,514)

PI, The Second CI Fellows Project, NSF, 2010-13 ($14,995,174)

Dissertations and Theses Supervised

Michael A. Liberty, *Capability Addressing and Protection in Operating Systems*, M.S. Thesis, 1975

James R. McGraw, *Language Features for Process Interaction and Access Control*, Ph.D. Dissertation, 1977

David L. Spooner, *Design of a Multiprocess Database Management System*, M.S. Thesis, 1978

Richard P. Reitman, *Information Flow in Parallel Programs: An Axiomatic Approach*, Ph.D. Dissertation, 1978

Thomas P. Murtagh, *A Data Abstraction Language for Concurrent Programming*, Ph.D. Dissertation, 1983

Ronald A. Olsson, *Issues in Distributed Programming Languages: The Evolution of SR*, Ph.D. Dissertation, 1986

Michael H. Coffin, *The Par Approach to Architecture-Independent Parallel Programming*, Ph.D. Dissertation, 1990

David K. Lowenthal, *Fine-Grain Parallelism and Run-Time Decision Making*, Ph.D. Dissertation, 1996

Vincent W. Freeh, *Software Support for Distributed and Parallel Computing*, Ph.D. Dissertation, 1996

Benjamin W. Schwarz, *Post Link-Time Optimization on the Intel IA-32 Architecture*, B.S. Honors Thesis, 2002 (co-supervised by Saumya Debray)

Tal Shaked, *Value Specialization Using PLTO*, B.S. Honors Thesis, 2002 (co-supervised by Saumya Debray)

Thomas Trebisky, *Skidoo: A Real-Time Operating System Kernel*, M.S. Thesis, 2002

K. Noah Snavely, *Optimizing and Reverse Engineering Itanium Executables*, B.S. Honors Thesis, 2003 (co-supervised by Saumya Debray)

Milind Chabbi, *Efficient Taint Analysis Using Multicore Machines*, M.S. Thesis, 2007 (co-supervised by Saumya Debray)

Joseph Roback, *Gossamer: A Lightweight Approach to Using Multicore Machines*, Ph.D. Dissertation, 2010

Somasundaram Perianayagam, *Rex: Tools for Reproducing Software Experiments*, Ph.D. Dissertation, 2011

Professional Activities

Editorial Board: *Information Processing Letters*, 1979-2000

Advisory Boards: NSF Advisory Committee for Computer and Computation Research, 1988-92 (Chair, 1992); NSF Advisory Committee for Office of Cross Disciplinary Activities, 1990-92; University of Texas, El Paso (UTEP), Model Institutions for Excellence Grant, 1996-2000; University of Texas, El Paso (UTEP), Department of

Computer Science, 2000-03

Computing Research Association: Board of Directors, 1991-98; Executive Committee, 1992-95; Surveys Committee chair, 1993-98; Snowbird Conference Committee, 1992 (co-chair), 1994 (co-chair), 1996; Undergraduate Awards Committee, 1998-2002 (chair 2000-02)

Computing Community Consortium (CCC): Council Member 2006-09; Co-Chair of "Computing Research that Changed the World," March 2009; Chair of CI Fellows Steering and Selection Committees, 2010

Professional Societies: ACM, SIGOPS, and SIGPLAN, since 1971; Secretary-Treasurer of SIGOPS, 1980-83; Chair of SIGOPS Nominating Committee, 1986

Refereeing: *Comm. ACM*, *Journal ACM*, *ACM Trans. on Prog. Lang. and Systems*, *IEEE Trans. on Soft. Engr.*, *Info. Proc. Letters*, *Software—Practice and Experience*, *Acta Informatica*, *ACM Trans. on Computer Systems*, *IEEE Trans. on Computers*, *IEEE Software*, *IEEE Trans. on Parallel and Distributed Systems*, *Journal of Parallel and Distributed Computing*, numerous conferences

Reviewer for NSF, NSERC, ARO, Conf. Board on Math. Sciences, Addison-Wesley, McGraw Hill, Benjamin/Cummings, Prentice-Hall, McMillan.

