



## Monica Lam

Professor of Computer Science, & by courtesy, of Electrical Engineering

### CONTACT INFORMATION

- **Administrative Contact**

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### Bio

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#### BIO

Dr. Monica Lam is a Professor in the Computer Science Department at Stanford University, and the Faculty Director of the Stanford Open Virtual Assistant Laboratory.

Dr. Monica Lam obtained her BS degree in computer science from University of British Columbia, and her PhD degree in computer science from Carnegie Mellon University in 1987. She joined Stanford in 1988.

Professor Lam's current research is on conversational virtual assistants with an emphasis on privacy protection. Her research uses deep learning to map task-oriented natural language dialogues into formal semantics, represented by a new executable programming language called ThingTalk. Her Almond virtual assistant, trained on open knowledge graphs and IoT API standards, can be easily customized to perform new tasks. She is leading an Open Virtual Assistant Initiative to create the largest, open, crowdsourced language semantics model to promote open access in all languages. Her decentralized Almond virtual assistant that supports fine-grain sharing with privacy has received Popular Science's Best of What's New Award in Security in 2019.

Prof. Lam is also an expert in compilers for high-performance machines. Her pioneering work of affine partitioning provides a unifying theory to the field of loop transformations for parallelism and locality. Her software pipelining algorithm is used in commercial systems for instruction level parallelism. Her research team created the first, widely adopted research compiler, SUIF. She is a co-author of the classic compiler textbook, popularly known as the "dragon book". She was on the founding team of Tensilica, now a part of Cadence.

Dr. Lam is a Member of the National Academy of Engineering and an Association of Computing Machinery (ACM) Fellow.

#### ACADEMIC APPOINTMENTS

- Professor, Computer Science
- Professor (By courtesy), Electrical Engineering
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)

#### HONORS AND AWARDS

- ASPLOS Influential Paper Award, ACM (2021)

- Member, National Academy of Engineering (2019)
- Computer Science 50th Anniversary Research Award, University of British Columbia (2018)
- Fellow, ACM (2007)
- SIGSOFT Distinguished Paper Award, ACM (2002)
- Most Influential Programming Language Design and Implementation Paper Award, ACM (2001)
- Young Investigator Award, National Science Foundation (1992)

## PROFESSIONAL EDUCATION

- PhD, Carnegie Mellon University , Computer Science (1987)
- MS, Carnegie Mellon University , Computer Science (1982)
- BS (Hons), University of British Columbia , Computer Science (1980)

## LINKS

- <http://cs.stanford.edu/~lam>: <http://cs.stanford.edu/~lam>

## Teaching

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### COURSES

#### 2022-23

- Conversational Virtual Assistants with Deep Learning: CS 224V (Aut)
- Program Analysis and Optimizations: CS 243 (Win)

#### 2021-22

- Conversational Virtual Assistants with Deep Learning: CS 224V (Aut)

#### 2020-21

- Program Analysis and Optimizations: CS 243 (Win)
- Research Project in Software Systems and Security: CS 294S (Aut)
- Writing Intensive Research Project in Computer Science: CS 294W (Aut)

#### 2019-20

- Program Analysis and Optimizations: CS 243 (Win)
- Research Project in Software Systems and Security: CS 294S (Spr)
- Writing Intensive Research Project in Computer Science: CS 294W (Spr)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Megan Leszczynski

#### Orals Evaluator

Megan Leszczynski, Silei Xu

#### Doctoral Dissertation Advisor (AC)

Mehrad Moradshahi, Silei Xu

#### Master's Program Advisor

Olayinka Adekola, Emily Broadhurst, Jackie Gong, Vincent Heng, Farzaan Kaiyom, Lauren Kong, Noah Kuo, Yasmine Mitchell, Hannah Prausnitz-Weinbaum, Vivek Shankar

