

Publications

Below is a list of publications that use Jikes RVM. This list includes both papers written by Jikes RVM developers, as well as users of the system. We **strongly encourage** authors to utilize the [Research Archive](#) to **publish source code** used in their studies, and thus, allow others to build on their results. When the implementation described in a paper is available in a Jikes RVM release, this is noted with the paper.

Information of dissertations relating to the Jikes RVM is [available here](#).

If you would like to see a paper listed then please send details to the [RVM researchers mailing list](#).

2014

Fast Conservative Garbage Collection

- Rifat Shahriyar, Stephen M. Blackburn and Kathryn S. McKinley
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Portland OR, October 2014

2013

Taking Off the Gloves with Reference Counting Immix

- Rifat Shahriyar, Stephen M. Blackburn, Xi Yang and Kathryn S. McKinley
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Indianapolis IN, October 2013

2012

Work-Stealing Without The Baggage

- Vivek Kumar, Daniel Frampton, Stephen M. Blackburn, David Grove, Olivier Tardieu
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Tuscon AZ, October 2012

A Black-box Approach to Understanding Concurrency in DaCapo

- Tomas Kalibera, Matthew Mole, Richard Jones and Jan Vitek
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Tuscon AZ, October 2012

Down for the Count? Getting Reference Counting Back in the Ring

- R. Shahriyar, S. M. Blackburn, and D. Frampton
- ACM SIGPLAN International Symposium on Memory Management, ISMM '12, Beijing, China, June 15-16, 2012
- Source code available in the Jikes RVM repository as of August 2012 (see [RVM-979](#))

Barriers Reconsidered: Friendlier Still!

- Xi Yang, Stephen M. Blackburn, Daniel Frampton, Antony L. Hosking
- ACM SIGPLAN International Symposium on Memory Management, ISMM'12, Beijing, China, June 15-16, 2012

2011

Fine-Grained Adaptive Biased Locking

- Filip Pizlo, Daniel Frampton, Antony L. Hosking
- 9th International Conference on Principles and Practice of Programming in Java, Kongens Lyngby, Denmark, August 24-26, 2011

Next In Line, Please! Efficiently Estimating and Exploiting the Indirect Benefits of Inlining

- A. Sewe, J. Jochem and M. Mezini
- 5th workshop on Virtual Machines and Intermediate Languages (VMIL), Portland, OR, USA, 24 October 2011

SOS: Saving Time in Dynamic Race Detection with Stationary Analysis

- D. Li, W. Srisa-an, and M. Dwyer
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Portland, Oregon, USA, October 22-27, 2011

A Literate Experimentation Manifesto

- J. Singer
- ACM SIGPLAN Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software (ONWARD), Portland, Oregon, USA, October 22-27, 2011

Quarantine: A Framework to Mitigate Memory Errors in JNI Applications

- D. Li and W. Srisa-an
- ACM Conference on Principles and Practice of Programming in Java (PPPJ), Kongens Lyngby, Denmark, August 24-26, 2011

A Comprehensive Evaluation of Object Scanning Techniques

- R. Garner, S. M. Blackburn and D. Frampton
- ACM SIGPLAN International Symposium on Memory Management (ISMM), San Jose, CA, USA, June 2011

LeakChaser: Helping Programmers Narrow Down Causes of Memory Leaks

- G. Xu, M. D. Bond, F. Qin, and A. Rountev
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), San Jose, CA, USA, June 2011
- Source code available on the [Research Archive](#)

Magic for the Masses: Safer High-level Low-level Programming through Customizable Static Analyses

- R. Mitschke, A. Sewe, M. Mezini
- 1st workshop on Modularity in Systems Software (MISS), Porto de Galinhas, Brazil, 22 Mar 2011

2010

Hera-JVM: A System for Heterogeneous Multi-Core Architectures

- R. McIlroy and J. Sventek.
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Reno/Tahoe, Nevada, October, 2010

An Input-Centric Paradigm for Program Dynamic Optimizations

- K. Tian, Y. Jiang, E. Zhang, X. Shen
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Reno/Tahoe, Nevada, October, 2010

What Can the GC Compute Efficiently? A Language for Heap Assertions at GC Time

- C. Reichenbach, E. Aftandilian, N. Immerman, S. Guyer, and Y. Smaragdakis
- ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, Reno/Tahoe, Nevada, October, 2010