Consulting: U.S. Army Electronics Command, 1975-77; U.S. Army Evaluation Team for the Ada Programming Language, 1978-79; Cray Laboratories, 1981; Portland law firm, 1998; San Francisco law firm, 1999-2001; Houston law firm, 2000-01; Los Angeles law firm, 2010

Program Committees: Second Symposium on Principles of Distributed Computing, August 1983; 4th Symposium on Reliability in Distributed Software and Database Systems, October 1984; 6th International Conference on Distributed Computing Systems, May 1986; 1986 International Conference on Computer Languages, October 1986; 14th Annual Symposium on Principles of Programming Languages, January 1987; Workshop on Runtime Systems for Parallel Programming, April 1997

Conference Committees: General Chair, Twelfth Symposium on Operating Systems Principles, December 1989; Co-Chair, Snowbird Meetings for Heads of Academic Departments and Industrial Labs, July 1992 and July 1994

Invited Lectures (professional meetings): ACM National Conference, Dallas, October 1982; IBM Conference on Parallelism and Concurrency in Programming Languages, Tucson, February 1986; Institute on Encapsulation, Modularity, and Reusability, University of Texas, April 1987

Review Panels: NSF Graduate Fellowships in Computer Science, February 1984; NSF Course, Curriculum, and Laboratory Improvement Program, July 2001 and July 2002

Site Visitor: NSF CER Proposal, University of Illinois, December 1986; NSF Science and Technology Center Proposal, Rice University, July 1988, August 1991, September 1993, September 1994 (site visit chair, 1991 and 1994); NSF MII Proposal, University of Texas, San Antonio, April 1996; NSF PACI Program (Supercomputer Center Renewals), Cornell University, November 1996 and University of Pittsburgh, December 1996; NSF Global Environment for Networking Innovations (GENI) Design Review, February 2006 (site visit chair)

External Reviewer: Computation Directorate of Lawrence Livermore National Laboratory, May 1988; Professorial Candidates in Computer Science, University of Helsinki (Finland), December 1993; Department of Computer Science, Utah State University, April

1995; Department of Computer Science, The University of Iowa, April 1995; Department of Computer Science, Purdue University, October 2005 (site visit chair)

Workshop Leadership: Preparing a Successful Infrastructure Grant, Snowbird Conference for Chairs of Ph.D.-granting departments, July 1990, 1992; Department Management, Snowbird Conference for Chairs of Ph.D.-granting departments, July 1992, 1994, 1996

Workshop Participation (Non-Research): NSF Workshop on Infrastructure Needs in Computer Science and Engineering, July 1991; NSF Workshop on Expanding Opportunities for Women in Computer Science and Engineering, October 1992

University Service Activities

Academic Computing Advisory Committee, 1988-90

Research Computing Advisory Committee, 1988-90

Ad-Hoc Committee to Review the Operation of CCIT, 1993-94

Information Planning Study Team, 1994-95

Planning Committee, Ph.D. Minor in Computational Science and Engineering, 1994-95

Department Head Search Committees for Computer Science, 1994-95, 1995-96

Convex Replacement Team, 1996-97

Executive Committee, Ph.D. Minor in Computational Science and Engineering, 1996-2002; Chair, 1996-97

Five-Year Review Committee for Dean of Science, 1997-98

Sunset Review Committee for Arizona Center for Mathematical Sciences, Chair, 1998

Steering Committee, Applied Mathematics Program, 2000-03

Promotion and Tenure Advisory Committee for UA South, 2000-02

College of Science Scholarships Selection Committee, 2002

Arizona Center for Information Science and Technology (ACIST), Research Director for Human-Computer Interaction and Visualization, 2005

Books

Andrews, G.R. *Concurrent Programming: Principles and Practice.* Benjamin/Cummings, Redwood City, CA, 1991, 656 pp.