#### Doctoral (Program)

George Liu, Silei Xu

## Publications

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### PUBLICATIONS

- **Zero-Shot Transfer Learning with Synthesized Data for Multi-Domain Dialogue State Tracking**  
Campagna, G., Foryciarz, A., Moradshahi, M., Lam, M. S., Assoc Computat Linguist  
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2020: 122–32
- **Genie: A Generator of Natural Language Semantic Parsers for Virtual Assistant Commands**  
Campagna, G., Xu, S., Moradshahi, M., Socher, R., Lam, M. S., McKinley, K. S., Fisher, K.  
ASSOC COMPUTING MACHINERY.2019: 394–410
- **Controlling Fine-Grain Sharing in Natural Language with a Virtual Assistant** *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*  
Campagna, G., Xu, S., Ramesh, R., Fischer, M., Lam, M. S.  
2018
- **Brassau: Automatically Generating Graphical User Interfaces for Virtual Assistants** *20th International Conference on Human-Computer Interaction with Mobile Devices and Services. (MobileHCI)*  
Fischer, M., Campagna, G., Xu, S., Lam, M. S.  
2018
- **Almond: The Architecture of an Open, Crowdsourced, Privacy-Preserving, Programmable Virtual Assistant** *Proceedings of the 26th World Wide Web Conference*  
Campagna, G., Ramesh, R., Xu, S., Fischer, M., Lam, M. S.  
2017
- **Musubi: Disintermediated Interactive Social Feeds for Mobile Devices**  
Dodson, B., Vo, I., Purtell, T., J., Cannon, A., Lam, Monica, S.  
2012
- **Compilers: Principles, Techniques and Tools.**  
Aho, Alfred, V., Lam, Monica, S., Sethi, R., Ullman, Jeffrey, D.  
2006
- **Interprocedural parallelization analysis in SUIF** *ACM TRANSACTIONS ON PROGRAMMING LANGUAGES AND SYSTEMS*  
Hall, M. W., Amarasinghe, S. P., Murphy, B. R., Liao, S. W., Lam, M. S.  
2005; 27 (4): 662-731
- **Cloning-based context-sensitive pointer alias analysis using binary decision diagrams** *Conference on Programming Language Design and Implementation*  
Whaley, J., Lam, M. S.  
ASSOC COMPUTING MACHINERY.2004: 131–44
- **Software pipelining: An effective scheduling technique for VLIW machines** *ACM SIGPLAN NOTICES*  
Lam, M. S.  
2004; 39 (4): 244-245
- **A data locality optimizing algorithm** *ACM SIGPLAN NOTICES*  
Wolf, M. E., Lam, M. S.  
2004; 39 (4): 445-459
- **Maximizing parallelism and minimizing synchronization with affine partitions** *24th Annual ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*

- 
- Lim, A. W., Lam, M. S.  
ELSEVIER SCIENCE BV.1998: 445–75
- **A DATA LOCALITY OPTIMIZING ALGORITHM** *CONF ON PROGRAMMING LANGUAGE : DESIGN AND IMPLEMENTATION*  
Wolf, M. E., Lam, M. S.  
ASSOC COMPUTING MACHINERY.1991: 30–44
  - **Soteria: A Provably Compliant User Right Manager Using a Novel Two-Layer Blockchain Technology**  
Fu, W., Lin, Y., Campagna, G., Liu, C., Tsai, D., Mei, C., Chang, E. Y., Liao, S., Lam, M. S., IEEE  
IEEE.2020
  - **Keeping the Internet Open with an Open-Source Virtual Assistant**  
Lam, M. S., ACM  
ASSOC COMPUTING MACHINERY.2018: 145–46
  - **SocialLite: An Efficient Graph Query Language Based on Datalog** *IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING*  
Seo, J., Guo, S., Lam, M. S.  
2015; 27 (7): 1824-1837
  - **Dispatch: Secure, Resilient Mobile Reporting** *SIGCOMM Conference*  
Biscuitwala, K., Bult, W., Lecuyer, M., Purtell, T. J., Ross, M. K., Chaintreau, A., Haseman, C., Lam, M. S., McGregor, S. E.  
ASSOC COMPUTING MACHINERY.2013: 459–60
  - **SocialLite: Datalog Extensions for Efficient Social Network Analysis** *29th IEEE International Conference on Data Engineering (ICDE)*  
Seo, J., Guo, S., Lam, M. S.  
IEEE.2013: 278–289
  - **SocialLite: Datalog Extensions for Efficient Social Network Analysis**  
Seo, J., Guo, S., Lam, Monica, S.  
2013
  - **Processing Email Archives in Special Collections**  
Hangal, S., Chan, P., Lam, Monica, S., Heer, J.  
2012
  - **Effective Browsing and Serendipitous Discovery with an Experience-Infused Browser**  
Hangal, S., Nagpal, A., Lam, Monica, S.  
2012
  - **Friends, Romans, Countrymen: Lend me your URLs, Using Social Chatter to Personalize Web Search.**  
Nagpal, A., Hangal, S., Joyee, R. R., Lam, Monica, S.  
2012
  - **An Algorithm and Analysis of Social Topologies from Email and Photo Tags**  
Purtell, T. J., MacLean, D., Teh, S. K., Hangal, S., Lam, Monica, S., Heer, J.  
2011
  - **Sentiment Analysis on Personal Email Archives**  
Hangal, S., Lam, Monica, S.  
2011
  - **Micro-Interactions with NFC-Enabled Mobile Phones**  
Dodson, B., Lam, Monica, S.  
2011
  - **Groups Without Tears: Mining Social Topologies from Email.**  
MacLean, D., Hangal, S., Teh, S. K., Lam, Monica, S., Heer, J.  
2011
  - **Email Clients as Decentralized Social Apps in Mr. Privacy**  
Fischer, M., Purtell, T. J., Lam, Monica, S.

