

A Profile Summary

Highly motivated and skilled computer engineer with strong interpersonal skills and a demonstrated ability for scholarly work and problem solving in academic and industrial environments.

B Educational Background

Dec 2009 Ph.D. in Electrical and Computer Engineering



Colorado State University, Fort Collins, CO. Dissertation: “Rapid Early Design Space Exploration Using Legacy Design Data, Technology Scaling Trend And In-Situ Macro Models”

May 2005 M.S. in Electrical and Computer Engineering



Colorado State University, Fort Collins, CO. Thesis: “Truly CMOS Compatible Wave-Guide Based On-Chip Optical Clock Distribution And Recovery”

Apr 2001 B.E. in Electrical and Electronics Engineering



Bharathiar/Anna University, Coimbatore, India. Project: “Simulation of Serial EPROM Compatible with I^2C Bus”

C Teaching History

Jan 2026 – Present ✖ Program Director, MSADS, University of St. Thomas (TX)

Jun 2023 – Present ✖ Associate Professor, University of St. Thomas (TX)

Aug 2020 – May 2023 ✖ Assistant Professor, University of St. Thomas (TX)

- COMSC 1451: Object Oriented Programming – A sophomore level course that introduces the concept of object oriented programming basics in Java language.
- COMSC 2351: Data Structures – A junior level course focusing on data structures for computations, types, needs, features and basics of algorithmic complexity.
- COMSC 4340: Computer Networks – A junior level course focusing on data transmission in computer networks, a historical view of networking leading up to 5G technology.
- COMSC 3385: Computer Architecture - A junior level introduction to logic design, computer organization, instruction set architecture and micro-architecture.
- COMSC 4393: A Special Projects - Upper-division treatment of selected topics in IoT, home and industrial automation.
- COMSC 4350: System Development Project - Upper-division project in networking, hardware setup, webserver installation, operation and maintenance of a webserver.
- ENGR 2410: Digital Design - A sophomore level introduction to design and analysis of digital circuits.
- ENGR 3330: Electronics I - A sophomore level introduction to design and analysis of electronic components and circuits.

- ENGR 3331: Electronics II - A junior level introduction to advanced topics in electronic systems and circuits design.
- ENGR 3336: Robotics - A junior level course introducing the computational, sensors and electrical aspects, and kinematics of robots.
- ENGR 4392: Independent Study: Upper-division treatment of selected topics in smart grid, networking, data communication, protocols, relays, actuators, breakers and grid resilience.
- MSDS 5X01: Programming for Data Science – A graduate level practical hands on course dealing with the use of Python for data processing application.

Aug 2014 – July 2020 ✚ Assistant Professor of Engineering, Roger Williams University

- ENGR270: Digital Systems Design and laboratory – A sophomore/junior level class introducing digital gates, logic design, HDL and CMOS technology. Laboratory experiments designed around Logisim and ModelSim software tools.
- ENGR260: Engineering Electronics and laboratory – A sophomore/junior level class introducing analog electronic devices, circuit design, small and large signal analysis, frequency response, circuit stability and SPICE circuit analysis using the LTSpice tool.
- ENGR370: Microprocessors – A junior/senior level class describing the design of a microprocessor/microcontroller based system and deeply embedded digital systems. Experimental designs using Arduino and or Rasperry Ri 3.
- ENGR470: VLSI System Design - A junior/senior level class introducing physical design, manufacturing and testing of VLSI systems and in class practical studio sessions using the open source LASI tool.
- ENGR335: Engineering Economics – A junior/senior year class introducing financial, cost and market considerations into engineering design and practice.
- ENGR340: Sustainable energy systems – A junior/senior year class detailing the design of wind, hydro and photovoltaic energy generation systems.
- ENGR240: Circuit Theory and laboratory – A sophomore/junior level class introducing the basic circuit elements, circuit laws, AC & DC circuit analysis, transient circuit analysis and electrical machine fundamentals. Laboratory experiments designed to be manual work bench exercises.
- ENGR110: Engineering Graphics and Design – A first year engineering class introducing principles of engineering design, drawing using SolidWorks and machine shop practice.

Jun 2009 – Aug 2010 ✚ Visiting Asst Prof of Engineering, Harvey Mudd College

- E85: Digital Electronics and Computer Architecture - A sophomore/junior level class introducing digital logic design, HDL, CMOS and computer architecture.
- E168A: Understanding power systems and smart grids - A special topics senior technical elective course aimed at enlightening students on the engineering challenges and issues pertaining to power systems and smart grids, with a special focus on alternative and renewable energy sources.