Headroom-based pretenuring: dynamically pretenuring objects that live "long enough"

- A. Sewe, D. Yuan, J. Sinschek and M. Mezini
- Principles and Practice of Programming in Java (PPPJ '10), Vienna, Austria, 15-17 September 2010

Local redundant polymorphism query elimination

- Rhodes H. F. Brown and R. Nigel Horspool
- *Principles and Practice of Programming in Java (PPPJ '10)*, Vienna, Austria, 15-17 September 2010

Z-Rays: Divide Arrays and Conquer Speed and Flexibility

- J. Sartor, S. M. Blackburn, D. Frampton, M. Hirzel, and K. S. McKinley
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), Toronto, Canada, June 2010
- Source code available [here](#)

Pacer: Proportional Detection of Data Races

- M. D. Bond, K. E. Coons, and K. S. McKinley
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), Toronto, Canada, June 2010
- Source code available on the [Research Archive](#)

Breadcrumbs: Efficient Context Sensitivity for Dynamic Bug Detection Analyses

- M. D. Bond, G. Z. Baker, and S. Z. Guyer
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), Toronto, Canada, June 2010
- Source code available on the [Research Archive](#)

The Locality of Concurrent Write Barriers

- L. Hellyer, R.E. Jones and A.L. Hosking
- ACM SIGPLAN International Symposium on Memory Management (ISMM), Toronto, Canada, June 2010

The Economics of Garbage Collection

- J. Singer, R.E. Jones, G. Brown and M. Lujan
- ACM SIGPLAN International Symposium on Memory Management (ISMM), Toronto, Canada, June 2010

Efficient, Context-Sensitive Detection of Real-World Semantic Attacks

- M. D. Bond, V. Srivastava, K. S. McKinley, and V. Shmatikov
- ACM SIGPLAN Workshop on Programming Languages and Analysis for Security (PLAS), Toronto, Canada, June 2010
- Source code available on the [Research Archive](#)

Automated just-in-time compiler tuning

- Kenneth Hoste, Andy Georges and Lieven Eeckhout
- Code generation and optimization (CGO '10), Toronto, Canada, 24-28 April 2010

2009

GC Assertions: Using the Garbage Collector to Check Heap Properties

- E. Aftandilian and S. Guyer
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), Dublin, Ireland, June 2009.

An Experimental Study of Methods for Executing Test Suites in Memory Constrained Environments

- Suvarshi Bhadra, Alexander Conrad, Charles Hurkes, Brian Kirklin, and Gregory M. Kapfhammer
- In the Proceedings of the 4th Workshop on the Automation of Software Test, Vancouver, Canada, May 2009.

Demystifying Magic: High-level Low-level Programming

- Frampton, Blackburn, Cheng, Garner, Grove, Moss, and Salishev.
- VEE 2009.

Flexible Reference-Counting-Based Hardware Acceleration for Garbage Collection

- Jose A. Joao, Onur Mutlu, and Yale N. Patt
- International Symposium on Computer Architecture (ISCA), Austin, TX, June 2009

Laminar: Practical Fine-Grained Decentralized Information Flow Control

- Indrajit Roy, Donald E. Porter, Michael D. Bond, Kathryn S. McKinley, and Emmett Witchel
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI), Dublin, June 2009

Leak Pruning

- Michael D. Bond, Kathryn S. McKinley
- International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS), Washington, DC, March 2009
- Source code available on the [Research Archive](#)

The Impact of Java Applications at Microarchitectural Level from Branch Prediction Perspective

- Adrian Florea, Arpad Gellert, Lucian Vinan, Marius Velan.
- International Journal of Computers, Communication and Control

Mostly-Functional Behavior in Java Programs

- William C. Benton, Charles N. Fischer
- Proceedings of the Tenth International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI '09). Savannah, Georgia, USA 18-20 January 2009.

2008

Tolerating Memory Leaks

- Michael D. Bond, Kathryn S. McKinley
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Nashville, TN, October 2008
- Source code available on the [Research Archive](#)

Java Performance Evaluation through Rigorous Replay Compilation

- Andy Georges, Lieven Eeckhout, Dries Buytaert
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Nashville, TN, October 2008

Constraint Based Optimization of Stationary Fields

- Ian Rogers, Jisheng Zhao, Chris Kirkham, Ian Watson
- [Principles and Practice of Programming in Java \(PPPJ '08\)](#), Modena, Italy, 9-11 September 2008.