Andrews, G.R. and Olsson, R.A. *The SR Programming Language: Concurrency in Practice.* Benjamin/Cummings, Redwood City, CA, 1993, 360 pp.

Andrews, G.R. *Foundations of Multithreaded, Parallel, and Distributed Programming.* Addison-Wesley, Reading, MA, 2000, 684 pp. Support materials online at: `http://www.cs.arizona.edu/people/greg/mpdbook`

Chapters in Books

Andrews, G.R. and McGraw, J.R. Language features for parallel processing and resource control. *Design and Implementation of Programming Languages*, (J. Williams and D. Fisher, Eds.), *Lecture Notes in Computer Science*, Vol. 54, Springer-Verlag, New York, 1977, 243-287.

Schneider, F.B. and Andrews, G.R. Concepts for concurrent programming. *Current Trends in Concurrency*, (J.W. de Bakker, W.-P de Roever, and G. Rozenberg, Eds.), *Lecture Notes in Computer Science*, Vol. 224, Springer-Verlag, New York, 1986, 669-716.

Schlichting, R.D., Andrews, G.R., Hutchinson, N.C., Olsson, R.A., and Peterson, L.L. Observations on building distributed languages and systems. *Experiences with Distributed Systems*, (J. Nehmer, Ed.), *Lecture Notes in Computer Science*, Vol. 309, Springer-Verlag, New York, 1988, 271-291.

Journal Papers

Shaw, A., Weiderman, N., Andrews, G., Felcyn, M.-B., Rieber, J., and Wong, G. A multiprogramming nucleus with dynamic resource facilities. *Software—Practice and Experience 5*, 3 (July 1975), 245-267.

McGraw, J.R. and Andrews, G.R. Access control in parallel programs. *IEEE Trans. on Software Engineering SE-5*, 1 (January 1979), 1-9.

Andrews, G.R. The design of a message switching system: An application and evaluation of Modula. *IEEE Trans. on Software Engineering SE-5*, 2 (March 1979), 138-147.

Andrews, G.R. and Reitman, R.P. An axiomatic approach to information flow in programs. *ACM Trans. on Prog. Lang. and Systems 2*, 1 (Jan. 1980), 56-76.

Andrews, G.R. Parallel programs: Proofs, principles, and practice. *Comm. ACM. 24*, 3 (March 1981), 140-146.

Andrews, G.R. Synchronizing Resources. *ACM Trans. on Prog. Lang. and Systems 3*, 4 (Oct. 1981), 405-430. Reprinted in Gehani and McGettrick (Editors), *Concurrent Programming*, Addison-Wesley, 1988, 184-215.

Andrews, G.R. An alternative approach to arrays. *Software—Practice and Experience 12*, 5 (May 1982), 475-485.

Andrews, G.R. The distributed programming language SR—mechanisms, design, and implementation. *Software—Practice and Experience 12*, 8 (August 1982), 719-754.

Andrews, G.R. and Schneider, F.B. Concepts and notations for concurrent programming. *ACM Computing Surveys 15*, 1 (March 1983), 3-43. Reprinted in *bit* (1985), 5-42 (in Japanese). Reprinted in Horowitz, E. (Editor), *Programming Languages: A Grand Tour, Third Edition*, Computer Science Press, 1987, 323-359. Reprinted in Gehani and McGettrick (Editors), *Concurrent Programming*, Addison-Wesley, 1988, 3-69. Reprinted in Zedan (Editor), *Distributed Computer Systems: Theory and Practice*, Butterworths Scientific, 1990, 29-84.

Andrews, G.R. and Olsson, R.A. The evolution of the SR language. *Distributed Computing 1*, 3 (July 1986), 133-149.

Andrews, G.R., Schlichting, R.D., Hayes, R., and Purdin, T.D.M. The design of the Saguaro distributed operating system. *IEEE Trans. on Software Engineering SE-13*, 1 (Jan. 1987), 104-118.