Jan 2003 – Jul 2008 ✚ Instructor (Various Terms), Colorado State University

- ECE204: Introduction to Electrical Engineering - A sophomore level, introductory class introducing basic circuit elements, circuit theory, diodes, BJTs, CMOS, Boolean algebra, power generation & transmission.
- ECE575: Experiments in VLSI System Design (Teaching Assistant) - A senior/entry level graduate course on VLSI design, providing students with opportunities to step through various design stages from behavioral modeling using VHDL or Verilog and their simulation environment, to logic and circuit design, and finally to layout, DRC, LVS and design verification.
- ECE450: Digital System Design Laboratory (Teaching Assistant) - A senior level course on digital design techniques, providing students with opportunities to step through the entire design process of describing hardware using software languages, mapping it into gates and simulating the gate level design, and finally loading the schematic design onto a silicon chip to verify the functionality of the system in hardware.
- ECE471: Introduction to MOS Integrated Circuits (Teaching Assistant) - A senior level course on CMOS device physics, physical design, lithography and circuit simulation.

D Industrial Experience

Oct 2010 – Jul 2014 ✚ Senior ASIC Design/Development Engineer, LSI Corporation.

- SOC Power estimation and distribution - Owned the implementation of SOC level power distribution network, power integration of various SOC sub-systems and IPs. Owned static IR power analysis and static power signoff for SOCs.
- IC Packaging, floor-planning and IO ring development - Owned package pinout definition for SOCs. Supported RFQ for new design wins with LSI's customers.
- DRC/LVS and Tapeout Readiness - Supported DRC rule checking. Designed custom routes for critical signals (tapeout gating items) to meet IP requirements. Managed design reviews between various IP, IO and packaging teams.
- Enabled customer's design success by aiding the generation of a consolidated SOC specification for automated RTL generation.

Mar 2007 – Mar 2008 ✚ Graduate Technical Intern, Intel Corporation.

- Generated global routes for the EXE section of a microprocessor in 28 nm COMS.
- Wrote automation scripts for efficiently handling hierarchical physical design.
- Generated wire length guidelines for interconnect design and planning.
- Participated in an in-house study on transistor aging in advanced CMOS technologies.
- Performed device aging characterization and developed aging aware device sizing guidelines for circuit designers in the company.

E Research Experience

Aug 2020 – Present ✠ University of St. Thomas

- Externally funded research:

US Department of Education award - Minority Science and Engineering Improvement Program. A program for minority institutions aimed at increasing the flow of underrepresented ethnic minorities, particularly minority women, into science and engineering careers. **Role:** High school student researcher mentor.

- Externally funded research:

NSF award - celtSTEM Research Collaborative: Catapulting MSI Faculty and Students into Computational Research. A joint effort by UST and Rice University to enable collaborative research in computation and machine learning applied to DNA/RNA analysis. **Role:** Undergraduate research advisor.

- Externally funded research:

US Department of Education STEM Grant Award Number P031C160188 UST STARS Program: Support, Train, Advise, Retain, Systematize. Year 5 student research grant to design, develop and implement a portable solar power station for off-grid medical and emergency services. **Role:** Undergraduate research advisor.

- Internally funded research:

Student research funding to design, assemble and test a custom built low-cost scanning tunneling microscope (STM) with micrometer precision. **Role:** Undergraduate research advisor.

- Internally funded research:

Student research funding to assemble, test and operationalize a small mobile computational cluster based on Raspberry Pi modules for use in low-cost automobile applications. **Role:** Undergraduate research advisor.

- Internally funded research:

Student research funding to develop an athlete GPS tracking system for game time data collection, performance tracking and improving coaching effectiveness. This work is done in collaboration with Dr. Jack Follis.

Aug 2014 – July 2020 ✠ Roger Williams University

- Externally funded research:

(1) E2Sol LLC co-sponsored product design to research, develop and prototype a car-top solar energy capture and storage solution.

(2) RI Commerce Corporation's Innovation voucher recipient for 2017 to design wireless recharging systems for marine flotation solar systems.

(3) Design of a hand held near IR scanner device for detecting ocean contaminants such as toxic algae in-situ. Funded by the Rhode Island Science and Technology Advisory Council (STAC), 2016.

- Internally funded research:

Improving wind turbine efficiency through solar integration. Developed and prototyped a wind turbine design that reduces the turbine's environmental impact and improves energy availability by incorporating solar panels into the turbine design. Funding for this work is provided by the university's Foundation to Promote Scholarship and Teaching fund.