The PIM: an Innovative Robot Coordination Model based on Java Thread Migration

- Raffaele Quitadamo, Danilo Ansaloni, Niranjani Suri, Kenneth M. Ford, James Allen, Giacomo Cabri
- [Principles and Practice of Programming in Java \(PPPJ '08\)](#), Modena, Italy, 9-11 September 2008.

A Lazy Developer Approach: Building a JVM with Third Party Software

- Nicolas Geoffroy, Gael Thomas, Charles Clement, Bertil Folliot
- [Principles and Practice of Programming in Java \(PPPJ '08\)](#), Modena, Italy, 9-11 September 2008.

Speculative Improvements to Verifiable Bounds Check Elimination

- Andreas Gampe, Jeffrey von Ronne, David Niedzielski, Kleantes Psarris

- Principles and Practice of Programming in Java (PPPJ '08), Modena, Italy, 9-11 September 2008.

Wake Up and Smell the Coffee: Evaluation Methodology for the 21st Century

- Stephen M. Blackburn, Kathryn S. McKinley, Robin Garner, Chris Hoffmann, Asjad M. Khan, Rotem Bentzur, Amer Diwan, Daniel Feinberg, Daniel Frampton, Samuel Z. Guyer, Martin Hirzel, Antony Hosking, Maria Jump, Han Lee, J. Eliot, B. Moss, Aashish Phansalkar, Darko Stefanovi, Thomas VanDrunen, Daniel von Dincklage, Ben Wiedermann.
- Communications of the ACM (CACM), pages 83-89, August 2008.

Boot Image Layout for Jikes RVM

- Ian Rogers, Jisheng Zhao and Ian Watson
- Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems (ICOOOLPS), Cyprus, 7 July 2008.
- Presentation, tracker and source code

Pure Method Analysis within Jikes RVM

- Jisheng Zhao, Ian Rogers, Chris Kirkham and Ian Watson
- Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems (ICOOOLPS), Cyprus, 7 July 2008.
- Presentation, tracker and source code

Approaches to Reflective Method Invocation

- Ian Rogers, Jisheng Zhao and Ian Watson
- Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems (ICOOOLPS), Cyprus, 7 July 2008.
- Presentation, tracker and source code

Speculative Multithreading: An Object-Driven Approach

- Simon Wilkinson, Ian Watson
- Parallel Execution of Sequential Programs on Multi-core Architectures (PESPMA), Beijing, China, 22 June 2008.

No Bit Left Behind: The Limits of Heap Data Compression

- J.B. Sartor, M. Hirzel, and K.S. McKinley
- The 2008 International Symposium on Memory Management. Tucson, AZ, June 2008.

Immix: A Mark-Region Garbage Collector with Space Efficiency, Fast Collection, and Mutator Performance

- Stephen Blackburn and Kathryn McKinley
- ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2008), Tucson, AZ, June 7-13, 2008
- Patch against r13767 [here](#). Code being integrated into svn head April-May 2008.

Adaptive Loop Tiling for a Multi-Cluster CMP

- Jisheng Zhao, Matthew Horsnell, Mikel Lujan, Ian Rogers, Chris Kirkham and Ian Watson
- International Conference on Algorithms and Architectures, Cyprus, 9-11 June 2008.

A Study of Java Object Demographics

- Richard Jones and Chris Ryder
- International Symposium on Memory Management, Tucson, AZ, June 7-8, 2008

Phase-based Adaptive Recompilation in a JVM

- Dayong Gu and Clark Verbrugge
- 2008 International Symposium on Code Generation and Optimization (CGO), Boston, Massachusetts, 6-9 April.

Branch-on-Random

- Edward Lee and Craig Zilles
- 2008 International Symposium on Code Generation and Optimization (CGO), Boston, Massachusetts, 6-9 April.