Schlichting, R.D., Purdin, T.D.M., and Andrews, G.R. A file replication facility for Berkeley UNIX. *Software—Practice and Experience 17*, 12 (Dec. 1987), 923-940.

Andrews, G.R., Olsson, R.A., Coffin, M., Elshoff, I., Nilsen, K., Purdin, T., and Townsend, G. An overview of the SR language and implementation. *ACM Trans. on Prog. Lang. and Systems 10*, 1 (Jan. 1988), 51-86. Reprinted in Ananda and Srinivasan (Editors), *Distributed Computing Systems: Concepts & Structures*, IEEE Computer Society Press, 1991, 338-369.

Andrews, G.R. A method for solving synchronization problems. *Science of Computer Programming 13*, 4 (Dec. 1989), 1-21.

Andrews, G.R. Paradigms for process interaction in distributed programs. *ACM Computing Surveys 23*, 1 (March 1991), 49-90. Reprinted in *bit* 1992 (in Japanese).

Lowenthal, D.K., Freeh, V.W, and Andrews, G.R. Using fine-grain threads and run-time decision making in parallel computing. *Journal of Parallel and Distributed Computing 37*, 1 (August 1996), 41-54.

Lowenthal, D.K., Freeh, V.W., and Andrews, G.R. Efficient support for fine-grain parallelism on shared-memory machines. *Concurrency—Practice and Experience 10*, 3 (March 1998), 157-173.

Snavely, N., Debray, S., and Andrews, G. Unscheduling, unpredication, and unspeculation: reverse engineering Itanium executables. *IEEE Trans. on Software Engineering,* Vol. 31, No. 2 (Feb. 2005), 99-115. (An earlier version appeared in the 2003 Working Conf. on Reverse Engr.)

Refereed Conference Papers

Andrews, G.R. COPS — a mechanism for computer protection. *Proc. International Workshop on Protection in Operating Systems*, Paris (August 1974), 5-25.

Andrews, G.R. Partitions and principles for secure operating systems. *ACM '75 Proceedings* (October 1975), 177-180.

Andrews, G.R. and McGraw, J.R. Language features for process interaction. Proc. Conf. on Language Design for Reliable Software, *SIGPLAN Notices 12*, 3 (March 1977), 114-127.

Reitman, R.P. and Andrews, G.R. Certifying information flow properties of programs: An axiomatic approach. *Proc. 6th Conf. on Principles of Programming Languages*, January 1979, 283-290.

Andrews, G.R., Dobkin, D.P., and Downey, P.J. Active data structures. *Proc. 5th International Conference on Software Engineering*, March 1981, 354-362.

Andrews, G.R., Dobkin, D.P., and Downey, P.J. Distributed allocation with pools of servers. *Proc. Symposium on Principles of Distributed Computing*, August 1982, 73-83.

Andrews, G.R. and Levin, G.M. On-the-fly deadlock prevention. *Proc. Symposium on Principles of Distributed Computing*, August 1982, 165-172.

Andrews, G.R. Distributed programming languages. *Proc. ACM '82 Conference*, October 1982, 113-117.

Schlichting, R.D., Andrews, G.R., and Purdin, T.D.M. Mechanisms to enhance file availability in distributed systems. *Proc. 16th International Symposium on Fault-Tolerant Computing*, July 1986, 44-49.

Freeh, V.W., Lowenthal, D.K., and Andrews, G.R. Distributed Filaments: efficient fine-grain parallelism on a cluster of workstations. *Proc. First Symposium on Operating Systems Design and Implementation (OSDI)*, November 1994, 201-213.

Freeh, V.W., and Andrews, G.R. `fsc`: a Sisal compiler for both distributed- and shared-memory machines. *Proc. Conf. on High-Performance Functional Computing*, April 1995, 164-172.

Lowenthal, D.K., and Andrews, G.R. An adaptive approach to data placement. *Proc. 10th International Parallel Processing Symp.*, Honolulu, April 1996, 349-353.