- Engineering Capstone Advisor:

- (1) Guided a senior design group to design, develop and implement a real time image based security system for automated access to secure facilities.
- (2) Advised a team of students in designing a long term electronic data logging system for residential/industrial barometric pressure measurements for improving overall HVAC system efficiency. The designed systems were delivered as planned to the external client.
- (3) Advised a team of students in designing a solar electric propulsion system for a water craft aimed at the 2016 Solar splash student competition sponsored by IEEE power electronics society.
- (4) Advised a team of students competing in the University Design Competition for Addressing Airport Needs sponsored by Airport Cooperative Research Program. Guided the design of a load cell based foot traffic energy harvesting system. A preliminary prototype was developed, further refinement of the design by subsequent student groups is expected.

Aug 2009 – Oct 2010 ✚ Harvey Mudd College

- Engineering Clinic Advisor

- (1) Advised a team of senior engineering students designing a satellite link budget analysis software tool for DIRECTV.
- (2) Advised a team of senior engineering students designing a low-noise high-speed CCD readout system for an astronomical telescope for the National Optical Astronomy Observatory.

- E-Bike Study Group Lead

Lead a team of students in designing a low cost electric drive system configuration for a drop-in replacement kit for any 26" wheeled bicycle.

Jan 2005 – Aug 2009 ✚ VLSI System Architecture Laboratory, Colorado State University.

- Research Assistant. (Advisor: Tom Chen)

- (1) Developed a modeling methodology and a design automation tool for rapid early design space exploration and design optimization of nanometer CMOS VLSI systems.
- (2) Developed a design automation tool for identifying and maximizing reusable logic cones in combinational circuits to reduce physical layout dimensions.
- (3) Investigated active clock de-skewing techniques and topologies to reduce clock skew in traditional balanced tree based clock distribution systems.
- (4) Developed a scheme for automated simulation of the power grid model for power plane integrity to guide a heuristics driven decoupling capacitance allocation.
- (5) Developed a design environment for a 350 nm CMOS process for Mentor Graphic's toolset which was used by fellow researchers to design test chips and circuitry for many applications including a lab-on-chip test chip to study nitrous oxide and GABA concentrations in brain cells.
- (6) Set up an analytical probe station for post-silicon verification test and debug.

Jan 2003 – Dec 2004 ✖ VLSI System Architecture Laboratory and Optoelectronics Laboratory, Colorado State University.

- Research Assistant. (Advisor: Tom Chen, Co-investigator: Kevin Lear)
 - (1) Developed a proof of concept design for a truly CMOS compatible edge-fired on-chip optical clock distribution network.
 - (2) Designed and fabed two prototype optoelectronic test chips in a 350 nm CMOS process to study optical clock distribution and optoelectronic clock recovery circuitry.
 - (3) Collaborated with a third party design service vendor, generating specification for designing a 48-channel probe card to probe the prototype optical test chip.

F Publication Record

F.I Refereed Journal Papers

- Thangaraj, C., “An economic case for small scale solar-wind-augmented agriculture in exurban localities”, <https://doi.org/10.12688/f1000research.127506.1>.
- Thangaraj,C.; Follis, J.L., “Ethics and faith in the metaverse afterlife”, **Being converted to be an online publication, summer 2024**.
- POTENTIALS AND CHALLENGES OF LEVERAGING BIM FOR MONITORING BUILDING OPERATION SENSOR DATA”, Omer Aslan, Issa Ramaji and Charles Thangaraj. The Buildings Journal Special Issue - BIM in Building Repair and Maintenance”, **2019**.
- A Mixed Learning Approach to Integrating Digital Signal Processing Laboratory Exercises into a Non-Lab Junior Year DSP Course, McPheron, Benjamin D.; Thangaraj, Charles V.; Thomas, Charles R., Advances in Engineering Education, v6 n1 Spr **2017**
- Thangaraj, C.; Alkan, C; Chen, T., “Rapid Design Space Exploration Using Legacy Design Data And Technology Scaling Trend”, Elsevier Integration the VLSI Journal. <http://dx.doi.org/10.1016/j.vlsi.2009.11.002>.
- Thangaraj, C.; Pownall, R.; Nikkel, P.; Yuan, G.; Lear, K.; Chen, T., “Fully CMOS-Compatible On-Chip Optical Clock Distribution & Recovery”, IEEE Transactions on Very Large Scale Integration Systems. <http://dx.doi.org/10.1109/TVLSI.2009.2024206>.
- Pownall, R.; Thangaraj, C.; Nikkel, P.; Yuan, G.; Lear, K.; Chen, T., “CMOS optoelectronic components for clock distribution”, Microelectronic Engineering, Volume 87, Issue 10, October 2010, Pages 1838-1845. <https://doi.org/10.1016/j.mee.2009.10.051>
- Yuan, G.; Pownall, R.; Nikkel, P.; Thangaraj, C.; Chen, T.; Lear, K., ”Characterization of CMOS compatible waveguide-coupled leaky-mode photodetectors,” Photonics Technology Letters, IEEE , vol.18, no.15, pp.1657-1659, Aug. 2006.