GC Assertions: Using the Garbage Collector to Check Heap Properties

- Edward Aftandilian and Samuel Guyer
- ACM SIGPLAN Workshop on Memory Systems Performance and Correctness, Seattle, Washington, USA, 2 March, 2008

A Method Specialisation and Virtualised Execution Environment for Java

- A.M. Cheadle, A.J. Field and J. Nystrom-Persson
- Fourth ACM SIGPLAN/SIGOPS international conference on Virtual Execution Environments (VEE), Seattle, Washington, USA, 5-7 March, 2008

Dynamic Analysis of Java Program Concepts for Visualization and Profiling

- Jeremy Singer and Chris Kirkham
- Science of Computer Programming, vol. 70, no.2-3, pp.111-126, Elsevier, Feb 2008.

Object Co-location and Memory Reuse for Java Programs

- Zoe C. H. Yu, Francis C. M. Lau, and Cho-Li Wang
- ACM Transactions on Architecture and Code Optimization, Vol. 4, No. 4, Article 23, January 2008.

2007

Effective Prefetch for Mark-Sweep Garbage Collection

- Robin Garner, Stephen Blackburn, & Daniel Frampton
- ACM SIGPLAN International Symposium on Memory Management (ISMM), Montreal, October 2007
- Patch against Jikes RVM r10327 available [here](#).

Decrypting the Java Gene Pool: Predicting Object Lifetimes with Micro-Patterns

- Sebastien Marion, Richard Jones, & Chris Ryder
- ACM SIGPLAN International Symposium on Memory Management (ISMM), Montreal, October 2007

Uniqueness Inference for Compile-Time Object Deallocation

- Sigmund Cherem & Radu Rugina
- ACM SIGPLAN International Symposium on Memory Management (ISMM), Montreal, October 2007

Statistically Rigorous Java Performance Evaluation

- Andy Georges, Dries Buytaert, Lieven Eeckhout
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Montreal, October 2007

Using HPM-Sampling to Drive Dynamic Compilation

- Dries Buytaert, Andy Georges, Michael Hind, Matthew Arnold, Lieven Eeckhout, Koen De Bosschere
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Montreal, October 2007

Intelligent Selection of Application-Specific Garbage Collectors

- Jeremy Singer, Gavin Brown, Ian Watson, John Cavazos
- ACM SIGPLAN International Symposium on Memory Management (ISMM), Montreal, October 2007

Probabilistic Calling Context

- Michael D. Bond, Kathryn S. McKinley.

- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Montreal, October 2007
- Source code available on the [Research Archive](#).

Tracking Bad Apples: Reporting the Origin of Null and Undefined Value Errors

- Michael D. Bond, Nicholas Nethercote, Stephen W. Kent, Samuel Z. Guyer, Kathryn S. McKinley.
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Montreal, October 2007
- Source code available on the [Research Archive](#).

Java Object Header Elimination for Reduced Memory Consumption in 64-Bit Virtual Machines

- Kris Venstermans, Lieven Eeckhout, and Koen De Bosschere.
- ACM Transactions on Code Optimizations (TACO), Vol 4, No. 3, Article 17, September 2007

Optimizing Chip Multiprocessor Work Distribution using Dynamic Compilation

- Jisheng Zhao, Matthew Horsnell, Ian Rogers, Andrew Dinn, Chris Kirkham, Ian Watson.
- Proceedings of Euro-Par, IRISA/ENS Cachan, Rennes, France, 28-31 August 2007

GCH: Hints for Triggering Garbage Collections

- Dries Buytaert, Kris Venstermans, Lieven Eeckhout, and Koen De Bosschere.
- Transactions on High-Performance Embedded Architectures and Compilers I

Object-Relative Addressing: Compressed Pointers in 64-Bit Java Virtual Machines

- Kris Venstermans, Lieven Eeckhout, and Koen De Bosschere.
- Proceedings of 21st European Conference on Object-Oriented Programming (ECOOP '07), July 30 - August 3, 2007

Fast Online Pointer Analysis

- Martin Hirzel, Daniel von Dincklage, Amer Diwan, and Michael Hind.
- Transactions on Programming Languages and Systems (TOPLAS), April 2007.

