Tariq Mahmood

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Education	Purdue University (West Lafayette, Indiana)	Aug 17
	Ph.D. candidate, Department of Electrical and Computer Engineering	
	Major Professor: Mithuna S. Thottethodi (https://engineering.purdue.edu/~mithuna/)	
	Research Interests: Distributed Systems, Cloud Computing, Cloud Storage	
	Doctoral Dissertation: Efficient, Dynamic Mechanisms for Ordering Data Accesses and Management Operations in the Cloud	

	Lahore University of Management Sciences (Pakistan)	May 05
	Bachelor of Science (Hons.), Specialization Cumulative GPA 3.92	
	(Major) Computer Science, (Minor) Mathematics	

Work Experience	AT&T Labs Research (Bedminster, New Jersey)	Jun - Aug 16
	Summer Intern, Cloud Software Research Group	

Designed and developed a new platform that enables **automated change coordination** across independently managed services in Virtualized Cloud Environments. The system was fully integrated with the **Openstack**-based AT&T research cloud. This work spawned a new research direction for my lab, and a collaboration (still on-going) between Purdue University and AT&T Labs Research. Tools: Java, Openstack

Purdue University (West Lafayette, Indiana)   Jan 13 - May 16
Graduate Assistant, Purdue Libraries Archives and Special Collections Unit
Working as a student archivist. Responsibilities included processing collections, developing Finding Aids, and maintaining websites for the collections. I also assisted with developing new processes (automated scripts, and in-house tools) for handling digital collections, including the use of forensics tools to get data off of legacy media.

Purdue University (West Lafayette, Indiana)   Aug - Dec 12
Graduate Teaching Assistant, Department of Mathematics
For two sections of a freshman course on Calculus. Responsibilities included conducting recitations, making and grading quizzes, proctoring exams, and helping students with their home works.

Lahore University of Management Sciences (Pakistan)   Jan - May 11
Teaching Assistant, Department of Computer Science.
For the course titled "Graduate Algorithms". Responsibilities included delivering lectures, organizing help sessions and helping with the course grading.

Amazon (Seattle, Washington)   Jun - Aug 10
Summer Intern, Software Development Engineer, Community Platform Team
Designed and developed a reputation system for Amazon.com. Also worked on the integration of Audble.com into the Amazon services system.

Lahore University of Management Sciences (Pakistan)   Aug 05 - Jul 07
Research Associate, Department of Computer Science.
Worked on the development of a fault tolerant router using open source software. Findings were published in the form of an experience report at the South Asian Network Operators Group (SANOG) VIII, Karachi, Pakistan in August 2006.

Publications **ACCORD:** Automated Change Coordination across independently managed Cloud Services, *under submission at Middleware 2017*

Karma: Cost-effective Geo-replicated Cloud Storage with Dynamic Enforcement of Causal Consistency, *under submission at IEEE TCC*, (preliminary results published as a Purdue Technical report 2016)

Karma: Poster presented at the ACM Symposium on Cloud Computing (SoCC) 2016

Academic Projects Implementation and evaluation of Dynamic Self Invalidation as a technique that reduces cache coherence overhead in a shared memory multiprocessor. Undertaken during a course on Advanced Computer Architecture under the supervision of Prof. T.N. Vijaykumar. Tools: Simics, Gems, C

A comparative study of 3G and WiFi networks for mobile devices: Undertaken during a course on Distributed Systems. The study aimed at benchmarking the available 3G and WiFi networks in the city of West Lafayette (home of Purdue). The study focused on clients using smart phones and required extensive development on Android-based phones. Tools: Java, Android

Intensive operating system development: Done as part of a graduate course on Operating Systems. Assignments consisted of implementing various scheduling policies, mechanisms for inter-process communication and a fully functional virtual memory sub-system. The development was done in an instructional Operating System called XINU. Tools: C/C++

Compiler development: Built a fully functional language compiler as part of a graduate course on Compilers and Translation Systems. Tools: C/C++

Honors/ Awards Awarded the Fulbright Scholarship (for Ph.D.) from Pakistan for the years 2007-2012

Placed on the Dean's Honor List (minimum requirement being a cumulative GPA of 3.60) during the academic years 2002-03, 2003-04 and 2004-05

Interests Photography (www.flickr.com/tarekm), cars, trekking, and traveling