Ali Akoglu

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CHRONOLOGY OF EDUCATION

Aug. 1999 – Jul. 2005	**Arizona State University**, Tempe, AZ Ph.D., Computer Science Dissertation: "Application Specific Reconfigurable Architecture Design Methodology" , Advisor: Sethuraman Panchanathan
Aug. 1995 – Dec. 1998	**Purdue University**, West Lafayette, IN B.S., Computer Engineering

CHRONOLOGY OF EMPLOYMENT

Aug. 2012 – Present	**Associate Professor** Department of Electrical and Computer Engineering BIO5 Institute University of Arizona, Tucson, AZ
Aug. 2005 – Aug. 2012	**Assistant Professor** Department of Electrical and Computer Engineering University of Arizona, Tucson, AZ
May 2004 – Jul. 2005	**Research Intern** Embedded Intel Architecture Division Intel Corporation, Chandler, AZ
Aug. 2001 – May 2004	**Research/Teaching Assistant** Department of Computer Science Arizona State University, Tempe, AZ
May 2000 – Aug. 2001	**Research Intern** Luxxon Corporation Tempe, AZ
Aug. 1999 – May 2000	**Research Assistant** Department of Computer Science Arizona State University, Tempe, AZ

EXTENT OF TEACHING

Semester	Course		Level
Spring 2017	ECE569:	High Performance Computing	Graduate
Fall 2016	ECE369A:	Fundamentals of Computer Architecture	Undergraduate
Spring 2016	ECE506:	Reconfigurable Computing	Graduate
Fall 2015	ECE369A:	Fundamentals of Computer Architecture	Undergraduate
Spring 2015	ECE274A:	Digital Logic	Undergraduate
Fall 2014	ECE274A:	Digital Logic	Undergraduate
Fall 2014	ECE369A:	Fundamentals of Computer Architecture	Undergraduate
Spring 2014	ECE506:	Reconfigurable Computing	Graduate
Spring 2014	ECE369A:	Fundamentals of Computer Architecture	Undergraduate
Fall 2013	ECE369A:	Fundamentals of Computer Architecture	Undergraduate
Spring 2013	ECE369A:	Fundamentals of Computer Architecture	Undergraduate
Fall 2012	ECE 369A:	Fundamentals of Computer Architecture	Undergraduate
Fall 2012	ECE 462/562:	Computer Architecture and Design	Undergraduate/Graduate
Spring 2012	ECE 506:	Reconfigurable Computing	Graduate
Fall 2011	ECE 462/562:	Computer Architecture and Design	Undergraduate/Graduate
Spring 2010	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Spring 2010	ECE 569:	High Performance Computing	Graduate
Fall 2009	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Spring 2009	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Spring 2009	ECE 473:	Software Engineering Concepts	Undergraduate
Fall 2008	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Fall 2008	ECE 506:	Reconfigurable Computing	Graduate
Spring 2008	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Fall 2007	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Fall 2007	ECE 596C:	Advanced Topics: Computer Engineering	Graduate
Spring 2007	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Fall 2006	ECE 596C:	Advanced Topics: Computer Engineering	Graduate
Spring 2006	ECE 369:	Fundamentals of Computer Architecture	Undergraduate
Fall 2005	ECE 369:	Fundamentals of Computer Architecture	Undergraduate

PRINCIPAL AREAS OF RESEARCH

Architectures:

Reconfigurable architectures and Adaptive hardware architectures
Performance Modeling

Systems:

Cloud Computing
High Performance Computing
Massively Parallel Systems

PUBLICATIONS/CREATIVE ACTIVITY (Published or Accepted)

Refereed Journal Publications

[J1] Benjamin Vincent, Adam Buntzman, Benjamin Hopson, Chris McEwen, Lindsay Cowell, Ali Akoglu, Helen Zhang, Jeffrey Frelinger, "iWAS – A novel approach to analyzing Next Generation Sequence data for immunology," Cellular Immunology, Volume 299, January 2016, Pages 6-13, ISSN 0008-8749, http://dx.doi.org/10.1016/j.cellimm.2015.10.012.

[J2] Yoon Kah Leow, Ali Akoglu, and Susan Lysecky, "FPGA Static Power Model for Low-Duty Cycle Embedded Applications," *ACM Transactions on Reconfigurable Technology and Systems (TRETS)*, vol. 6, no. 4, article 18, pp. 18:1-18:23, 2013. http://doi.acm.org/10.1145/2535935.

[J3] Yang Song and Ali Akoglu, "An adaptive motion estimation architecture for H.264/AVC," *Journal of Signal Processing Systems*, vol. 73, pp. 161-179, 2013. DOI: 10.1007/s11265-013-0740-8

[J4] Hanyu Liu, Senthilkumar T. Rajavel, and Ali Akoglu, "Integration of Net Length Factor with Timing and Routability Driven Clustering Algorithms," *ACM Transactions on Reconfigurable Technology and Systems (TRETS)*, vol. 6, no. 3, article 12 pp. 12:1-12:21, 2013. http://doi.acm.org/10.1145/2517324.

[J5] Yang Song and Ali Akoglu, "Bit-by-Bit pipelined and hybrid-grained 2D architecture for motion estimation of H.264/AVC," *Journal of Signal Processing Systems*, vol. 68, issue 1, pp. 49-62, 2012. http://dx.doi.org/10.1007/s11265-010-0575-5.

[J6] Venkata Krishna Nimmagadda, Ali Akoglu, Salim Hariri, and Talal Moukabary, "Cardiac simulation on multi-GPU platform," *Journal of Supercomputing*, vol 59, no. 3, pp. 1360-1378, 2012. http://dx.doi.org/10.1007/s11227-010-0540-x

[J7] Khaled Benkrid, Ali Akoglu, Cheng Ling, Yang Song, Ying Liu, and Xiang Tian, "High performance biological pairwise sequence alignment: FPGA vs. GPU vs. Cell BE vs. GPP," *International Journal of Reconfigurable Computing* vol. 2012, Article ID 752910, 15 pages, 2012. doi:10.1155/2012/752910

[J8] Gregory Striemer, David Story, Ali Akoglu, and Murat Kacira, "A node and network level self-recovering distributed wireless sensor architecture for real-time crop monitoring in greenhouses," *Transactions of the American Society of Agricultural and Biological Engineers (ASABE)*, vol. 54, no. 4, pp. 1521-1577, 2011.