Correcting the Dynamic Call Graph Using Control Flow Constraints

- Byeongcheol Lee, Kevin Resnick, Michael D. Bond, Kathryn S. McKinley
- Proceedings of the 16th International Conference on Compiler Construction (CC 2007), Braga, Portugal, March 2007

Isla Vista Heap Sizing: Using Feedback to Avoid Paging

- Chris Grzegorzczuk, Sunil Soman, Chandra Krintz, Rich Wolski
- Proceedings of the 5th International Symposium on Code Generation and Optimization (CGO 2007), San Jose, California, March 2007

Transactional Collection Classes

- Brian D. Carlstrom, Austen McDonald, Michael Carbin, Christos Kozyrakis, Kunle Olukotun (Stanford University)
- Principles and Practice of Parallel Computing (PPoPP 2007), San Jose, California, 15 March 2007.

A Scalable, Non-blocking Approach to Transactional Memory

- H. Chafi, J. Casper, B. D. Carlstrom, A. McDonald, C. Cao Minh, W. Baek, C. Kozyrakis, and K. Olukotun (Stanford University)
- The 13th International Symposium on High-Performance Computer Architecture (HPCA), Phoenix, Arizona, February 10-14, 2007.

Mobility of Data in Distributed Hybrid Computing Systems

- Philippe Faes, Mark Christiaens and Dirk Stroobandt
- Proceedings of the 21st International Parallel and Distributed Processing Symposium, 2007

Transactional Memory: The Hardware-Software Interface

- Austen McDonald, Brian D. Carlstrom, JaeWoong Chung, Chi Cao Minh, Hassan Chafi, Christos Kozyrakis, Kunle Olukotun
- Micro's Top Picks, IEEE Micro January/February 2007 (Vol. 27, No. 1).

Cork: Dynamic Memory Leak Detection for Java

- Maria Jump, Kathryn S. McKinley
- Proceedings of the 2007 Principles of Programming Languages, Nice, France, January 2007

2006

Lazy Interprocedural Analysis for Dynamic Loop Parallelization

- Jisheng Zhao, Chris Kirkham, Ian Rogers
- New Horizons in Compilers, Bangalore, India, December 18, 2006.

Leveraging strong agent mobility for Aglets with the Mobile JikesRVM framework

- Raffaele Quitadamo, Letizia Leonardi, Giacomo Cabri
- Scalable Computing: Practice and Experience, ISSN: 1895-1767, Volume 7, No. 4, December 2006.

Executing Java programs with transactional memory

- Brian D. Carlstrom, JaeWoong Chung, Hassan Chafi, Austen McDonald, Chi Cao Minh, Lance Hammond, Christos Kozyrakis, Kunle Olukotun
- Science of Computer Programming, Volume 63, Issue 2, 1 December 2006, Pages 111-129.

CRAMM: Virtual Memory Support for Garbage-Collected Applications

- Ting Yang and Emery D. Berger and Scott F. Kaplan and J. Eliot B. Moss
- Proceedings of the 7th USENIX Symposium on Operating Systems Design and Implementation (OSDI), Seattle, Washington, November, 2006.

Revocation techniques for Java concurrency

- Welc A, Jagannathan S and Hosking AL.
- Concurrency and Computation - Practice and Experience 18(2):1613-1656, October 2006.

JAVANA: A System for Building Customized Java Program Analysis Tools

- Jonas Maebe, Dries Buytaert, Lieven Eeckhout, Koen De Bosschere
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Portland, Oregon, October 22-26, 2006.

The DaCapo Benchmarks: Java Benchmarking Development and Analysis

- Stephen M Blackburn, Robin Garner, Chris Hoffmann, Asjad M Khan, Kathryn S. McKinley, Rotem Bentzur, Amer Diwan, Daniel Feinberg, Daniel Frampton, Samuel Z. Guyer, Martin Hirzel, Antony Hosking, Maria Jump, Han Lee, J. Eliot B. Moss, Aashish Phansalkar, Darko Stefanovic, Thomas VanDrunen, Daniel von Dincklage, Benjamin Wiedermann
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Portland, Oregon, October 22-26, 2006.

Method-Specific Dynamic Compilation using Logistic Regression

- John Cavazos, Michael O'Boyle
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Portland, Oregon, October 22-26, 2006.

Adapting VM Techniques for Seamless Aspect Support

- Christoph Bockisch, Matthew Arnold, Tom Dinkelaker, Mira Mezini
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Portland, Oregon, October 22-26, 2006.

Efficient Control Flow Quantification

- Christoph Bockisch, Sebastian Kanthak, Michael Haupt, Matthew Arnold, Mira Mezini,
- ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA), Portland, Oregon, October 22-26, 2006.