F.II Conference Papers

- “Implementing a Neural Network on a Low-Power and Mobile Cluster to Aide Drivers with Predictive AI for Traffic Behavior”, Christopher Lama, Alix Rieser, Aleksandra Molchanova, Charles Thangaraj. ICS 2023: XVII. International Conference on Supercomputing. **2023 & C. Lama - best presenter award**.
- “Mosquito virus mosaic: A Scalable Computational Workflow for Metagenomic Sequence Analysis in Mosquitoes”, Navarro, B., et. al. **2023**.

- “Motif Cluster Domains, a Sequence Signature Playing Roles in DNA Damage Response and Cell Cycle Control Pathways”, Carbajal, M., et. al. **2023**.
- “Using TinkerCAD for a hybrid undergraduate embedded systems design course”, Charles Thangaraj, International Conference on Engineering, Science and Technology (IConEST), **2022**.
- “Utilizing Transportation Infrastructure, Big Data and AI for Localized EV Energy Neutrality”, Charles Thangaraj, Eighth Annual International Energy & Sustainability Conference, **2019**.
- “Utilizing Small Scale Mobile PV to Offset Residential Grid Consumption”, Charles Thangaraj, Alexander F. Nagle, Kyle Kremzeir, Moayad Kutby, Mohammed Aldayel and Mashhor A. Alshrieef. 51st North American Power Symposium, **2019**.
- “Study of Apple Face IDs Practical Limits”, Madison Tribuna and Charles Thangaraj; IEEE Region 1 Annual Student Conference. Mar **2018**.
- “Capturing Automobile Solar Exposure Energy”, Alexander F. Nagle, Kyle Kremzeir, Moayad Kutby, Mohammed Aldayel, Mashhor A. Alshrieef and Charles Thangaraj; IEEE Region 1 Annual Student Conference. Mar **2018**.
- “Development of low cost device for in-situ algae monitoring”, A. J. Bradley, W. C. Caruso, Y. Zheng, C. V. Thangaraj and B. D. McPherson, 2016 IEEE MIT Undergraduate Research Technology Conference (URTC), Cambridge, MA, **2016**
- “A Scalable Modular Heterogeneous System for Home and Office Automation”, Fredy Augusto Maciel Alves and Charles Thangaraj 2016 IEEE MIT Undergraduate Research Technology Conference. Nov **2016**.
- Design of a Noise and Wildlife Optimized Residential Roof-top Horizontal Wind-Turbine with PV Integration” Alex Proulx, Aidan Bradley, Sara Vose, Charles Thangaraj., 2016 IEEE Green Technologies Conference. Apr **2016**.
- “Evaluation of Standard Municipal Energy Benchmarking Tools” Ethan Daniels, Benjamin McPherson, Charles Thangaraj., 2015 IEEE MIT Undergraduate Research Technology Conference. Nov **2015**.
- “A miniature combined horizontal wind-turbine and PV demonstration kit for K-12 STEM program” Alex Proulx, Anthony D’Amico, Charles Thangaraj., 2015 IEEE MIT Undergraduate Research Technology Conference. Nov **2015**.
- Robert Pownall, Guangwei Yuan, Charles Thangaraj, Joel Kindt, Tom W. Chen, Phil Nikkel, Kevin L. Lear, “DC and AC performance of leaky-mode metal-semiconductor-metal polysilicon photodetectors,” Proc. SPIE 7598, Optical Components and Materials VII, 759811 (25 Feb 2010);
- Thangaraj, C.; Chen, T., “A Fully CMOS-Compatible Optical H-Tree & Clock Recovery System”, IFIP/IEEE VLSI-SoC 2008 – International Conference on Very Large Scale Integration, October 13-15, 2008.
- Thangaraj, C.; Chen, T., “Design target exploration for meeting time-to-market using pareto analysis,” Circuits and Systems, 2008. ISCAS 2008. IEEE International Symposium on , pp.364-367, 18-21 May 2008
- Thangaraj, C.; Chen, T., “Early Design Phase Power Performance Trade-Offs Using In-Situ Macro Models,” Electronic Design, Test and Applications, 2008. DELTA 2008. 4th IEEE International Symposium on , pp.539-544, 23-25 Jan. 2008
- Thangaraj, C.; Chen, T., “Power and Performance Analysis for Early Design Space Exploration,” VLSI, 2007. ISVLSI ’07. IEEE Computer Society Annual Symposium on, pp.473-478, 9-11 March 2007