2011

- **MUSE: Reviving Memories Using Email Archives**

Hangal, S., Lam, Monica, S., Heer, J.

2011

- **Secure, Consumer-Friendly Web Authentication and Payments with a Phone.**

Dodson, B., Sengupta, D., Boneh, D., Lam, Monica, S.

2010

- **PrPI: a Decentralized Social Networking Infrastructure.**

Seong, S., Jiwon, S., Nasielski, M., Sengupta, D., Hangal, S., Teh, S. K., Lam, M. S.

2010

- **InvisiType: Object-Oriented Security Policies.**

Seo, J., Lam, Monica, S.

2010

- **Life-Browsing with a Lifetime of Email.**

Hangal, S., Lam, Monica, S.

2010

- **All Friends are Not Equal: Using Weights in Social Graphs to Improve Search**

Hangal, S., MacLean, D., Lam, Monica, S., Heer, J.

2010

- **Towards Software-Friendly Networks**

Yap, K., Huang, T., Dodson, B., Lam, Monica, S., McKeown, N.

2010

- **PhoneNet: a Phone-to-Phone Network for Group Communication in a LAN.**

Huang, T., Yap, K., Dodson, B., Lam, Monica, S., McKeown, N.

2010

- **Automatic Dimension Inference and Checking for Object-Oriented Programs** *31st International Conference on Software Engineering (ICSE 2009)*

Hangal, S., Lam, M. S.

IEEE.2009: 155–165

- **Automatic inference of stationary fields: a generalization of java's final fields** *35th Annual ACM SIGPLAN/SIGACT Symposium on Principles of Programming Language*

Unkel, C., Lam, M. S.

ASSOC COMPUTING MACHINERY.2008: 183–95

- **Automatic Inference of Stationary Fields: a Generalization of Java's Final Fields** *35th ACM-SIGPLAN-SIGACT Symposium on Principles of Programming Languages*

Unkel, C., Lam, M. S.

ASSOC COMPUTING MACHINERY.2008: 183–195

- **Automatic Generation of XSS and SQL Injection Attacks with Goal-Directed Model Checking.**

Martin, M., C., Lam, M., S.

2008

- **Securing Web Applications Using Static and Dynamic Information Flow Tracking**

Lam, M., S., Martin, M., C., Livshits, V., B., Whaley, J.

2008

- **Securing Web Applications with Static and Dynamic Information Flow Tracking** *ACM SIGPLAN Symposium on Partial Evaluation and Semantics-Based Program Manipulation*

Lam, M. S., Martin, M., Livshits, B., Whaley, J.