[J9] Lakshmi Easwaran and Ali Akoglu, "Net length based routability driven power aware clustering," *ACM Transactions on Reconfigurable Technology and Systems (TRETS)*, vol. 4, no. 4, article 38, pp. 38:1-38:16, 2011. http://doi.acm.org/10.1145/2068716.2068724.

[J10] Stephen A Goff, Matthew Vaughn, Sheldon McKay, Eric Lyons, Ann Stapleton, Damian Gessler, Naim Matasci, Liya Wang, Matthew Hanlon, Andrew Lenards, Andy Muir, Nirav Merchant, Sonya Lowry, Stephen Mock, Matthew Helmke, Adam Kubach, Martha Narro, Nicole Hopkns, David Micklos, Uwe Hilgert, Michael Gonzales, Chris Jordan, Edwin Skidmore, Rion Dooley, John Cazes, Robert McLay, Zhenyuan Lu, Shiran Pasternak, Lars Koesterke, William H. Piel, Ruth Grene, Christos Noutsos, Karla Gendler, Xin Feng, Chunlao Tang, Monica Lent, Seung-Jin Kim, Kristian Kvilekval, B. S. Manjunath, Val Tannen, Alexandros Stamatakis, Michael Sanderson, Stephen W. Welch, Karen A. Cranston, Pamela Soltis, James Leebens-Mack, Michael J. Donoghue, Edgar P. Spalding, Todd J. Vision, Christopher R. Myers, David Lowenthal, Brian J. Enquist, Brad Boyle, Ali Akoglu, Greg Andrews, Sudha Ram, Doreen Ware, Lincoln Stein, and David Stanzione, "The iPlant collaborative: cyberinfrastructure for plant biology," *Frontiers in Plant Science*, vol. 2, no.34, pp. 1-16, 2011.

[J11] Xuanxing Xiong, Yang Song, and Ali Akoglu, "Architecture design of variable block size motion estimation for full and fast search algorithms in H.264/AVC," *Computers and Electrical Engineering*, vol. 37, no. 3, pp. 285-299, 2011.

[J12] Yang Song and Ali Akoglu, "Parallel implementation of the irregular terrain model (ITM) for radio transmission loss prediction using GPU and Cell BE processors," *IEEE Transactions on Parallel and Distributed Systems, (TPDS)*, vol. 22, no. 8, pp. 1276-1283, 2011.

[J13] David Story, Murat Kacira, Chieri Kubota, Ali Akoglu, and Lingling An, "Lettuce calcium deficiency detection with machine vision computed plant features in controlled environments," *Computers and Electronics in Agriculture*, vol. 74, no. 2, pp. 238-243, 2010.

[J14] Hanyu Liu and Ali Akoglu, "Timing-driven non-uniform depopulation based clustering," *International Journal of Reconfigurable Computing*, vol. 2010, no. 158602, 2010. http://dx.doi.org/10.1155/2010/158602 (11 pages).

[J15] Ali Akoglu and Gregory M. Striemer, "Scalable and highly parallel implementation of Smith-Waterman on graphics processing unit using CUDA," *Cluster Computing*, vol. 12, no. 3, pp. 341-352, 2009.

[J16] Ali Akoglu, Adarsha Sreeramareddy, and Jeff G. Josiah, "FPGA based distributed self healing architecture for reusable systems," *Cluster Computing*, vol. 12, no. 3, pp. 269-284, 2009.

Peer Reviewed Conference Publications

[C1] Burak Unal, Ali Akoglu, "Resource Efficient Real-Time Processing of Contrast Limited Adaptive Histogram Equalization," 26th International Conference on Field-Programmable Logic and Applications (FPL), Lausanne, Switzerland, August 29 – September 2, 2016.

[C2] Cihan Tunc, Nirmal Kumbhare, Ali Akoglu, Salim Hariri, Dylan Machovec, Howard Jay Siegel, "Value of Service Based Task Scheduling for Cloud Computing Systems," 2016 IEEE International Conference on Cloud and Autonomic Computing (ICCAC), Augsburg, Germany, September 12-16, 2016.

[C3] Nirmal Kumbhare , Cihan Tunc, Salim Hariri, Ivan Djordjevic, Ali Akoglu, Howard Jay Siegel, "Just In Time Architecture (JITA) for Dynamically Composable Data Centers, "13th ACS/IEEE International Conference on Computer Systems and Applications AICCSA 2016 , Agadir, Morocco, November 29 – December 2, 2016.

[C4] Dylan Machovec, Cihan Tunc, Nirmal Kumbhare, Bhavesh Khemka, Ali Akoglu, Salim Hariri, Howard Jay Siegel, "Value-Based Resource Management in High-Performance Computing Systems," 7th Workshop on Scientific Cloud Computing (ScienceCloud 2016), cosponsors: ACM SIGARCH (Special Interest Group on Computer Architecture) and The University of Arizona, in the proceedings of The 25th International Symposium on High Performance Parallel and Distributed Computing (HPDC `16), pp. 19-26, Kyoto, Japan, May/June 2016.

[C5] Nilangshu Bidyanta, Garrett Vanhoy, Mohammed Hirzallah, Ali Akoglu, and Bo Ryu, "GPU and FPGA Based Architecture Design for Real-time Signal Classification," In Proceedings of the 2015 Wireless Innovation Forum Conference on Wireless Communications Technologies and Software Defined Radio (WInnComm'15), March 24-26, 2015, San Diego, CA, pp. 70-79.

[C6] Farah Fargo, Cihan Tunc, Youssif Al-Nashif, Ali Akoglu, and Salim Hariri, "Autonomic Workload and Resources Management of Cloud Computing Resources," IEEE International Conference on Cloud and Autonomic Computing (ICCAC'14), London, Sept 8-12, 2014, pp. 101-110.

[C7] Peter Gadfort, Aravind Dasu, Ali Akoglu, Yoon Leow, and Michael Fritze, "A Power Efficient Reconfigurable System-in-Stack: 3D integration of accelerators, FPGAs, and DRAM," IEEE 27th International System-on-Chip Conference (SOCC'14), Las Vegas, NV, Sep. 2-5, 2014, pp. 11-16.

