

ZHIJIA ZHAO

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Education

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| 2010 – 2015 | College of William and Mary, USA. Ph.D. in Computer Science, Advisor: Dr. Xipeng Shen |
| 2007 – 2009 | Harbin Institute of Technology, China. M.S. in Computer Science, Advisor: Dr. Quanlong Li |
| 2003 – 2007 | Harbin Institute of Technology, China. B.S. in Mathematics |

Professional Experience

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| 2015.7 – current | Assistant Professor at CSE, UC Riverside |
| 2015.5 – 2015.6 | Research Intern at Pacific Northwest National Laboratory |
| 2014.9 – 2015.5 | Research Associate at North Carolina State University |
| 2011.5 – 2014.9 | Research Assistant at College of William and Mary |
| 2012.7 – 2012.9 | Research Intern at Mozilla Corporation |
| 2010.1 – 2011.5 | Teaching Assistant at College of William and Mary |

Research Interests

- Program Optimization and Parallelization
- Multicore and Heterogeneous Computing
- Automata Theory and Its Applications
- Probability/Reliability Analysis
- Mobile (Android) Application Optimizations

Awards

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| 2011 | ACM Student Research Competition Silver Medal at PACT'11 (ranked 2nd / 29) |
| 2009 | Outstanding Graduate, Harbin Institute of Technology |
| 2008 | Graduate Fellowship, Harbin Institute of Technology (ranked top 2%) |

Grants

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| 03/2016 | NSF CRII : <i>FSM-centric approximate computing: a quantitative approach.</i> |
| \$17,500 | Funded by NSF CISE Research Initiation Initiative (CRII) from 03/2016-03/2018. |
| (sole-PI) | |

Publications

- PPoPP'17 Lin Jiang and **Zhijia Zhao**. Grammar-aware Parallelization for Scalable XPath Querying. In *22th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*, 2017, acceptance rate 22% (29/132)
- PACT'16 Junqiao Qiu, **Zhijia Zhao** and Bin Ren. MicroSpec: Speculation-centric fine-grained parallelization for FSM computations. In *25th International Conference on Parallel Architecture and Compilation Techniques*, 2016, pages 221-233, acceptance rate 26% (31/119)
- ASPLOS'15 **Zhijia Zhao** and Xipeng Shen. On-the-fly principled speculation for FSM parallelization. In *20th International Conference on Architecture Support for Programming Languages and Operating Systems*, 2015, pages 619-630, acceptance rate 17.3% (48/278)
- OOPSLA'14 **Zhijia Zhao**, Bo Wu, Mingzhou Zhou, Yufei Ding, Jianhua Sun, Xipeng Shen, and Youfeng Wu. Call sequence prediction through probabilistic calling automata. In *ACM SIGPLAN conference on Systems, Programming, Languages and Applications*, 2014, pages 745-762, acceptance rate 28.0% (52/186)
- Ubicomp'14 **Zhijia Zhao**, Mingzhou Zhou, and Xipeng Shen. SatScore: Uncovering and avoiding a principled pitfall in responsiveness measurements of app launches. In *ACM International Joint Conference on Pervasive and Ubiquitous Computing*, 2014, pages 21-32, first-round acceptance rate 13.7% (62/454)
- ASPLOS'14 **Zhijia Zhao**, Bo Wu, and Xipeng Shen. Challenging the "embarrassingly sequential": Parallelizing finite state machine-based computations through principled speculation. In *19th International Conference on Architecture Support for Programming Languages and Operating Systems*, 2014, pages 543-558, acceptance rate 22.6% (49/217)
- ASPLOS'14 Yufei Ding, Mingzhou Zhou, **Zhijia Zhao**, Sarah Eisenstat, and Xipeng Shen. Finding the limit: Examining the potential and complexity of compilation scheduling for JIT-based runtime systems. In *19th International Conference on Architecture Support for Programming Languages and Operating Systems*, 2014, pages 607-622, acceptance rate 22.6% (49/217)
- TACO'13 **Zhijia Zhao**, Michael Bebenita, Dave Herman, Jianhua Sun, and Xipeng Shen. HPar: A practical parallel parser for HTML — taming HTML complexities for parallel parsing. *ACM Transactions on Code Optimization and Architecture*, 10(4):Article 44, December 2013 (Original work)
- PPoPP'13 Bo Wu, **Zhijia Zhao**, Zheng Zhang, Yunlian Jiang, and Xipeng Shen. Complexity analysis and algorithm design for reorganizing data to minimize non-coalesced memory accesses on GPU. In *18th ACM Symposium on Principles and Practice of Parallel Programming*, 2013, pages 57-68, acceptance rate 17.8% (26/146)
- OOPSLA'12 Bo Wu, **Zhijia Zhao**, Xipeng Shen, Yunlian Jiang, Yaoqing Gao, and Raul Silvera. Exploiting inter-sequence correlations for program behavior prediction. In *The ACM SIGPLAN conference on Systems, Programming, Languages and Applications*, 2012, pages 851-866, acceptance rate 25.9% (59/228)
- PACT'12 Poster **Zhijia Zhao**, Bo Wu, and Xipeng Shen. Speculative parallelization needs rigor: Probabilistic analysis for optimal speculation of finite state machine applications. In *21st International Conference on Parallel Architecture and Compilation Techniques*, 2012, pages 433-434
- PACT'11 SRC **Zhijia Zhao**, Bo Wu, and Xipeng Shen. Probabilistic models towards optimal speculation of DFA applications. In *20th International Conference on Parallel Architecture and Compilation Techniques*, 2011, page 220