- Thangaraj, C.; Stephenson, K.; Chen, T.; Lear, K.; Raza, A. M., “Design of clock recovery circuits for optical clocking in DSM CMOS”, Proc. SPIE 6590, 65900F (2007), DOI:10.1117/12.721646
- Yuan, G.; Nikkel, P.; Thangaraj, C.; Chen, T. W.; Pownall, R.; Iguchi, A.; Lear, K. L., ”Optical characterization of a leaky-mode polysilicon photodetector using near-field scanning optical microscopy,” Lasers and Electro-Optics and 2006 Quantum Electronics and Laser Science Conference. CLEO/QELS 2006. Conference on , pp.1-2, 21-26 May 2006
- Raza, A.M.; Yuan, G.; Thangaraj, C.; Chen, T.; Lear, K., “Waveguide-coupled CMOS photodetector for on-chip optical interconnects”, Proc. SPIE 5556, 27 (2004), DOI:10.1117/12.559875
- Raza, A.M.; Guang Wei Yuan; Thangaraj, C.; Chen, T.; Lear, K.L., ”Waveguide coupled CMOS photodetector for on-chip optical interconnects,” Lasers and Electro-Optics Society, 2004. LEOS 2004. The 17th Annual Meeting of the IEEE , vol.1, no., pp. 152-153 Vol.1, 7-11 Nov. 2004

F.III Misc Presentations and Collaborations

- “Smart Machines, Self Diagnosis and Repair - How Electronics can help Mechanical maintenance”, The University of Rhode Island, Nov 2016.
- “PEER: Enriching Secondary Engineering Education Through a College Summer Camp”, International Conf. on Microelectronic Systems Education, Anaheim, CA. June 13, 2005.
- “Design of CMOS Trans-Impedance Amplifier for On-Chip Waveguide Based Optical Clock Distribution System”, Information Science and Technology Colloquium, Fort Collins, CO. April 14, 2005
- Yan, R.; Mestas, S.P.; Yuan, G.; Safaisini, R.; Dandy, D.S.; Lear, K.L.; “Label-free silicon photonic biosensor system with integrated detector array”. Lab on Chip, vol. 9, no. 15, pp. 2163-2168, 2009. <http://dx.doi.org/10.1039/b902111f>
- Pownall, R; Yuan, G; Thangaraj, C; Kindt, J; Chen, T; Nikkel, P; Lear, K; “DC and AC performance of leaky-mode metal-semiconductor-metal polysilicon photodetectors” Proc. SPIE 7598, 759811 (2010), DOI:10.1117/12.843002
- http://www.muddsustainability.org/Kenya_final_report.pdf
- http://cimit.net/images/forum/forum_051110_harveymudd.pdf

G Service Record

- Serving as the faculty senate representative for the School of Arts and Sciences, UST (2020-present).
- Serving on the faculty senate representative’s faculty policies task force. (2024)
- Served on the faculty senate representative by-laws committee. (2023)
- Serving on the organizing committee and as a reviewer for The 33rd Microelectronics Design and Test Symposium (2024).
- Serving on the organizing committee and as a reviewer for The 32nd Microelectronics Design and Test Symposium (2023).
- Serving as a technical advisor for the International Conference on Intelligent Technologies for Sustainable Electric and Communications Systems iTech SECOMS-2023
- Serving on two faculty search committees (2022-2023).