[C8] Gregory Striemer, Harsha Krovi, Ali Akoglu, Benjamin Vincent, Ben Hopson, Jeffrey Frelinger, and Adam Buntzman, "Overcoming the Limitations Posed by TCR-beta Repertoire Modeling through a GPU-Based In-Silico DNA Recombination Algorithm," In Proceedings of the 2014 IEEE 28th International Parallel and Distributed Processing Symposium (IPDPS '14), May 19-23, 2014, Phoenix, AZ, pp. 231-240.

[C9] Yoon Kah Leow, Ali Akoglu, "A Hybrid FPGA Model to Estimate On-Chip Crossbar Logic Utilizations In SoC Platforms," *20th Reconfigurable Architectures Workshop (RAW 2013)*, Proceedings of the 2013 IEEE 26th International Parallel and Distributed Processing Symposium Workshops, IPDPSW'13, Boston, USA in May 2013, pp. 239-246.

[C10] Priyank Gupta, Ali Akoglu, Kathleen Melde, and Janet Roveda, "FPGA Based Single Cycle, Reconfigurable Router for NoC Applications," *IEEE International Symposium on Circuits and Systems, ISCAS'12*, Beijing, China, May 19-23, 2013.

[C11] Peter Bailey, Tapasya Patki, Gregory M. Striemer, Ali Akoglu, David Lowenthal, Peter Bradbury, Matthew Vaughn, Liya Wang, and Stephen Goff, "Quantitative Trait Locus Analysis Using a Partitioned Linear Model on a GPU Cluster," *IEEE International Workshop on High Performance Computational Biology, HiCOMB'12*, Proceedings of the 2012 IEEE 26th International Parallel and Distributed Processing Symposium Workshops, IPDPSW'12, May 2012, Shanghai, China, pp. 752-760.

[C12] Rodrigo Savage, Senthilkumar T. Rajavel and Ali Akoglu, "WL-Emap: Wirelength prediction based technology mapping for FPGAs," *IEEE Southern Conference on Programmable Logic, SPL 2012*, Bento Gonçalves, Brazil, Mar. 20-23, 2012, pp. 1-6.

[C13] Senthilkumar T. Rajavel and Ali Akoglu, "An analytical energy model to accelerate FPGA logic architecture investigation," *IEEE Int. Conference on Field-Programmable Technology, FPT* 2011, New Delhi, India, Dec. 12-14, 2011, pp. 1-8.

[C14] Yoon Kah Leow, Ali Akoglu, Ibrahim Guven and Erdogan Madenci, "High performance linear equation solver using NVIDIA graphical processing units," *IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS)*, San Diego, CA, Jun. 6-9, 2011, pp. 367-374.

[C15] Travis Hoffman, Jerzy Rozenblit, Ali Akoglu, and Liana Suantak, "Queral networks: toward an approach for engineering large artificial neural networks," *IEEE Int. Conference and Workshops on Engineering of Computer-Based Systems (ECBS)*, Las Vegas, NV, Apr. 27-29, 2011, pp. 81-88.

[C16] Senthilkumar T. Rajavel and Ali Akoglu, "MO-Pack: Many-objective clustering for FPGA CAD," *Proc. ACM/EDAC/IEEE Design Automation Conference (DAC)*, San Diego, CA, Jun. 5-10, 2011, pp. 818-823.

[C17] Adarsha Sreeramareddy, Ramachandra Kallam, Aravind R. Dasu, and Ali Akoglu, "Self-configurable architecture for reusable systems with accelerated relocation circuit (SCARS-ARC)," *Proc. IEEE International Symposium on Parallel and Distributed Processing (IPDPS) Workshops, Reconfigurable Architectures Workshop (RAW)*, Atlanta, GA, Apr. 19-20, 2010, pp. 1-4.

[C18] David Story, Murat Kacira, Chieri Kubota, and Ali Akoglu, "Morphological and textural plant feature detection using machine vision for intelligent plant health, growth and quality monitoring," *Proc. International Society for Horticultural Science, Acta Hort. (ISHS)*, 2011, vol. 893, pp. 299-306.

[C19] Arjun Hary, Ali Akoglu, Youssif Al-Nashif, Salim Hariri, and Darrel Jenerette, "Design and evaluation of a self-healing Kepler for scientific workflows," *Proc. ACM International Symposium on High Performance Distributed Computing (HPDC)*, Chicago, IL, Jun. 20-25, 2010, pp. 340-343.

[C20] Gregory M. Striemer and Ali Akoglu, "An adaptable low density parity check (LDPC) engine for space based communication systems," *Proc. IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS)*, Anaheim, CA, Jun. 15-18, 2010, pp. 105-112. doi: 10.1109/AHS.2010.5546275

[C21] Yang Song, Gregory M. Striemer, and Ali Akoglu, "Performance analysis of IBM cell broadband engine on sequence alignment," *Proc. IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS)*, San Francisco, CA, Jul. 29-Aug. 1, 2009, pp. 439-446. doi: 10.1109/AHS.2009

[C22] Chad Rossmeissl, Adarsha Sreeramareddy, and Ali Akoglu, "Partial bitstream 2-D core relocation for reconfigurable architectures," *Proc. IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS)*, San Francisco, CA, Jul. 29-Aug. 1, 2009, pp. 98-105, 2009. doi: 10.1109/AHS.2009.41

[C23] Gregory M. Streimer, and Ali Akoglu, "Sequence alignment with GPU: performance and design challenges," *Proc. 23rd IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, Rome, Italy, May 25-29, 2009, pp. 1-10.doi: 10.1109/IPDPS.2009.5161066

[C24] Yang Song, Jeffrey A. Rudin, and Ali Akoglu, "Parallel implementation of irregular terrain model on IBM cell broadband engine," *Proc. IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, Rome, Italy, May 25-29, 2009, pp. 1-7.doi: 10.1109/IPDPS.2009.5161051

[C25] Yaser Jararweh, Arjun Hary, Youssif B. Al-Nashif, Salim Hariri, Ali Akoglu, and Darrel Jenerette, "Accelerated discovery through integration of Kepler with data turbine for ecosystem research," *Proc. 7th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA)*, Rabat, Morocco, May 10-13, 2009, pp. 1005-1012.doi: 10.1109/AICCSA.2009.5069454

[C26] Hanyu Liu and Ali Akoglu, "T-NDPack: timing-driven non-uniform depopulation based clustering," *Proc. 2009 5th IEEE Southern Conference on Programmable Logic (SPL)*, São Carlos, Brazil, Apr. 1-3, 2009, pp. 9-14. doi: http://dx.doi.org/10.1109/AICCSA.2009.5069454

[C27] Audip Pandit, Lakshmi Easwaran, and Ali Akoglu, "Concurrent timing based and routability driven depopulation technique for FPGA packing," *IEEE International Conference on Field Programmable Technology (FPT)*, Taipei, Taiwan, Dec. 7-10, 2008, pp. 325-328.