ASSOC COMPUTING MACHINERY.2008: 3–12

- **Static Detection of Leaks in Polymorphic Containers.**  
Heine, D., Lam, M., S.  
2006
- **Finding application errors and security flaws using PQL: a program query language** *20th Conference on Object-Oriented Programming, Systems, Languages and Applications*  
Martin, M., Livshits, B., Lam, M. S.  
ASSOC COMPUTING MACHINERY.2005: 365–83
- **Using datalog with binary decision diagrams for program analysis** *3rd Asian Symposium on Programming Languages and Systems*  
Whaley, J., Avots, D., Carbin, M., Lam, M. S.  
SPRINGER-VERLAG BERLIN.2005: 97–118
- **Context-Sensitive Program Analysis as Database Queries.**  
Lam, M., S., Whaley, J., Livshits, V., B., Martin, M., C., Avots, D., Carbin, M.  
2005
- **Improving Software Security with A C Pointer Alias Analysis.**  
Avots, D., Dalton, M., Livshits, V., B., Lam, M., S.  
2005
- **Finding Security Vulnerabilities in Java Applications Using Static Analysis.**  
Livshits, V., B., Lam, M., S.  
2005
- **Finding Application Errors using PQL: a Program Query Language.**  
Martin, M., Livshits, V., B., Lam, M., S.  
2005
- **Improving software security with a C pointer analysis** *27th International Conference on Software Engineering (ICSE 2005)*  
Avots, D., Dalton, M., Livshits, V. B., Lam, M. S.  
ASSOC COMPUTING MACHINERY.2005: 332–341
- **Finding security vulnerabilities in Java applications with static analysis** *14th USENIX Security Symposium*  
Livshits, V. B., Lam, M. S.  
USENIX ASSOC.2005: 271–286
- **Reflection analysis for Java** *3rd Asian Symposium on Programming Languages and Systems*  
Livshits, B., Whaley, J., Lam, M. S.  
SPRINGER-VERLAG BERLIN.2005: 139–160
- **The collective: A cache-based system management architecture** *2nd Symposium on Networked Systems Design and Implementation (NSDI 05)*  
Chandra, R., Zeldovich, N., Sapuntzakis, C., Lam, M. S.  
USENIX ASSOC.2005: 259–272
- **A data locality optimizing algorithm** *ACM SIGPLAN NOTICES*  
Lam, M. S.  
2004; 39 (4): 442-444
- **A Retrospective: Software Pipelining: An Effective Scheduling Technique for VLIW Machines.** *In 20 Years of PLDI (1979-1999): A Selection.*  
Lam, M., S.  
2004: 1
- **A Practical Dynamic Buffer Overflow Detector.**  
Ruwase, O., Lam, M., S.  
2004
- **A Retrospective: A Data Locality Optimizing Algorithm** *In 20 Years of PLDI (1979-1999): A Selection.*  
Lam, M., S.  
2004: 1

- **A practical flow-sensitive and context-sensitive C and C++ memory leak detector** *Conference on Programming Language Design and Implementation*  
Heine, D. L., Lam, M. S.  
ASSOC COMPUTING MACHINERY.2003: 168–81
- **A SMART scheduler for multimedia applications** *ACM TRANSACTIONS ON COMPUTER SYSTEMS*  
Nieh, J., Lam, M. S.  
2003; 21 (2): 117-163
- **Challenges and new approaches to program analysis** *12th International Conference on Parallel Architectures and Compilation Techniques (PACT 2003)*  
Lam, M.  
IEEE COMPUTER SOC.2003: 102–102
- **Virtual Appliances in the Collective: A Road to Hassle-free Computing**  
Sapuntzakis, C., P., Lam, M., S.  
2003
- **Tracking Pointers with Path and Context Sensitivity for Bug Detection in C Programs**  
Livshits, V., B., Lam, M., S.  
2003
- **Virtual appliances for deploying and maintaining software** *17th Large Installation Systems Administration Conference*  
Sapuntzakis, C., Brumley, D., Chandra, R., Zeldovich, N., Chow, J., Lam, M. S., Rosenblum, M.  
USENIX ASSOC.2003: 181–194
- **Enhancing software reliability with speculative threads** *ACM SIGPLAN NOTICES*  
Oplinger, J., Lam, M. S.  
2002; 37 (10): 184-196
- **An efficient inclusion-based points-to analysis for strictly-typed languages** *9th International Static Analysis Symposium*  
Whaley, J., Lam, M. S.  
SPRINGER-VERLAG BERLIN.2002: 180–195
- **Tracking Down Software Bugs Using Automatic Anomaly Detection**  
Hangal, S., Lam, M., S.  
2002
- **Automatic Extraction of Object-Oriented Component Interfaces**  
Whaley, J., Martin, M., C., Lam, M., S.  
2002
- **Enhancing Software Reliability using Speculative Threads**  
Oplinger, J., Lam, M., S.  
2002
- **Optimizing the migration of virtual computers** *5th Symposium on Operation Systems Design and Implementation (OSDI 02)*  
Sapuntzakis, C. P., Chandra, R., Pfaff, B., Chow, J., Lam, M. S., Rosenblum, M.  
USENIX ASSOC.2002: 377–390
- **Blocking and array contraction across arbitrarily nested loops using affine partitioning** *8th ACM SIGPLAN Symposium on the Principles and Practice of Parallel Computing*  
Lim, A. W., Liao, S. W., Lam, M. S.  
ASSOC COMPUTING MACHINERY.2001: 103–12
- **Cache Optimizations With Affine Partitioning**  
Lim, A., W., Lam, M., S.  
2001
- **Cutting-edge designs** *IEEE MICRO*  
Lam, M., Baskett, F.  
2000; 20 (2): 14-15