Freeh, V.W., and Andrews, G.R. Dynamically controlling false sharing in distributed shared memory. *Proc. Fifth IEEE Symp. on High Performance Distributed Computing*, Syracuse, NY, August 1996, 403-411.

Schwarz, B., Debray, S., Andrews, G., and Legendre, M. PLTO: a link-time optimizer for the Intel IA-32 architecture. *Proc. 2001 Workshop on Binary Translation*, Barcelona, Spain, September 2001. See `http://research.ac.upc.es/pact01/pwbt.htm`.

Schwarz, B., Debray, S., and Andrews, G. Disassembly of executable code revisited. *Proc. Working Conf. on Reverse Engineering* (WCRE 2002), Richmond, Virginia, October 2002.

Snavely, N., Debray, S., and Andrews, G. Predicate analysis and if-conversion in an Itanium link-time optimizer. *Proc. Workshop on EPIC Architectures and Compiler Techniques*, Istanbul, Turkey, November 2002, pp. 78-87.

Moseley, P., Debray, S., and Andrews, G. Checking prograrm profiles. *Proc. Third IEEE International Workshop on Source Code Analysis and Manipulation*, Sept. 2003, pp. 193-202.

Snavely, N., Debray, S., and Andrews, G. Unspeculation. *Proc. 18th IEEE International Conf. on Automated Software Engr.*, Oct. 2003, pp. 193-202.

Snavely, N., Debray, S., and Andrews, G. Unscheduling, unpredication, and unspeculation: reverse engineering Itanium executables. *Proc. 2003 Working Conf. on Reverse Engr.*, Nov. 2003, pp. 4-13.

Rajagopalan, M., Perianayagam, S., He, H., Andrews, G., and Debray, S. Binary rewriting and instrumentation of an operating system kernel. *Proc. Workshop on Binary Instrumentation and Applications*, October 2006.

Perianayagam, S., He, H., Rajagopalan, M., Andrews, G., and Debray, S. Profile-guided specialization of an operating system kernel. *Proc. Workshop on Binary Instrumentation and Applications*, October 2006.

He, H., Trimble, J., Perianayagam, S., Debray, S., and Andrews, G. Code compaction of an operating system kernel. *2007 International Symposium on Code Generation and Optimization*, San Jose, CA, March 2007, pp. 283-95.

Popov, I., Debray, S., and Andrews, G. Binary obfuscation using signals. *Proc. 16th USENIX Security Symposium*, Boston, August 2007.

He, H., Debray, S., and Andrews, G. The revenge of the overlay: automatic compaction of OS kernel code via on-demand code loading. *Proc. 2007 ACM Conf. on Embedded Systems Software* (EMSOFT 2007), Salzburg, Austria, October 2007, pp. 75-83.

He, H., Debray, S., and Andrews, G. Compressing dynamic data structures in operating system kernels. *Proc. Seventh Workshop on Optimizations for Signal Processing and Embedded Systems* (ODES-7), Seattle, March 2009, pp. 27-36.

Roback, J.A and Andrews, G.R. Gossamer: A lightweight programming framework for multicore machines. *Proc. Second USENIX Workshop on Hot Topics in Parallelism* HotPar 2010), June 2010.

Roback, J.A, and Andrews, G.R. Gossamer: A lightweight approach to using multicore machines. *Proc. 39th Int. Conf. on Parallel Processing* (ICPP 2010), San Diego, September 2010.

Articles in Books and Newsletters

Andrews, G.R. Hierarchical organization; and Kernel systems. *Fundamentals Handbook of Electrical and Computer Engineering III: Computer Hardware, Software and Applications*, John Wiley, 1982, 305-310.

Andrews, G.R. The 1994 CRA Taulbee Survey, *Computing Research News 7*, 2 (March 1995), 6-9.

Andrews, G.R. The 1995 CRA Taulbee Survey, *Computing Research News 8*, 2 (March 1996), 6-9.