Bell: Bit-Encoding Online Memory Leak Detection

- Michael D. Bond, Kathryn S. McKinley.
- Proceedings of the 12th International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS-XII), San Jose, October 21-25, 2006.
- Source code available on the [Research Archive](#).

Trace-based automatic parallelization in the Jikes RVM

- Borys Bradel and Tarek S. Abdelrahman
- "Proceedings of the 5th Workshop on Compiler-Driven Performance," Toronto, Canada, Oct 16, 2006.

Enabling Java Mobile Computing on the IBM Jikes Research Virtual Machine

- Giacomo Cabri, Letizia Leonardi, "Raffaele Quitadamo".
- "Proceedings of the 4th International Conference on the Principles and Practice of Programming in Java 2006 (PPPJ)", Mannheim, Germany, August 2006, ACM Press.

Transparently reconciling transactions with locking for Java synchronization

- Welc A, Hosking AL, Jagannathan S.
- Proceedings of the 20th European Conference on Object-Oriented Programming (ECOOP):148-173 (Nantes, France, July 2006), Lecture Notes in Computer Science 4067, Springer-Verlag, 2006.

Architectural Semantics for Practical Transactional Memory

- Austen McDonald, JaeWoong Chung, Brian D. Carlstrom, Chi Cao Minh, Hassan Chafi, Christos Kozyrakis, and Kunle Olukotun.
- "Proceedings of the 33rd Annual International Symposium on Computer Architecture", Boston, Massachusetts, June 17-21, 2006.

Relative Factors in Performance Analysis of JVMs

- Dayong Gu, Clark Verbrugge, and Etienne M. Gagnon
- "Proceedings of the 2nd Annual International Conference on Virtual Execution Environments", Ottawa, Canada, June 14-16, 2006.

Impact of Virtual Execution Environments on Processor Energy Consumption and Hardware Adaptation

- Shiwen Hu and Lizy K. John
- "Proceedings of the 2nd Annual International Conference on Virtual Execution Environments", Ottawa, Canada, June 14-16, 2006.

Free-Me: A Static Analysis for Automatic Individual Object Reclamation

- Samuel Z. Guyer, Kathryn S. McKinley, and Daniel Frampton.
- "Proceedings of the ACM SIGPLAN 2006 Conference on Programming Language Design and Implementation", Ottawa, Canada, June 10-16, 2006.

The Compressor: Concurrent, Incremental, and Parallel Compaction

- Haim Kermany, Erez Petrank.
- "Proceedings of the ACM SIGPLAN 2006 Conference on Programming Language Design and Implementation", Ottawa, Canada, June 10-16, 2006.

The Atomos Transactional Programming Language

- Brian D. Carlstrom, Austen McDonald, Hassan Chafi, JaeWoong Chung, Chi Cao Minh, Christos Kozyrakis, and Kunle Olukotun.
- "Proceedings of the ACM SIGPLAN 2006 Conference on Programming Language Design and Implementation", Ottawa, Canada, June 10-16, 2006.

Parallelizing SPECjbb2000 with Transactional Memory

- JaeWoong Chung, Chi Cao Minh, Brian D. Carlstrom, and Christos Kozyrakis.
- "Workshop on Transactional Memory Workloads", Ottawa, Canada, June 10, 2006.

Reducing generational copy reserve overhead with fallback compaction

- McGachey P, Hosking AL.
- Proceedings of the 4th ACM SIGPLAN International Symposium on Memory Management (ISMM):17-28 (Ottawa, Canada, June 2006), ACM.

Strong Agent Mobility for Aglets based on the IBM JikesRVM

- Giacomo Cabri, Luca Ferrari, Letizia Leonardi, Raffaele Quitadamo
- The 21st ACM International Symposium on Applied Computing (SAC), Dijon, France, April 2006

Hybrid Optimizations: Which Optimization Algorithm to Use?

- John Cavazos, J. Eliot B. Moss, and Michael F.P. O'Boyle
- "15th International Conference on Compiler Construction (CC 2006)", Vienna, Austria, March 30 - 31, 2006.

Space-Efficient 64-bit Java Objects through Selective Typed Virtual Addressing

- Kris Venstermans, Lieven Eeckhout, and Koen De Bosschere.
- "The 4th Annual International Symposium on Code Generation and Optimization (CGO)", New York. March 26-29, 2006.