[C28] David Story, Murat Kacira, Ali Akoglu and Chieri Kubota, "A machine vision guided system for plant health and growth monitoring in controlled environment agriculture production," presented at the *ISHS International Workshop on Greenhouse Environmental Control and Crop Production in Semi-Grid Regions*, Tucson, AZ, Oct. 20-24, 2008.

[C29] Sandeep Venishetti and Ali Akoglu, "Highly parallel FPGA based IEEE-754 compliant double-precision floating-point division," *Proc. 2008 International Conference on Engineering of Reconfigurable Systems & Algorithms (ERSA)*, Jul. 14-17, 2008, Las Vegas, NV, CSREA Press, pp. 159-165.

[C30] Adarsha Sreeramareddy, Jeff G. Josiah, Ali Akoglu, and Adrian Stoica, "SCARS: Scalable self-configurable architecture for reusable space systems," *Proc. IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS)*, June 22-25, 2008, Noordwijk, Netherlands, pp. 204-210.

[C31] Deepak Sreedharan and Ali Akoglu, "A hybrid processing element based reconfigurable architecture for hashing algorithms," *Proc. 22nd IEEE International Symposium on Parallel and Distributed Processing (IPDPS) Workshops, Reconfigurable Architectures Workshop (RAW)*, Miami, FL, Apr. 14-18, 2008, 8 pages. doi: 10.1109/IPDPS.2008.4536527

[C32] Ruchika Verma and Ali Akoglu, "A coarse grained and hybrid reconfigurable architecture with flexible noc router for variable block size motion estimation," *Proc. 22nd IEEE International*

Symposium on Parallel and Distributed Processing (IPDPS) Workshops, Reconfigurable Architectures Workshop (RAW), Miami, FL, Apr. 14-18, 2008, 8 pages.
doi: 10.1109/IPDPS.2008.4536528

[C33] Sandeep Venishetti and Ali Akoglu, "A highly parallel FPGA based IEEE-754 compliant double-precision binary floating-point multiplication algorithm," *Proc. IEEE International Conference on Field Programmable Technology (FPT)*, Kitakyushu, Japan, Dec. 12-14, 2007, pp. 145-152.

[C34] Audip Pandit and Ali Akoglu, "Net length based routability driven packing," *Proc. IEEE International Conference on Field-Programmable Technology (FPT)*, Kitakyushu, Japan, Dec. 12-14, 2007, pp. 225-232, 2007.

[C35] Ruchika Verma and Ali Akoglu, "A coarse grained reconfigurable architecture for variable size block motion estimation," *Proc. IEEE International Conference on Field-Programmable Technology (FPT)*, Kitakyushu, Japan, Dec. 12-14, 2007, pp. 81-88, 2007.

[C36] Audip Pandit and Ali Akoglu, "Wirelength prediction for FPGAs," *Proc. 17th International Conference on Field Programmable Logic and Applications (FPL)*, Amsterdam, Netherlands, Aug. 27-29, 2007, pp. 749-752.

[C37] Sandeep Venishetti, Ali Akoglu, and Rahul Kalra, "Hierarchical built-in self-testing and FPGA based healing methodology for system-on-a-chip," *Proc. IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS 2007)*, Aug. 5-8, 2007, University of Edinburgh, Scotland, United Kingdom, pp. 717-724.

[C38] David Montgomery and Ali Akoglu, "Methodology and toolset for ASIP design and development targeting cryptography-based applications," *Proc. IEEE International Conference on Application–Specific Systems, Architectures and Processors (ASAP)*, Montréal, Québec, Canada, Jul. 8-11, 2007, pp. 365-370.

[C39] *Ali Akoglu and Sethuraman Panchanathan, "Application specific reconfigurable architecture design methodology," *Proc. 2005 International Conference on Engineering of Reconfigurable Systems and Algorithms (ERSA)*, Las Vegas, NV, Jun. 27-30, 2005, pp. 247-250.

[C40] *Ali Akoglu, Bhagat Janarthanan, Karthik Vaithianathan, and Atul Kwatra, "Platform performance analysis on networking applications," Intel Design, Test, and Technology Conference (DTTC), DTTC Online Journal, Aug. 2005, 8 pages.

[C41] *Ali Akoglu, Aravind Dasu, and Sethuraman Panchanathan, "Application specific hybrid-FPGA design," *Proc. SPIE IS&T/SPIE17th Symposium, Electronic Imaging Science and Technology*, San Jose, CA, Jan. 16-20, 2005, vol. 5683, pp. 21-31, 2005.

[C42] *Aravind Dasu, Ali Akoglu, and Sethuraman Panchanathan, "Cluster extraction for hybrid FPGA architecture in computation intensive applications," *Proc. International Conference on Engineering of Reconfigurable Systems and Algorithms (ERSA)*, Las Vegas, NV, Jun. 2004.

[C43] *Ali Akoglu, Aravind Dasu, and Sethuraman Panchanathan, "A framework for design of heterogeneous hierarchical routing architecture of a dynamically reconfigurable application specific media processor," *Workshop on Embedded Systems for Media Processing, International Conference High Performance Computing (HiPC)*, Hyderabad, India, Dec.17, 2003.

[C44] *Aravind Dasu, Ali Akoglu, and Sethuraman Panchanathan, "Analysis tool set for reconfigurable media processing," *Proc. International Conference on Engineering of Reconfigurable Systems and Algorithms (ERSA)*, Las Vegas, NV, Jun. 2003.

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* indicates publication substantially based on work done as a graduate student.