Andrews, G.R. The 1996 CRA Taulbee Survey, *Computing Research News 9*, 2 (March 1997), 5-9.

Gries, D. and Andrews, G.R. Academic computer science. *Encyclopedia of Computer Science, 4th Edition*, Ralston, Reilly, and Hemmendinger (Eds.), Macmillan Reference Ltd., London, 2000.

Additional Technical Reports (not represented above)

Andrews, G.R. COPS—A protection mechanism for computer systems. Ph.D. Thesis, Univ. of Washington, August 1974.

Andrews, G.R. Concepts and conditions for confinement. Cornell University, May 1975.

Andrews, G.R. Message classes: An approach to process synchronization. Cornell University, April 1976.

Andrews, G.R. A nucleus for real-time tactical software systems. Center for Tactical Computer Sciences, Ft. Monmouth, N.J., May 1976.

Andrews, G.R. Modula and the design of a message switching communication system. Cornell University, January 1978.

Andrews, G.R., Fisher, G., Goodenough, J., *et al*. Evaluation of the Red and Green designs. U.S. Army CORADCOM, April 1979.

Andrews, G.R. An implementation of guarded commands using the cobegin statement. University of Arizona, December 1979.

Andrews, G.R. Dynamic access control in concurrent programs—a new approach. University of Arizona, May 1981.

Andrews, G.R. SR: A language for distributed programming. University of Arizona, October 1981.

Olsson, R.A. and Andrews, G.R. SuccessoR: Refinements to SR. University of Arizona, March 1984.

Olsson, R.A. and Andrews, G.R. An implementation of SuccessoR. University of Arizona, March 1984.

Andrews, G.R. and Olsson, R.A. Report on the programming language SR. University of Arizona, October 1985.

Olsson, R.A., Coffin, M., and Andrews, G.R. SR user's guide. University of Arizona, November 1985.

Andrews, G.R. and Olsson, R.A. Revised report on the SR programming language. University of Arizona, November 1987.

Elshoff, I.J.P. and Andrews, G.R. The development of two distributed algorithms for network topology. University of Arizona, March 1988.

Andrews, G.R. and Olsson, R.A. Report on the SR Programming Language: Version 1.1. University of Arizona, May 1989.

Coffin, M.H. and Andrews, G.R. Towards architecture-independent parallel programming. University of Arizona, December 1989.

Olsson, R.A., Andrews, G.R., Coffin, M.H., and Townsend, G.M. SR: A language for parallel and distributed programming. University of Arizona, March 1992.

Andrews, G.R., Debray, S.K., B. Schwarz, and M. Legendre. Using link-time optimization to improve the performance of MPI programs. University of Arizona, April 2001.

LeGendre, M., Andrews, G., and, Debray, S. BIT: a binary instrumentation toolkit for the Intel IA-32 architecture. University of Arizona, January 2004.

Linn, C., Debray, S., Andrews, G., and Schwarz, B. Stack analysis in the PLTO linktime optimizer. University of Arizona, April 2004.

Software Distributions

Andrews, G.R., Olsson, R.A., and Townsend, G.M. The SR programming language.
Version 1.0, March 1988; 4 Mb of code and documentation, about 100 sites.
Version 1.1, May 1989; 4.2 Mb of code and documentation, about 200 sites.
Version 2.0, August 1992; 5.7 Mb of code and documentation, about 700 sites.
Version 2.1, March 1993; 6.6 Mb of code and documentation, about 350 sites.
Version 2.2, September 1993; 7.0 Mb of code and documentation, about 700 sites
Version 2.3, October 1994; 7.4 Mb of code and documentation, over 6800 downloads

Andrews, G.R., and Townsend, G.M. The MPD programming language.
Version 1.0, March 2001; 9.0 Mb of code and documentation, over 500 downloads
Version 1.0.1, January 2004; 9.0 Mb of code and documentation, over 1100 downloads