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Legion Research Group
Department of Computer Science
University of Virginia
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EDUCATION

- Ph.D.** Computer Science, Advisor: Andrew Grimshaw Expected May 1999
University of Virginia (UVa), Charlottesville, VA
Thesis Title: *Dynamically Configurable Distributed Objects*
- M.S.** Computer Science May 1994
Pennsylvania State University (Penn St.), State College, PA
Paper Title: *DPS: A Distributed Program Simulator and Performance Measurement Tool*
- B.S.** Computer Science, **B.S.** Mathematics May 1991
Duke University, Durham, NC

RESEARCH INTERESTS

Distributed computing, metasystems, parallel computing, object-orientation, component-based software development, operating systems.

SUBMITTED FOR PUBLICATION

Michael J. Lewis and Andrew S. Grimshaw, "Dynamically Configurable Distributed Objects," Submitted to *ACM Principles of Distributed Computing*.

Andrew S. Grimshaw, Michael J. Lewis, Adam J. Ferrari, and John F. Karpovich, "Architectural Support for Extensibility and Autonomy in Wide Area Distributed Object Systems," Submitted to *IEEE Transactions on Parallel and Distributed Computing*.

REFEREED PUBLICATIONS

Charles L. Viles, Michael J. Lewis, Adam J. Ferrari, Anh Nguyen-Tuong, and Andrew S. Grimshaw, "Enabling Flexibility in the Legion Run-Time Library," *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'97)* (invited paper), Hamid R. Arabnia, editor. pp. 265-274, Las Vegas, Nevada, June 30 - July 2, 1997.

Andrew S. Grimshaw, Anh Nguyen-Tuong, Michael J. Lewis, and Mark Hyett, "Campus-Wide Computing: Results Using a Legion Prototype at the University of Virginia," *International Journal of Supercomputing Applications*, Volume 11, Number 2, Summer 1997, pp. 129-143.

Michael J. Lewis and Andrew S. Grimshaw, "The Core Legion Object Model," *Proceedings of the Fifth IEEE Conference on High Performance Distributed Computing*, pp. 551-561, Syracuse, NY, August 1996.

W. Timothy Strayer, Michael J. Lewis, and Raymond E. Cline, Jr., "XTP as a Transport Protocol for Distributed Parallel Processing," *Proceedings of the 1994 USENIX Symposium on High-Speed Networking*, pp. 91-101, Oakland, California, August 1994.

Michael J. Lewis and Raymond E. Cline, Jr., "PVM Communication Performance in a Switched FDDI Heterogeneous Distributed Computing Environment," *Proceedings of the IEEE Workshop on Advances in Parallel and Distributed Systems*, pp. 13-19, Princeton, NJ, October 1993.

PROFESSIONAL AFFILIATIONS

Association for Computing Machinery (ACM)
Institute of Electrical and Electronics Engineers (IEEE)

The USENIX Association
IEEE Computer Society

EXPERIENCE & AWARDS

- Graduate Research Assistant**, Computer Science, UVa Fall 1994 - Present
Independently designed and implemented the dynamically configurable distributed object model.
Helped design and implement the Legion wide-area object-based metasystem.
Contributed to Legion funding proposals to NSF, DARPA, and DOE.
Programmed and modified the Mentat object-oriented parallel processing system.
Member of the project team that won the *HPC Challenge Award* for overall system interface and functionality at Supercomputing '95 and an *HPC Challenge Award* at Supercomputing '98.
- Head Teaching Assistant**, Computer Science, UVa Fall 1995
Managed four graduate student TAs and six undergraduate graders.
Lectured (as a substitute), designed exams, homework, and class projects.
Won the *Outstanding Teaching Assistant Award* in computer science at UVa for 1995-96.
- Computer Scientist**, Sandia National Laboratories May 1993 - August 1994
Received a *Doctoral Research Fellowship* from Associated Western Universities.
Characterized the performance of the Heterogeneous Environment and Testbed workstation cluster, and the XTP transport protocol. Developed a distributed program simulator using PVM.
- Graduate Student**, Computer Science, Penn St. Fall 1991 - Spring 1993
Programmed the Univis attribute-based name server, written in Scheme.
Implemented significant class projects including an RPC mechanism, a fully-functional network transport protocol, and a distributed database.
Passed Ph.D. comprehensive exams in March 1993.
- Teaching Assistant**, Computer Science, Penn St. Fall 1991 - Spring 1993
Prepared and taught recitation classes (student evaluations available). Designed and graded exams.
- Assistant Instructor**, BEST Program, Penn St. Summer 1992
Helped design and teach a six-week programming course for gifted high school students.
- Calculus Tutor**, Duke University Fall 1990 - Spring 1991
- Computer Programmer**, Providence Journal Company Summer 1989, 1990, & 1991
Helped design and implement an SQL-based database for advertising inserts.
Converted newspaper page layout systems to use multiple printer control languages.
- Dean's List, Cum Laude**, Duke University Fall 1987 - Spring 1991

PROFESSIONAL SERVICE

- Graduate Student Steering Committee Member** March 1997 - March 1998
Elected by fellow graduate students to the 3-person committee in computer science.
Interviewed faculty candidates, represented student concerns to faculty, organized meetings and social events.
- Director of Graduate Student Orientation**, Computer Science, UVa August 1997
Organized and conducted Orientation Week for incoming computer science graduate students.
- Paper Referee** Fall 1995 - Present
Reviewed papers for *Software: Practice & Experience*, *High Performance Distributed Computing*, *International Parallel Processing Symposium*.
- Graduate Student Mentor**, Computer Science, UVa 1995, 1996, 1997
Welcomed, advised, and mentored incoming computer science graduate students.
- Graduate Student Selection Committee Member**, Computer Science, Penn St. Fall 1992
Appointed by faculty to be the lone graduate student representative on the committee.
Reviewed applications and helped select the graduate student class of 1993.

REFERENCES

Dr. Andrew S. Grimshaw

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Director, Institute for Parallel Computation
Thornton Hall, University of Virginia
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Dr. Raymond E. Cline, Jr.

Executive Director, Distance Computing
Director, Center for Advanced Technologies and Services
Science Applications International Corporation
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cline@apo.saic.com
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Dr. William A. Wulf

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