[C45] *Ali Akoglu, Aravind Dasu, Aravind Sudarsanam, Mayur Srinivasan, and Sethuraman Panchanathan, "Pattern recognition tool to detect reconfigurable patterns in MPEG4 video processing," *Proc.16h International Symposium on Parallel and Distributed Processing (IPDPS)*, Ft. Lauderdale, FL, Apr. 15-19, 2002, pp.131-135.

Disclosures/Patents

[D1] Ali Akoglu, Scott Marshall, "High Speed Multiple Communication Signal Classification Algorithm and Model", Invention of Authorship Disclosure filed to Office of Technology Transfer, UA17-106, 2016.

[D2] Aravind Dasu Ali Akoglu, Aravind Sudarsanam, and Sethuraman Panchanathan, "Reconfigurable processing" U.S. patent number US 8,281,297 B2, Date: Oct. 2, 2012.

[D3] Ali Akoglu and Gregory Streimer, "TCR Repertoire Modeling Through GPU-Based In-Silico DNA Recombination," Invention of Authorship Disclosure and provisional patent application filed to Office of Technology Transfer, UA12-106, 2012.

[D4] Peter Bailey, Gregory Streimer David Lowenthal, Ali Akoglu, "Quantitative Traint Locus Analysis Using a Partitioned Linear Model on a GPU Cluster," Invention of Authorship Disclosure and provisional patent application filed to Office of Technology Transfer, UA12-103, 2012.

[D5] Ali Akoglu and Gregory Streimer, "Software code for scalable and highly parallel implementation of Smith-Waterman," Invention of Authorship Disclosure and provisional patent application filed to Office of Technology Transfer, UA09-063 and UA09-064, 2009.

[D6] Ali Akoglu and Yang Song, "Parallel implementation of irregular terrain model on NVIDIA graphics processing units," Authorship Disclosure filed to Office of Technology Transfer, UA10-036, 2010.

[D7] Ali Akoglu and Yang Song, "Parallel implementation of irregular terrain model on NVIDIA graphic processing units," Software Demonstration Agreement, by and between The Arizona Board of Regents on Behalf of The University of Arizona and Keybridge Global LLC on UA10-036, 2010.

Workshops / Seminars/Lectures

[W1] Ali Akoglu, "Modeling for FPGA Architectures, and Parallelizing Applications for FPGA and GPU based Computing," ETIS Laboratory - ASTRE Team, University of Cergy-Pontoise, Cergy Cedex, France (Video Conference), Nov 17, 2016.

[W2] Ali Akoglu, "GPU:Under the Hood," Guest Lecture, University of Arizona, ECE677-Distributed Computing, Oct 24, 2016

[W3] Nilangshu Bidyanta, Ali Akoglu, "RealTime GPU Based Video Segmentation with Depth Information," NVIDIA GPU Technology Conference, San Jose, CA, March 17-20, 2015.

[W4] Under the Hood FPGAs and GPUs, Invited Speaker, UNAM, Mexico City, Mexico, September 2013

[W5] Cihan Tunc, Farah Farjo, Salim Hariri, Ali Akoglu, "Autonomic Cloud Management Services (ACMS)," NSF Center for Autonomic Computing Semiannual Meeting, Mississippi State University, MS, Dec. 10-11, 2012.

[W6] Venkata Krishna N, Shafiul Islam, Salim Hariri, Ali Akoglu, Steve Delong, "Cyber-Physical System for Biosphere 2 Landscape Evolution Observatory Testbed," NSF Center for Autonomic Computing Semiannual Meeting, Gainesville, FL, Apr. 5-6, 2012.

[W7] Ali Akoglu, "Wirelength Prediction and Modeling," Lattice Semiconductors, San Jose, CA, May 16, 2012

[W8] Ali Akoglu, "Self-configurable architecture for reusable systems (SCARS)," Honeywell Aerospace Visit, College of Engineering, University of Arizona, Tucson, AZ, Apr. 19, 2011.

[W9] Salim Hariri, Youssif Al-Nashif, Ali Akoglu, Zhitao Li, Farah Alfay, and Shafiul Islam, "Autonomic scale provisioning in large scale data centers," NSF Center for Autonomic Computing Semiannual Meeting, Dallas, TX, Apr. 5-6, 2011.

[W10] Venkata Krishna Nimmagadda, Shafiul Islam, Salim Hariri, Ali Akoglu, and Steve Delong, "Autonomic cyber physical system," NSF Center for Autonomic Computing Semiannual Meeting, Dallas, TX, Apr. 5-6, 2011.

[W11] Arjun Hary, Ali Akoglu, Youssif Al-Nashif, Salim Hariri, and Darrel Jenerette, "Design and evaluation of a self-healing Kepler for scientific workflows," NSF Center for Autonomic Computing Semiannual Meeting, University of Florida, Gainesville, FL, Oct. 4, 2010.

[W12] Gregory M. Striemer, Ali Akoglu, David Lowenthal, Peter Bradbury, Liya Wang, Matthew Vaughn, and Stephen Goff, "Relating genotypes to phenotypes in complex environments: generalized linear model (GLM) based quantitative trait locus (QTL) analysis," NVIDIA GPU Technology Conference, San Jose, CA, Oct. 20-23, 2010.

[W13] iPlant Collaborative inaugural conference "Bringing Plant and Computing Scientists Together to Solve Grand Challenges", 2010

[W14] David Story, Murat Kacira, Chieri Kubota, and Ali Akoglu, "Morphological and textural plant feature detection using machine vision for intelligent plant health, growth and quality monitoring," International Symposium on High Technology for Greenhouse System (GreenSys), Quebec, Canada, Jun. 13-18, 2009.

Non peer-Reviewed Publications

[NP1] AZ PBS, October 25, 2016, Mapping the Human Immune System
http://www.azpbs.org/arizonahorizon/play.php?vidId=9639

[NP2] The Daily Wildcat, October 20, 2016, UA collaboration leads to immune system mapping
http://www.wildcat.arizona.edu/article/2016/10/ua-collaboration-leads-to-immune-system-mapping

[NP3] UA News, Sept 28, 2016 "Grand Challenge: Mapping the Human Immune System"
https://uanews.arizona.edu/story/grand-challenge-mapping-human-immune-system

[NP4] CYVERSE News, Sept. 28, 2016 "Mapping The Human Immune System"
http://www.cyverse.org/news/mapping-human-immune-system

[NP5] Gregory M. Striemer, Ali Akoglu, and Murat Kacira, "A Node and network level self-healing distributed wireless sensor architecture for greenhouse based plant monitoring systems," *Annual International Meeting of American Society for Agricultural and Biological Engineers (ASABE)*, Pittsburgh, PA, Jun. 20-23, 2010.