- **Program analysis with partial transfer functions** *ACM SIGPLAN NOTICES*  
Murphy, B. R., Lam, M. S.  
1999; 34 (11): 94-103
- **SUIF explorer: An interactive and interprocedural parallelizer** *ACM SIGPLAN NOTICES*  
Liao, S. W., Diwan, A., Bosch, R. P., Ghuloum, A., Lam, M. S.  
1999; 34 (8): 37-48
- **A Compiler for Creating Evolutionary Software and Application Experience** *Technical Report CSL-TR-99-782, Stanford University*  
Schmidt, B., K., Lam, M., S.  
1999
- **An Affine Partitioning Algorithm to Maximize Parallelism and Minimize Communication**  
Lim, A., W., Cheong, G., I., Lam, M., S.  
1999
- **In Search of Speculative Thread-Level Parallelism**  
Oplinger, J., T., Heine, D., L., Lam, M., S.  
1999
- **The Interactive Performance of SLIM: a Stateless, Thin-Client Architecture**  
Schmidt, B., Lam, M., S., Northcutt, J., D.  
1999
- **The design, implementation, and evaluation of Jade** *ACM TRANSACTIONS ON PROGRAMMING LANGUAGES AND SYSTEMS*  
Rinard, M. C., Lam, M. S.  
1998; 20 (3): 483-545
- **The Design, Implementation and Evaluation of Jade** *ACM Transactions on Programming Languages and Systems*  
Rinard, M., C., Lam, M., S.  
1998; 3 (20): 483-545
- **The Domain Parallel Computation Model on Warp.**  
Tseng, P., S., Lam, M., Kung, H., T.  
1998
- **Multimedia on Multiprocessors: Where's the OS When You Really Need it**  
Nieh, J., Lam, M., S.  
1998
- **SMART UNIX SVR4 support for multimedia applications** *IEEE International Conference on Multimedia Computing and Systems 97*  
Nieh, J., Lam, M. S.  
IEEE COMPUTER SOC.1997: 404-414
- **SMART UNIX SV4 Support for Multimedia Applications**  
Nieh, J., Lam, M., S.  
1997
- **Maximizing Parallelism and Minimizing Synchronization with Affine Transforms**  
Lim, A., W., Lam, M., S.  
1997
- **The Design, Implementation and Evaluation of SMART: a Scheduler for Multimedia Applications**  
Nieh, J., Lam, M., S.  
1997
- **Software and Hardware for Exploiting Speculative Parallelism with a Multiprocessor** *Technical Report CSL-TR-97-715, Stanford University*  
Oplinger, J., Heine, D., Liao, S., W., Nayfeh, B., A., Lam, M., S., Olukotun, K.  
1997