- Served as a session chair at the 2022 International Conference on Engineering, Science and Technology, Austin, TX
- Served on the organizing committee for The 31st Microelectronics Design and Test Symposium (2022).
- Served as an advisor for a robotics design team for UST Research Symposium (2022).
- Served as a content editor for the UST Research Symposium Program document (2022).
- Serving as an external research mentor for St. Catherine's Montessori school, Houston TX. (2021-2022).
- Served on the UST Strategic Technology Planning Team to develop strategic technology plan for the university (2021).
- Served as a reviewer for the International Conference on Computing, Power and Communication Technologies (2019).
- Served as the senator representing the School of Engineering on the University's faculty senate (2016-2019).
- Served as a member (and chair) of the University faculty senate's diversity committee (2016-2019).
- Served as an Intercultural Leadership Ambassador (ILA) program mentor for the AY 2019-2020, mentoring a first generation to college, student of color from an under-represented community who desires to major in engineering.
- Served on the university wide technology advisory committee that advises the chief technology officer on matter related to university technology infrastructure. (2019)
- Served on the university's Market Expansion Task Force that is tasked with discussing and identifying solutions to enhance enrollment and retention. This committee is convened by the Associate Vice President for Enrollment Management and serves The Office of Admissions and Marketing. (2019)
- Served as the secretary for the IEEE Providence Section Feb 2019 – resigned in Nov 2019 due to overwhelming personal commitments.
- Served as the treasurer for the IEEE Providence Section 2017 – 2019.
- Served as the president of IEEE Computer Society's Providence Chapter, 2017 – 2020.
- Served on the organizing committee for the past four (2016, 2017, 2018, 2019 and 2020) IEEE North Atlantic Test Workshop, a conference for IC test practices and research.
- Serves as a Ph.D. dissertation evaluator (volunteer position) for Visvesvaraya Technological University, Karnataka State, India.
- Served as a final year capstone project reviewer for Colorado State University's electrical and computer engineering program for the past four years.
- For AY 2016-2017 served as the chair of the Roger Williams University's faculty senate diversity committee.
- Guided a high school student and a middle school student to compete in the 2016 RI Science and Engineering Fair at CCRI, Warwick, RI. Both project were focused on green energy generation. Both students received top honors at the RISEF fair. One project, Solar Powered Fuel Cell was selected as a top three finalist and was headed to Wisconsin for a national competition.

- Served as a judge for the 2016, 2017 and 2018 Massachusetts Region III Science Fair at Bristol Community College, Fall River, MA.
- Served as a community judge for Barrington high school's 2016 Senior Project Oral Presentation Day.
- Served as a town council appointed public servant on the Town of Barrington's Energy Commission. As part of committee work prepared a talk and submitted a report on Mercury contamination and LED street lighting to the broader commission members. Evaluation of vendor qualification for town services, evaluating RFP responses for net-metering proposals and conducting a energy summary study for town buildings for the previous years. (2016 - 2020).
- Served as an organizing committee member of the 2015 IEEE 58th International Midwest Symposium on Circuits and Systems conference in Fort Collins, CO.
- Served as a joint faculty in-charge for a partnership initiative between RWU's center for community partnership and an energy NGO, emerald cities collaborative, to assess energy consumption in public buildings and provide energy saving recommendations.
- Served (2016-2017) as the faculty advisor for RWU's engineers without border's student chapter.
- Volunteered at Oakwood Elementary School as a Junior Achievement instructor during spring of 2012 and taught financial literacy and entrepreneurship.
- Volunteered at Habitat for Humanity's as part of LSI's volunteer crew in Jun 2011.
- <http://www.itaa.org/oc-high-tech-awards-cmt> - Served on the 2010 committee.
- Mentored senior engineering students in Mentor Graphics' IC design tool suite. <http://www.engr.colostate.edu/ece-sr-design/AY08/CMOS/index.shtml>
- Helped a doctoral student with preprocessing benchmark circuit netlists for batch mode SPICE simulations. <http://www.ece.uic.edu/masud/iscas2spice.htm>
- Served as a reviewer for IEEE International Conference on Microelectronic Systems Education. San Diego, CA, USA. June 3-4, 2007.
- Served as a reviewer for Microelectronics Journal, Volume 38, Issues 4-5, Special Issue of the 6th International Symposium on Quality Electronic Design (ISQED), May 2007.
- Mentored high school students participating in partnership for engineering education in the Rockies (PEER) summer camp program, summer 2006.
- Volunteered for Larimer county United Way.
- Volunteered for World Vision's Aids awareness workshop held in Fort Collins, CO.
- Served as a student liaison officer of the Indian Association of Northern Colorado.
- Served as treasurer for Canterbury reading club at Colorado State University from Aug 2004 to Jul 2005.
- Served as president of Indian Student Association of Colorado State University from Aug 2003 to Jul 2004 and as vice president from Jan 2003 to Jul 2003.
- Served as an executive on the Council for International Student Affairs of Colorado State University from Aug 2003 to Jul 2004.