[NP6] David Story, Murat Kacira, Chieri Kubota, and Ali Akoglu, "Autonomous plant health/growth monitoring with machine vision in controlled environments," *Annual International Meeting of American Society of Agricultural and Biological Engineers (ASABE)*, Reno, NV, Jun. 21-24, 2009.

[NP7] David Montgomery and Ali Akoglu, "Cryptographic instruction set processor design," Information Security and Cryptology Conference, Ankara, Turkey, Dec. 13-14, 2007.

[NP8] Ali Akoglu, Sonia Vohnout, and Justin Judkins, "FPGA based fault detection, isolation and healing for integrated vehicle health management," Association for the Advancement of Artificial Intelligence (AAAI) Fall Symposium on Artificial Intelligence for Prognostics, AAAI Press FS-07-02, Arlington, VA, Nov. 8-11, 2007.

[NP9] *Ali Akoglu, Aravind Dasu, and Sethuraman Panchanathan, "Design of fast and efficient hybrid-FPGAs for numerically intensive applications," 7th Annual Military and Aerospace Programmable Logic Devices (MAPLD) International Conference, Washington, D.C., Sept. 2004.

Work Submitted for Review in Peer-Reviewed Publications

[WP1] Burak Unal, Fakhreddine Ghaffari, Ali Akoglu, Bane Vasic, "Analysis and Implementation of Resource Efficient Probabilistic LDPC Decoder: Trade-offs Between the Decoding Performance and Hardware Performance," IEEE International Symposium on Circuits and Systems (ISCAS), May 28-31, 2017, Baltimore, MD

[WP2] Dylan Machovec,_, Bhavesh Khemka, Nirmal Kumbhare, Sudeep Pasricha Anthony A. Maciejewski, Howard Jay Siegel, Ali Akoglu, Gregory A. Koenig, Salim Hariri, Cihan Tunc, Michael Wright, Marcia Hilton, Rajendra Rambharos, Christopher Blandin, Farah Fargo, Ahmed Louri, Neena Imam, "Utility-Based Resource Management in an Oversubscribed Energy-Constrained Heterogeneous Environment Executing Parallel Applications," Journal of Parallel Computing

[WP3] Arpit Soni, Yoon Kah Leow, Ali Akoglu, "Post-Routing Analytical Wirelength Model for Homogeneous FPGA," ACM Transactions on Reconfigurable Technology and Systems Architectures

GRANTS AND CONTRACTS

Federal

[G1] Project/Proposal Title: NSF Industry/University Cooperative Research Center for Cloud and Autonomic Computing - Phase II
Source of Support: NSF
Total Award Amount: $500,000
Period Covered: 8/1/2016 – 7/31/2021
Role: CoPI
PI: Salim Hariri
Award Credit: 30%

[G2] Project Title: GPU Based 3D Heart Simulation for Chronic Heart Failure Analysis
Source of Support: Avirtek Corporation
Total Award Amount: $21,250 (Total Direct Cost)
Period Covered: 9/01/2016 – 5/31/2017
Role: PI
Award Credit: 100%

[G3] Project/Proposal Title: High-Speed, Reconfigurable SIGINT (HiReS) System for Large Time-Bandwidth Product
Source of Support: SBIR, Phase2, Office of Naval Research
Total Award Amount: $225,470
Period Covered: 10/01/2015 – 09/30/2017
Role: PI
Award Credit: 100%

[G4] Project/Proposal Title: Impact of CMV Upon T-Cell Aging and Immune Defense
Source of Support: NIH, National Institute on Aging
Total Award Amount: $2,313,124
Period Covered: 07/15/2014 – 04/30/2019
Role: CoPI
Award Credit: 1%

[G5] Project/Proposal Title: High-Speed, Reconfigurable SIGINT (HiReS) System for Large Time-Bandwidth Product
Source of Support: SBIR, Phase1, Office of Naval Research
Total Award Amount: $45,000
Period Covered: 05/24/2014 – 10/14/2015
Role: PI
Percent Effort: 100%

[G6] Project/Proposal Title: Cybersecurity Collaboratory
Source of Support: French American Cultural Exchange Program, Partner University Fund
Total Award Amount: $108,000
Period Covered: 9/1/2012 – 5/31/2017
Role: CoPI
PIs: Salim Hariri, Jerzy Rozenblit
Award Credit: 33%

[G7] Project/Proposal Title: NSF Center for Autonomic Computing
Source of Support: NSF

Total Award Amount: $324,000
Period Covered: 8/22/2011 – 12/31/2015
Role: CoPI, with project oversight during lead PI sabbatical
PI: Salim Hariri
Award Credit: 8.3%

[G8] Project/Proposal Title: Genotype-to-Phenotype Grand Challenge (iPG2P), Phase 3
Source of Support: iPlant Collaborative
Total Award Amount: $239,638 (Total Direct Cost)
Period Covered: 01/24/2010 – 05/14/2015
Role: PI
Award Credit: 100%

[G9] Project/Proposal Title: IIP: Collaborative Research: Unified Cloud Computing and Management
Source of Support: NSF
Total Award Amount: $50,000 (University of Arizona's share)
Period Covered: 08/15/2011-07/31/2012
Role: PI
Co-PIs: Salim Hariri (University of Arizona), Dario Pompili (Rutgers, The State University of New Jersey), Iona Banicescu (Mississippi State University), Jose A. Fortes (University of Florida)
Award Credit: 50%

[G10] Project/Proposal Title: Algorithm Development for GPU-Based Computing Architectures
Source of Support: Air Force (STTR Phase-I)
Total Award Amount: $50,000
Period Covered: 9/1/2010 – 5/1/2011
Role: PI
Award Credit: 100%

[G11] Project/Proposal Title: Generalized Linear Model on GPUs
Genotype-to-Phenotype Grand Challenge (iPG2P)
Source of Support: iPlant Collaborative
Total Award Amount: $60,980 (Total Direct Cost)
Period Covered: 12/15/2009 – 12/14/2010
Role: PI
Award Credit: 100%