- **The Design, Implementation and Evaluation of SMART: a Scheduler for Multimedia Applications** *Technical Report CSL-TR-97-721, Stanford University*  
Nieh, J., Lam, M., S.  
1997
- **Maximizing multiprocessor performance with the SUIF compiler** *COMPUTER*  
Hall, M. W., Anderson, J. M., AMARASINGHE, S. P., Murphy, B. R., Liao, S. W., Bugnion, E., Lam, M. S.  
1996; 29 (12): 84-?
- **Compiler-directed page coloring for multiprocessors** *7th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS-VII)*  
Bugnion, E., Anderson, J. M., Mowry, T. C., Rosenblum, M., Lam, M. S.  
ASSOC COMPUTING MACHINERY.1996: 244-55
- **Multiprocessors from a software perspective** *IEEE MICRO*  
AMARASINGHE, S. P., Anderson, J. M., Wilson, C. S., Liao, S. W., Murphy, B. R., French, R. S., Lam, M. S., Hall, M. W.  
1996; 16 (3): 52-61
- **Transparent fault tolerance for parallel applications on networks of workstations** *USENIX 1996 Annual Technical Conference*  
Scales, D. J., Lam, M. S.  
USENIX ASSOC.1996: 329-341
- **Context-Sensitive Interprocedural Analysis in the Presence of Dynamic Aliasing**  
Sathyanathan, P., W., Lam, M., S.  
1996
- **Current Status of the SUIF Research Project** *The Data Parallel Programming Model: Foundations, HPF Realization, and Scientific Applications*  
Lam, M., S.  
edited by Perrin, G., R., Darte, A.  
Springer.1996: 65-75
- **DATA AND COMPUTATION TRANSFORMATIONS FOR MULTIPROCESSORS** *5th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*  
Anderson, J. M., AMARASINGHE, S. P., Lam, M. S.  
ASSOC COMPUTING MACHINERY.1995: 166-78
- **EFFICIENT CONTEXT-SENSITIVE POINTER ANALYSIS FOR C PROGRAMS** *ACM SIGPLAN 95 Conference on Programming Language Design and Implementation*  
Wilson, R. P., Lam, M. S.  
ASSOC COMPUTING MACHINERY.1995: 1-12
- **EFFECTIVENESS OF DATA DEPENDENCE ANALYSIS** *INTERNATIONAL JOURNAL OF PARALLEL PROGRAMMING*  
Maydan, D. E., HENNESSY, J. L., Lam, M. S.  
1995; 23 (1): 63-81
- **A general method for compiling event driven simulations** *32nd Design Automation Conference*  
French, R. S., Lam, M. S., LEVITT, J. R., Olukotun, K.  
ASSOC COMPUTING MACHINERY.1995: 151-156
- **Hot Compilers for Future Hot Chips** *In Hot Chips VII*  
Amarasinghe, S., P., Anderson, J., M., French, R., S., Hall, M., W., Lam, M., S., Liao, S.-W.  
1995
- **Integrated Processor Scheduling for Multimedia**  
Nieh, J., Lam, M., S.  
1995
- **A Method and Apparatus for Measuring Media Synchronization**  
Schmidt, B., K., Northcutt, J., D., Lam, M., S.  
1995

