



Arnamoy Bhattacharyya

Research Assistant in University of Toronto

Education and Research

- 2015–current **Research Assistant**, *Electrical and Computer Engineering*, University of Toronto, *Debugging cloud*.
4.0/4.0
- 2017, 2016 **CAS Intern**, *IBM Toronto Software Lab*, Toronto, Canada, *VM Consolidation*.
Summer
- 2013–2015 **Research Assistant**, *ETH Zürich*, Zurich, Switzerland, *Performance Modeling*.
- 2014 Summer **Research Aide Student**, *Argonne National Laboratory*, Illinois, USA, *Communication Modeling*.
- 2011–2013 **MSc**, *University of Alberta*, Edmonton, Canada, 3.8/4.0.
- 2007–2011 **BTech**, *West Bengal University of Technology*, West Bengal, India, 8.56/10.0.

Master thesis

- title *Do Inputs Matter? Using Dependence Profiling to Evaluate Thread Level Speculation in Bluegene/Q*
- supervisors Prof. José Nelson Amaral

Bachelor thesis

- title *Building a 4 bit Quantum ALU*
- supervisors Prof. Kishore Ghosh

Publications and Theses

- CloudCom '16 Arnamoy Bhattacharyya, Seyed Ali Joker Jandaghi, Stelios Sotiriadis, Cristiana Amza *Semantic Aware Online Detection of Resource Anomalies on the Cloud*, To appear in Proceedings of 8th IEEE International Conference on Cloud Computing Technology and Science, Luxembourg.
- CNSM '16 Arnamoy Bhattacharyya, Harsh Singh, Seyed Ali Joker Jandaghi, Cristiana Amza *Online Characterization of Buggy Applications Running on the Cloud*, To appear in Proceedings of the 12th International Conference on Network and Service Management, Montreal, Canada.

1922, 30 Charles Street West, Toronto, Ontario, Canada, M4Y1R5

☎ +1 (437) 345 9729 • ✉ arnamoy@ualberta.ca

🌐 <http://www.eecg.toronto.edu/~arnamoyb/>

- CASCON '16 Seyed Ali Joker Jandaghi, Arnamoy Bhattacharyya, Stelios Sotiriadis, Cristiana Amza *Consolidation of Underutilized Virtual Machines to Reduce Total Power Usage*, In Proceedings of IBM CASCON, Toronto, Canada
- A-Test '16 Arnamoy Bhattacharyya, Cristiana Amza *PredSym: Estimating Software Testing Budget for a Bug-free Release*, To appear in Proceedings of the The 7th Workshop on Automating Test Case Design, Selection, and Evaluation (Co located with FSE '16), Seattle, Washington.
- PACT '16 Arnamoy Bhattacharyya, Cristiana Amza *TMHelper: Optimizing Transactional Memory Applications using Machine Learning*, To appear in Proceedings of the 25th international conference on Parallel architectures and compilation techniques (PACT '16), Haifa, Israel.
- PACT '15 Arnamoy Bhattacharyya, Grzegorz Kwasniewski, Torsten Hoefler *Using Compiler Techniques to Improve Automatic Performance Modeling*, In Proceedings of the 24th international conference on Parallel architectures and compilation techniques (PACT '15), San Francisco, California.
- CASCON '15 Arnamoy Bhattacharyya, Jose Nelson Amaral, Hal Finkel *Data-dependence Profiling to Enable Safe Thread Level Speculation*, In Proceedings of IBM CASCON, Toronto, Canada
- PACT '14 Arnamoy Bhattacharyya, Torsten Hoefler *PEMOGEN: Automatic Adaptive Performance Modeling during Program Runtime*, In Proceedings of the 23rd international conference on Parallel architectures and compilation techniques (PACT '14), Edmonton, Canada. 393-404
- PACT '13 Arnamoy Bhattacharyya *Do inputs matter?: using data-dependence profiling to evaluate thread level speculation in BG/Q*. In Proceedings of the 22nd international conference on Parallel architectures and compilation techniques (PACT '13). 401-402.
- PACT '12 Arnamoy Bhattacharyya *Using Combined Profiling to Decide When Thread Level Speculation is Profitable*. In Proceedings of the 21st international conference on Parallel architectures and compilation techniques (PACT '12). 483-484.
- Thesis Arnamoy Bhattacharyya *Do inputs matter?: using data-dependence profiling to evaluate thread level speculation in BG/Q*. Master's thesis, University of Alberta, Fall 2013.
- COSMIC '13 Arnamoy Bhattacharyya *Automatic Speculative Parallelization of Loops Using Polyhedral Dependence Analysis* In Proceedings of the 2013 International Workshop on Code Optimisation for Multi and Many Cores (co-located with CGO'13)

Awards and Recognition

- Invited for an all-expenses paid trip to Google Europe PhD Student Summit on Compiler and Programming Technology 2014 in Munich, Germany.
- PACT 2014 Student Travel Grant Recipient.
- PACT 2013 Student Travel Grant Recipient.
- Prestigious Global Research Scholarship, University of Edinburgh, 2013 Recipient.
- Top 5% in Class in all Graduate Courses.

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- Best Project in Graduate Level Compiler Course.
- Selected in Persistent Systems as a Software Engineer.(Among the selected 10 from almost 1000 candidates).
- Topper among 60 students in 4 Undergraduate Semesters.
- State Level Rank 25 among 6 hundred thousand students in XIIth standard.
- State Level Rank 10 among 4 hundred thousand students in Xth standard.
- Received Governor's Award for Class X achievement.

Professional Experience

Winter 2016	Teaching Assistant, Operating Systems, Distributed Systems, University of Toronto
Fall 2015	Teaching Assistant, Operating Systems, Parallel Programming, University of Toronto
Spring 2015	Teaching Assistant, Operating Systems and Networks, ETH Zurich
Fall 2014	Teaching Assistant, Design of Parallel and High-Performance Computing, ETH Zurich
Spring 2014	Teaching Assistant, Operating Systems and Networks, ETH Zurich
Fall 2013	Research Assistant, Scalable Parallel Computing Lab, ETH Zurich
Summer 2013	Research Assistant, CDOL, University of Alberta
Winter 2013	Teaching Assistant, CMPUT 379 (Operating Systems)
Fall 2012	Teaching Assistant, CMPUT 379 (Operating Systems)
Summer 2012	Research Assistant, CDOL, University of Alberta
Winter 2012	Teaching Assistant, CMPUT 379 (Operating Systems)
Fall 2011	Teaching Assistant, CMPUT 379 (Operating Systems)

Graduate Coursework

- Computer System & Architecture.
- Parallel and Distributed Systems.
- Resource Allocation in Networks.
- Mining Software Repositories.
- Machine Learning in Optimizing Compilers.

Relevant Skills

Languages	C, C++, Java, Shell Script, C#, Python
Compilers	LLVM, GCC
Simulators	SimpleScalar, Omnet++
Tools	R, Matlab

References

- José Nelson Amaral (MSc Supervisor)
Professor, University of Alberta, jamaral@ualberta.ca

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- Cristiana Amza (PhD Supervisor)
Associate Professor, University of Toronto, amza@ece.utoronto.ca
- Torsten Hoefler (Internship Supervisor)
Assistant Professor, ETH Zurich, htor@inf.ethz.ch

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