[G12] Project/Proposal Title: Asymmetric Threat Response and Analysis Program (ATRAP) IV
Source of Support: US Army Battle Command Battle Lab
Total Award Amount: $1,790,664
Period Covered: 9/1/2010 – 8/31/2011
Role: Co-PI
PIs: Jerzy Rozenblit, Sudha Ram, Srinivasan Ramasubramanian, Ferenc Szidarovszky, Jonathan Sprinkle, Ali Akoglu
Award Credit: 2%

[G13] Project/Proposal Title: Self-Configurable Architecture for Reusable Space Systems
Source of Support: NASA, JPL Strategic University Partnership Program
Total Award Amount: $85,000
Period Covered: 9/1/2007 – 8/31/2008
Role: PI
Percent Effort: 100%

[G14] Project/Proposal Title: CELL BE Performance Analysis
Source of Support: US Army Battle Command Battle Lab-Huachuca (BCBL-H)
Total Award Amount: $384,000
Period Covered: 9/1/2007 – 8/31/2008
Role: PI
Co-PI: Jerzy Rozenblit
Award Credit: 37%

Industry

[G15] Project/Proposal Title: GPU Based TCR Analysis – CUDA Teaching Center
Source of Support: NVIDIA (Tesla K40 and Titan X GPUs)
Total Award Amount: $6,699
Period Covered: 5/19/2016
Role: PI
Percent Effort: 100%

[G16] Project/Proposal Title: Xilinx Virtex707 and 10 Nexys4 FPGAs for Digital Logic Class
Source of Support: Xilinx University Program
Total Award Amount: $6,695
Period Covered: 4/13/2016
Role: PI
Percent Effort: 100%

[G17] Project/Proposal Title: FPGA Boards and Xilinx ISE System Edition (x25 licenses)
Source of Support: Xilinx University Program
Total Award Amount: $3,749
Period Covered: 11/16/2015 – 11/15/2016
Role: PI
Percent Effort: 100%

[G18] Project/Proposal Title: FPGA Boards and Xilinx ISE System Edition (x25 licenses)
Source of Support: Xilinx University Program
Total Award Amount: $6,457
Period Covered: 4/15/2014 – 4/14/2015
Role: PI
Percent Effort: 100%

[G19] Project/Proposal Title: GPU Based Video Encryption and Processing
Source of Support: Futurewei Technologies, Inc.
Total Award Amount: $40,000
Period Covered: 4/15/2012 – 9/30/2013
Role: PI
Percent Effort: 100%

[G20] Project/Proposal Title: Benchmarking on GPUs
Source of Support: NVIDIA
Total Award Amount: $3,999
Period Covered: 4/1/2011

Role: PI
Percent Effort: 100%

[G21] Project/Proposal Title: CUDA Teaching Center Award
Source of Support: NVIDIA **(Education Grant)**
Total Award Amount: $25,485 (Hardware and Cash)
Period Covered: 8/1/2011 – 12/30/2014
Role: PI
Percent Effort: 100%

[G22] Project/Proposal Title: FPGA Boards and Xilinx ISE System Edition (x25 licenses)
Source of Support: Xilinx University Program
Total Award Amount: $26,465
Period Covered: 2/15/2010 – 2/14/2011
Role: PI
Percent Effort: 100%

[G23] Project/Proposal Title: NVIDIA Faculty Collaboration
Source of Support: NVIDIA
Total Award Amount: $3,000
Period Covered: 4/2/2009
Role: PI
Percent Effort: 100%

[G24] Project/Proposal Title: Multicore Training (15 Quad Core Computers + Software Licenses)
Source of Support: Intel Corporation, **(Education Grant)** Intel Multi-core University Program
Total Award Amount: $57,215
Period Covered: 8/15/2007 – 8/14/2008
Role: PI
Percent Effort: 100%

[G25] Project/Proposal Title: FPGA boards and synthesis/verification tools
Source of Support: Xilinx University Program
Total Award Amount: $7,758
Period Covered: 4/1/2005 – 6/30/2006
Role: PI
Percent Effort: 100%

[G26] Project/Proposal Title: Xilinx University Program (10 Spartan3 FPGAs)
Source of Support: Xilinx **(Education Grant)**
Total Award Amount: $990
Period Covered: 4/1/2005
Role: PI
Percent Effort: 100%

State

[G27] Project/Proposal Title: Demonstration of the 1T pixel-angle/sec Bandwidth Angular Spatial Light Modulator (ASLM) for Wide Field of View Optical Surveillance and Situation Awareness
Source of Support: University of Arizona, Research Advancement Grants, Category 2: Undergraduate/Graduate Interdisciplinary "LINK" Team Award

	Total Award Amount:	$34,771 (Total Direct Cost)
	Period Covered:	1/1/2017 – 5/30/2017
	Role:	CoPI
	Percent Effort:	50%
[G28]	Project/Proposal Title:	Digital Design Curriculum Development
	Source of Support:	University of Arizona Foundation
	Total Award Amount:	$20,000
	Period Covered:	5/31/2016 – 5/30/2017
	Role:	PI
	Percent Effort:	100%
[G29]	Project/Proposal Title:	Compressed Sensing Based Image Reconstruction on Reconfigurable Architectures
	Source of Support:	University of Arizona, Faculty Small Grants Program
	Total Award Amount:	$9,205
	Period Covered:	8/15/2007 – 8/14/2008
	Role:	PI
	Percent Effort:	100%
[G30]	Project/Proposal Title:	Markov Chain Based Isolation with Migration simulations on Field Programmable Gate Array Architectures
	Source of Support:	University of Arizona, IT-Bioscience Program
	Total Award Amount:	$8,000
	Period Covered:	5/15/2006 – 8/14/2006
	Role:	PI
	Percent Effort:	100%

HONORS AND AWARDS

2005	**Arizona State University**, Tempe, AZ Graduate College Award for Tuition
2000 – 2004	**Arizona State University**, Tempe, AZ Out-of-State Tuition Scholarship
March 2004	**Arizona State University**, Tempe, AZ One of four students to represent Arizona State University at Intel Foundation Fellowship Competition
1995 – 1998	**Turkish Ministry of National Education** Fellowship throughout undergraduate education at Purdue University (Ranked 76th among 800,000 high school graduates in nationwide exam in 1994)