- **A General Method for Compiling Event-Driven Simulations**  
French, R., S., Lam, M., S., Levitt, J., R., Olukotun, K.  
1995
- **A Fully Interprocedural System for Automatic Parallelization**  
Hall, M., W., Amarasinghe, S., P., Murphy, B., R., Liao, S., W., Lam, M., S.  
1995
- **Unified Compilation Techniques for Shared and Distributed Address Space Machines**  
Tseng, C., W., Anderson, J., M., Amarasinghe, S., P., Lam, M., S.  
1995
- **Detecting Coarse-Grain Parallelism Using an Interprocedural Parallelizing Compiler**  
Hall, M., W., Amarasinghe, S., P., Murphy, B., R., Liao, S., W., Lam, M., S.  
1995
- **AN OVERVIEW OF THE SUIF COMPILER FOR SCALABLE PARALLEL MACHINES** *7th SIAM Conference on Parallel Processing for Scientific Computing*  
AMARASINGHE, S. P., Anderson, J. M., Lam, M. S., Tseng, C. W.  
SIAM.1995: 662-667
- **SUIF - AN INFRASTRUCTURE FOR RESEARCH ON PARALLELIZING AND OPTIMIZING COMPILERS** *SIGPLAN NOTICES*  
Wilson, R. P., French, R. S., Wilson, C. S., AMARASINGHE, S. P., Anderson, J. M., TJIANG, S. W., Liao, S. W., Tseng, C. W., Hall, M. W., Lam, M. S., HENNESSY, J. L.  
1994; 29 (12): 31-37
- **FALSE SHARING AND SPATIAL LOCALITY IN MULTIPROCESSOR CACHES** *IEEE TRANSACTIONS ON COMPUTERS*  
Torrellas, J., Lam, M. S., HENNESSY, J. L.  
1994; 43 (6): 651-663
- **THE DESIGN AND EVALUATION OF A SHARED OBJECT SYSTEM FOR DISTRIBUTED MEMORY MACHINES** *1st USENIX Symposium on Operating Systems Design and Implementation (OSDI)*  
Scales, D. J., Lam, M. S.  
USENIX ASSOC.1994: 101-114
- **An Overview of a Compiler for Scalable Parallel Machines**  
Amarasinghe, S., P., Anderson, J., M., Lam, M., S., Lim, A., W.  
1994
- **Communication-Free Parallelization via Affine Transformations**  
Lim, A., W., Lam, M., S.  
1994
- **Locality Optimizations for Parallel Machines**  
Lam, M., S.  
1994
- **An Efficient Shared Memory System for Distributed Memory Machines** *Technical Report CSL-TR-94-627, Stanford University*  
Scales, D., J., Lam, M., S.  
1994
- **SUIF: A Parallelizing and Optimizing Research Compiler** *Technical Report CSL-TR-94-620, Stanford University, May 1994. ACM SIGPLAN Notices*  
Wilson, R., P., French, R., S., Wilson, C., S., Amarasinghe, S., P., Anderson, J., M., Tjiang, S., W. K., Lam, M. S.  
1994: 31-37
- **COMMUNICATION OPTIMIZATION AND CODE GENERATION FOR DISTRIBUTED-MEMORY MACHINES** *CONF ON PROGRAMMING LANGUAGE DESIGN AND IMPLEMENTATION*  
AMARASINGHE, S. P., Lam, M. S.  
ASSOC COMPUTING MACHINERY.1993: 126-38

- **GLOBAL OPTIMIZATIONS FOR PARALLELISM AND LOCALITY ON SCALABLE PARALLEL MACHINES** *CONF ON PROGRAMMING LANGUAGE DESIGN AND IMPLEMENTATION*  
Anderson, J. M., Lam, M. S.  
ASSOC COMPUTING MACHINERY.1993: 112-25
- **JADE - A HIGH-LEVEL, MACHINE-INDEPENDENT LANGUAGE FOR PARALLEL PROGRAMMING** *COMPUTER*  
Rinard, M. C., Scales, D. J., Lam, M. S.  
1993; 26 (6): 28-38
- **Jade: A High-Level, Machine-Independent Language for Parallel Programming** *IEEE Computer*  
Rinard, M., C., Scales, D., J., Lam, M., S.  
1993; 6 (26): 28 - 38
- **Communication Optimization and Code Generation for Distributed Memory Machines**  
Amarasinghe, S., P., Lam, M., S.  
1993
- **Data Dependence and Data-Flow Analysis of Arrays**  
Maydan, D., E., Amarasinghe, S., Lam, M., S.  
1993
- **Array Data Flow Analysis and its Use in Array Privatization**  
Maydan, D., R., Amarasinghe, S., P., Lam, M., S.  
1993
- **EFFICIENT SUPERSCALAR PERFORMANCE THROUGH BOOSTING** *SIGPLAN NOTICES*  
Smith, M. D., Horowitz, M., Lam, M. S.  
1992; 27 (9): 248-259
- **DESIGN AND EVALUATION OF A COMPILER ALGORITHM FOR PREFETCHING** *SIGPLAN NOTICES*  
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