Dynamic Class Hierarchy Mutation

- Lixin Su and Mikko H Lipasti.
- "The 4th Annual International Symposium on Code Generation and Optimization (CGO)", New York. March 26-29, 2006.

Online Phase Detection Algorithms

- Priya Nagpurkar, Michael Hind, Chandra Krintz, Peter F. Sweeney, and V.T. Rajan.
- "The 4th Annual International Symposium on Code Generation and Optimization (CGO)", New York. March 26-29, 2006.

The Common Case Transactional Behavior of Multithreaded Programs

- JaeWoong Chung, Chi Cao Minh, Hassan Chafi, Austen McDonald, Brian D. Carlstrom, Christos Kozyrakis, and Kunle Olukotun.
- "12th International Symposium on High Performance Computer Architecture (HPCA)", Austin, Texas, USA, February 11-15, 2006.

64-bit versus 32-bit Virtual Machines for Java

- Kris Venstermans, Lieven Eeckhout, and Koen De Bosschere
- "Software: Practice and Experience", January 2006.

Compiler Techniques for High Performance Sequentially Consistent Java Programs.

- Zehra Sura, Xing Fang, Chi-Leung Wong, Samuel P. Midkiff, Jaejin Lee, David Padua.
- "11th International Workshop on Compilers for Parallel Computers (CPC 2006)", A Coruna, Spain. January 2006.

Automatic Tuning of Inlining Heuristics

- John Cavazos and Michael F.P. O'Boyle

- "11th International Workshop on Compilers for Parallel Computers (CPC 2006)", A Coruna, Spain. January 2006.

2005

Loop Parallelisation for the Jikes RVM

- Jisheng Zhao, Ian Rogers, Chris Kirkham, and Ian Watson.
- "6th Parallel and Distributed Computing, Applications and Technologies (PDCAT)", Dalian, China, December 5-8, 2005.

Continuous Path and Edge Profiling

- Michael D. Bond and Kathryn S. McKinley.
- 38th International Symposium on Microarchitecture (MICRO), Barcelona, November 14-16, 2005.
- Source code available on the [Research Archive](#).

Garbage Collection Hints

- Dries Buytaert, Kris Venstermans, Lieven Eeckhout, and Koen De Bosschere.
- "International Conference on High Performance Embedded Architectures & Compilers (HIPEAC'05)", Lecture Notes in Computer Science Volume 3793, Springer-Verlag. Barcelona, Spain, November 2005.

Towards Continuous Usage Control on Grid Computational Services.

- Fabio Martinelli, Paolo Mori, and Anna Vaccarelli
- "International Conference on Autonomic and Autonomous Systems and International Conference on Networking and Services", Papeete, Tahiti, October 23-28, 2005.

A Platform to Use Hardware Performance Counters for Dynamic Compilation

- Florian Schneider and Thomas Gross.
- "Languages and Compilers for Parallel Computing (LCPC)", IBM, Hawthorne, New York, October 20-21, 2005."

Comparing Low-Level Behavior of SPEC CPU and Java Workloads

- Andy Georges, Lieven Eeckhout and Koen De Bosschere
- Proceedings of 10th Asia-Pacific Conference, Advances in Computer Systems Architecture (ACSAC), Singapore, October 24-26, 2005.

Are Patches Cutting it? Structuring Distribution within a JVM using Aspects

- Jennifer Baldwin, Yvonne Coady
- "2005 conference of the Centre for Advanced Studies on Collaborative research (CASCON)", Toronto, Canada, Oct 17-20, 2005.

Automating Vertical Profiling

- Matthias Hauswirth, Amer Diwan, Peter F. Sweeney, and Michael Mozer.
- "ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)", San Diego, California, October 16-20, 2005.

Improving Virtual Machine Performance Using a Cross-Run Repository

- Matthew Arnold, Adam Welc, and V.T. Rajan.
- "ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)", San Diego, California, October 16-20, 2005.

Quantifying the Performance of Garbage Collection vs. Explicit Memory Management

- Matthew Hertz and Emery Berger.
- "ACM Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)", San Diego, California, October 16-20, 2005.

Quantifying the Performance of Garbage Collection vs. Explicit Memory Management

- Matthew Hertz and Emery Berger.
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