

Curriculum Vitae

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Education

- Ph.D., Computer Science, California Institute of Technology, 2002.
Thesis advisers K. Mani Chandy and Jason Hickey.
- M.S., Computer Science, California Institute of Technology, 1998.
- B.S. with Honors, Engineering and Applied Science (with minor in Science, Ethics and Society), California Institute of Technology, 1996.

Experience

- [Institute of Technology, University of Washington, Tacoma](#), Assistant Professor of Computing and Software Systems, September 2006–.
- [Caltech Infospheres Group](#), Research Scientist, October 2003–August 2006.
- [Caltech Computer Science Department](#), Instructor in Computer Science, 2001–2003.
- [KindSoftware, LLC](#), Contributor, 2000–.
- [DALi, Inc.](#), Distributed Systems Architect, 2000–01.
- [iSpheres, Inc.](#), Consultant, 1999.
- [PeeChee, Inc.](#), Software Architect, 1998.

Teaching

- Instructor, *TCSS 325: Computers, Ethics and Society*, UW Tacoma, 2007.
- Instructor, *TCSS 322: Discrete Structures II*, UW Tacoma, 2007.
- Instructor, *TCSS 305: Programming Practicum*, UW Tacoma, 2006–07.
- Instructor, *TCSS 490: Selected Topics (Distributed Systems)*, UW Tacoma, 2006.
- Instructor, *CS 141: Distributed Computation Laboratory*, Caltech, 2002–04.
- Instructor, *CS 3: Structure and Interpretation of Computer Programs*, Caltech, 2002–03.
- Teaching Assistant, *CS 138: Computer Algorithms*, Caltech, 1997–98 and 1999–2000.
- Lecturer and Teaching Assistant, *CS 141: Distributed Computation Laboratory*, Caltech, 1996–97 and 1998–99.
- Teaching Assistant, *CS 20: Computation, Computers and Programs*, Caltech, 1994–96.

Publications

· Theses

- *Dynamic UNITY*. Ph.D. Dissertation, California Institute of Technology, 2002.
- *A Preliminary Investigation into Dynamic Distributed Workflow*. M.S. Thesis, California Institute of Technology, 1998.
- *Privacy Issues in Computerized Communications*. Science, Ethics and Society Minor Thesis, California Institute of Technology, 1996.

· Journal

- *A Framework for Structured Distributed Object Computing*, with K. Mani Chandy, Joseph R. Kiniry, and Adam Rifkin. *Parallel Computing*, Vol. 24, No. 12-13, 1998.
- *Webs of Archived Distributed Computations for Asynchronous Collaboration*, with K. Mani Chandy, Joseph R. Kiniry, and Adam Rifkin. *Journal of Supercomputing*, Vol. 11, No. 2, 1997.

· Conference

- *Enterprise Computing Systems as Information Factories*, with Lu Tian and K. Mani Chandy. Tenth IEEE International EDOC Conference (EDOC 2006), Hong Kong, China, October 2006.
- *Snapshot Processing in Streaming Environments*, with K. Mani Chandy. Submitted to the 7th IEEE International Conference on Grid Computing (GRID 2006), Barcelona, Spain, September 2006.
- *A Parallel Algorithm for Correlating Event Streams*, with K. Mani Chandy. 19th IEEE International Parallel & Distributed Processing Symposium (IPDPS 2005), Denver, Colorado, April 2005.
- *Event Webs for Crisis Management*, with Brian Emre Aydemir, K. Mani Chandy, and Elliott Michael Karpilovsky. 2nd IASTED International Conference on Communications, Internet and Information Technology, Scottsdale, Arizona, November 2003.
- *Event-Driven Architectures for Distributed Crisis Management*, with Brian Emre Aydemir, K. Mani Chandy, and Elliott Michael Karpilovsky. 15th IASTED International Conference on Parallel and Distributed Computing and Systems, Marina del Rey, California, November 2003.
- *Rewriting UNITY*, with Adam Granicz and Jason Hickey. 14th International Conference on Rewriting Techniques and Applications (RTA '03), Valencia, Spain, June 2003.
- *Distributed Scalable Server Architecture for Multi-User Environments*, with Erich R. Schmidt and Cristian Tapus. 12th International Conference on Control Systems and Computer Science (CSCS12), Bucharest, Romania, 1999.
- *Constructing Client-Server Multi-Player Asynchronous Networked Games Using a Single-Computer Model*, with Yevgeniy Kaganovich, Khai Pham, and Brian Rothstein. IASTED International Conference on Software Engineering, San Francisco, September 1997.