Teaching

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| 2016 Fall | CS180 Introduction to Software Engineering <i>Effectiveness (dept. avg.): 4.5 (4.2), Helpfulness (dept. avg.): 4.6 (4.2)</i> |
| 2016 Winter | CS201 Compiler Construction <i>Effectiveness (dept. avg.): 4.7 (4.2), Helpfulness (dept. avg.): 4.8 (4.2)</i> |
| 2015 Fall | CS180 Introduction to Software Engineering <i>Effectiveness (dept. avg.): 4.3 (4.2), Helpfulness (dept. avg.): 4.5 (4.2)</i> |

Professional Services

Chair and Organizing Committee

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| ICPADS'16 | Chair of track <i>parallel/distributed algorithms and applications</i> at <i>The 22nd IEEE International Conference on Parallel and Distributed Systems</i> , December 13-16, 2016. |
| LCPC'15 | Web chair of <i>The 28th International Workshop on Languages and Compilers for Parallel Computing</i> , September 9-11, 2015. |

Program Committee

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| IPDRM'17 | Program committee member of <i>Second Annual Workshop on Emerging Parallel and Distributed Runtime Systems and Middleware</i> , May 29-June 2, 2017 |
| HIPS'17 | Program committee member of <i>22nd International Workshop on High-Level Parallel Programming Models and Supportive Environments</i> , May 29-June 2, 2017 |
| CF'17 | Program committee member of <i>ACM International Conference on Computing Frontiers</i> , May 15-17, 2017 |
| ICPP'16 | Program committee member of <i>The 45th International Conference for Parallel Processing</i> , Philadelphia PA, August 16-19, 2016. |
| PLDI'16 | Program committee member of student research competition and poster selection at <i>The 37th annual ACM SIGPLAN conference on Programming Language Design and Implementation</i> , June 13-17, 2016. |
| IPDRM'16 | Program committee member of <i>First Annual Workshop on Emerging Parallel and Distributed Runtime Systems and Middleware</i> , May 27, 2016 |

Journal Reviewer

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| IEEE TC | Invited as a reviewer for <i>IEEE Transactions on Computers</i> . |
| ACM CSUR | Invited as a reviewer for <i>ACM Computing Surveys</i> . |
| ACM TACO | Invited as a reviewer for <i>ACM Transactions on Architecture and Code Optimization</i> . |
| Elsevier PMC | Invited as a reviewer for <i>Elsevier Pervasive and Mobile Computing</i> . |

Conference Reviewer/Subreviewer

IPDRM'17, HIPS'17, CF'17, ICPP'16, CC'16, IPDRM'16, IIWSC'15, SC'15, ICPP'15, PPOPP'15, CGO'15, ASPLOS'15, LCPC'14, PACT'14, ICPP'14, AsHES'14, PLDI'14, APPT'13, SC'13, AsHES'13, OOPSLA'12, MSPC'12, IISWC'11, NPC'11