SERVICE / OUTREACH

Local/State Outreach

Organizations

Member, BIO5 Institute
2005 – Present

Member, iPlant Collaborative
2008 – Present

Research Co-Director, NSF Center for Autonomic Computing (NSF-CAC),
2010 – 2011

Center Co-Director, NSF Center for Autonomic Computing (NSF-CAC),
2011– Present

National/International Outreach

Organizations

Member, Institute of Electrical and Electronics Engineers (IEEE)
2005 – Present

Editorial

Computers and Electrical Engineering
2012

Cluster Computing

2015

Conference Organization

Tracks Co-Chair
International Conference on Reconfigurable Computing and FPGAs (ReConFig)
Cancun, Mexico, 2011 and 2012

Publicity Co-Chair
International Conference on Field Programmable Technology (FPT)
Sydney, Australia, 2009

Session Chair, Session 2: Arithmetic
IEEE International Conference on Field Programmable Technology (FPT)
Taipei, Taiwan, 2008

Program Co-Chair
International Conference on Pervasive Services (ICPS)
Istanbul, Turkey, 2007

Technical Program Committee

IEEE International Conference on Field Programmable Technology (FPT)
Member, 2008 – Present

IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS)
Member, 2009 – Present

IEEE Southern Programmable Logic Conference (SPL)
Member, 2009 – Present

IEEE Reconfigurable Architectures Workshop (RAW)
Member, 2009 – Present

International Workshop on Highly Efficient Accelerators and Reconfigurable Technologies (HEART)
Member, 2011- Present

ACM Student Research Competition at Design Automation Conference (SRC-DAC)
Member, 2011

International Conference on Reconfigurable Computing (ReConFig)
Member, 2009 – 2010

IEEE International Conference on Pervasive Services (ICPS)
Member, 2008 – 2009

IEEE, Signal Processing, Communication and Applications Conference
Member, 2008 – 2009

Information Security and Cryptography Conference (ISCC)
Member, 2008

Reviewer

IEEE Data Compression Conference (DCC)
2008 – 2010

International Workshop on Advances in Multimedia Information Systems
2005

Referee

IEEE Internet of Things Journal

ACM Transactions on Reconfigurable Technology and Systems

IEEE/ACM Transactions on Computational Biology and Bioinformatics

IEEE Transactions on VLSI

IEEE Transactions on Computers
IEEE Transactions on Circuits and Systems for Video Technology
IEEE Transactions on Parallel and Distributed Systems
IEEE Design & Test of Computers
IEEE Software
IEEE Computer Architecture Letters
ACM Transactions on Design Automation of Electronic Systems
Cluster Computing
Journal of Supercomputing
International Journal of Embedded Systems
International Journal of Reconfigurable Computing
Computers & Electrical Engineering
Parallel Computing
International Journal of Computers and Applications
Journal of Circuits, Systems, and Computers

Panel Functions

Panelist, National Science Foundation

Graduate Research Fellowship Program, 2015
Computer and Information Science and Engineering, January 2011

Departmental Committees

Electrical and Computer Engineering		
	Faculty Search Committee	2015
	Graduate Studies Committee	2015-2016
	Undergraduate Studies Committee	2014 – 2015
	CE Lecturer Search Committee	2013
	Graduate Studies Committee	2011 – 2013
	Undergraduate Studies Committee	2009 – 2010
	Undergraduate Recruiting and Awards Committee	2007 – 2009
	Computer Engineering Curriculum Sub-Committee	2008
	Undergraduate Portfolio Assessment Committee	2006 – 2008
	Graduate Studies Committee	2006 – 2007

University Committees

University of Arizona

UA Research Computing Governance Policies subcommittee	2013 – 2016
Technical Advisory Panel for new GPU-enabled Cluster	2012 – 2013
High Performance Computing (HPC) Policy and Allocation Advisory Committee	2008 – 2010
Faculty Small Grants Program Proposal Review Committee	2008
Replacement of University Supercomputer Proposal Evaluation Committee	2006

Other Committees

Electrical and Computer Engineering

Distinguished Speaker Seminar Series Co-Organizer	2005 – 2007
Committees other than as advisor	2005 – Present

- Dissertation (22)
- Master of Science (35)
- Master of Engineering (1)
- Comprehensive Exam (Oral, Written) (27)

INDIVIDUAL STUDENT CONTACT

Advising

Graduate Advisee	Program	Status	Currently
Arpit D. Soni	M.S.	Completed, Spring 2016	
Benjie Tong	M.S.	Completed, Spring 2015	@Cornell U., Graduate
Cihan Tunc	Ph.D.	Completed, Fall 2014	@Avirtek
Nilangshu Bidyanta	M.S.	Completed, Fall 2014	@Verizon
Yoon Kah Leow	Ph.D.	Completed, Fall 2013	@Synopsys
Burak Unal	M.S.	Completed, Summer 2013	Ph.D. Program
Gregory Streimer	Ph.D.	Completed, Spring 2013	@US Government
Janhavi Sabnis	M.S.	Completed, Spring 2011	@Intel
Senthilkumar T. Rajavel	M.S.	Completed, Spring 2011	@Synopsys
Yang Song	Ph.D.	Completed, Spring 2011	@Nvidia
Lakshmi Easwaran	M.S.	Completed, Spring 2010	@Intel
Arjun Hary	M.S.	Completed, Spring 2010	@Intel
Gregory M. Striemer	M.S	Completed, Spring 2010	@Government Lab
Adarsha Sreeramareddy	M.S.	Completed, Fall 2009	@Indigo Quotient Labs
Hanyu Liu	M.S.	Completed, Fall 2009	@DataDomain
Ruchika Verma	M.S.	Completed, Spring 2009	@TRX Systems
Deepak Sreedharan	M.S.	Completed, Spring 2008	@Texas Instruments
Sandeep Venishetti	M.S.	Completed, Fall 2007	@Intel

Audip Pandit	M.S.	Completed, Fall 2007	@Intel
Burak Unal	Ph.D.	Expected graduation Spring 2016	
John Mixter	Ph.D.	Expected graduation Spring 2017	
Nirmal Kumbhare	Ph.D.	Expected graduation Spring 2018	
Elnaz Tavakoli Yazdi	M.S.	Expected graduation Spring 2018	