· Peer-Reviewed Workshops

- *A UNITY-based Formalism for Dynamic Distributed Systems*. 8th International Workshop on Formal Methods for Parallel Programming: Theory and Applications (FMPPTA '03), Nice, France, April 2003.
- *Applying the Distributed Programming Paradigm to Improve Scalability in Multi-User Environments*, with Erich R. Schmidt and Cristian Tapus. 13th European Conference on Object-Oriented Programming (ECOOP '99) Workshop on Multi-User Object-Oriented Environments, Lisbon, Portugal, June 1999.

- *A New Approach to Multi-User Environments Using Software Distributed Shared Memory*, with Joseph R. Kiniry, Erich R. Schmidt, and Cristian Tapus. 1st Workshop on Software Distributed Shared Memory (WSDSM '99), Rhodes, Greece, June 1999.

- **Industry Journals and Magazines**

- *A Hands On Look at Java Mobile Agents*, with Joseph R. Kiniry. IEEE Internet Computing, Vol. 1, No. 4, July/August, 1997.

- **Other**

- *ÜberNet: The Infospheres Network Layer User Guide*. California Institute of Technology, 1998.
- *II: The Infospheres Infrastructure User Guide* (editor). The Infospheres Group, Department of Computer Science, California Institute of Technology, 1998.
- *The Infospheres Java Coding Standard* (editor, with Joseph R. Kiniry). The Infospheres Group, Department of Computer Science, California Institute of Technology, 1997-99.

Patents

- U.S. patent 6,898,791 on distributed systems-related technology.

Awards

- Departmental Fellowship, Caltech Computer Science Department, 1996-97 and 2000-01
- NSF Graduate Research Fellowship, 1997-2000
- Member, Tau Beta Pi (Engineering Honor Society), 1995-

Group Leadership

- Coordinator, *Institute of Technology Mentors Program*, UWT, 2006-present.
- Adviser, *Jerome: Making Editing Easier* with students J. Boyd-Graber, J. de Jesus, and S. Lee, Caltech, 2004.
- Adviser, *Gypsy: Route Planning within Public Transportation Networks* with students J. White and A. McKenzie, Caltech, 2004.
- Adviser (with J. Kiniry), *Distributed Scalable Server Architecture for Multi-User Environments* with students E. Schmidt and C. Tapus, Caltech, 1998.
- Adviser, *EZD: Easy Concurrency for Distributed Systems* with students R. Osada and L. Saenz, Caltech, 1998.
- Adviser, *Virtual Swap Meet: A Distributed Agent Marketplace* with interns E. Matefy and J. Walton, Caltech, 1997.
- Adviser, *Automated Software Dissemination System* with students M. Chen and M. Neidengard, Caltech, 1997.
- Adviser, *Distributed Asynchronous Networked Game Engine Research (DANGER)* with students Y. Kaganovich, K. Pham and B. Rothstein, Caltech, 1997.

Public Speaking

- *Serializable Δ -Dataflow for Condition Detection*, Caltech, 2005.
- *A UNITY-based Formalism for Dynamic Distributed Systems*, University of Nijmegen, Netherlands, 2003.
- *An Introduction to Dynamic Distributed Workflow*, Caltech, 1998.

Professional Society Memberships

- Professional member of the [Association for Computing Machinery](#) and the [IEEE Computer Society](#).

Software

- *CGPSA*: Spam filter plug-in for the CommuniGate Pro email server, 2002-.
- *DALi Server*: Communication substrate and back-end database for distributed artificial life simulations, 2000-01.
- *PeeChee*: A peer-to-peer distributed system for data and metadata, 1999.
- *ÜberNet*: A compositional, dynamic messaging framework, 1998.
- *The Infospheres Infrastructure*: A massively scalable distributed systems infrastructure, 1997.