

Jawwad A. Shamsi

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POST-PhD. EMPLOYMENT

Director Karachi Campus (Overall management of the campus) 11/18- Present
National University FAST, Karachi

Administration

- Overall management and Administration of the Campus.
- Faculty and Staff Development
- Establishing Center for Professional Training
- Strengthening Academia and Industry Liasion.
- Promoting Research and Development
- Establishing Innovation and Incubation Centers
- Overall supervision of BS/MS/PhD. Programs in different degree programs.
- Designing and executing academic and administrative policies.

Professor Computer Science Department 01/17 – Present
National University FAST, Karachi

Head of the Computer Science Department 05/12- 12/17
National University FAST, Karachi

Administration

- Overall management and Administration of the Computer Science Department. Approximately 1800 undergraduate and graduate students and 40+ Faculty members
- Ensuring Quality and Coordination
 - o BS (Computer Science)
 - o MS (Computer Science, Data Sciences, Computer Networks and Security, Software Project Management)
 - o PhD (Computer Science)
- Proposing Curriculum Updates
- Hiring Faculty Members
- Assigning Courses and Planning Semester

Chair Board of Studies
Curriculum Planning, review, and updates for faculty of Computing (Multi-campus faculty).

Teaching

- Big Data (Graduate and Undergraduate)
- Advanced Operating Systems (Graduate)

- Algorithm Analysis and Design (Undergraduate)
- Concurrent and Distributed Systems (Undergraduate)
- Cloud Computing and Big Data (Graduate)
- Cyber and Network Security (Graduate)
- High Performance Computing (Undergraduate)
- Parallel and Distributed Algorithms (Graduate)
- Grid Computing
- Research Methods (Graduate)
- GPU Programming (Graduate)

Research

- Cloud Computing / Distributed Systems
- Cyber and Network Security
- High Performance Computing / Volunteer Computing/ GPGPU Computing
- Software Defined Networks / Network Management
- Mobile/ Ubiquitous Computing
- Smart City / Network Management

Assistant Professor - Computer Science Department

08/99- 04/12

FUNDED PROJECTS

HEC NRPU 2018-2021

- Efficient Communication Infrastructure for large-scale IoT devices in a smart city

NVIDIA Research Center Award 2015

- A highly competent award from NVIDIA to establish the first and only NVIDIA Research Center in Pakistan.
- To facilitate interoperable GPGPU Computing across heterogeneous clusters of GPUs.
- To develop platform to support data-intensive (Big Data) computation on GPUs.
Platform: Tesla K-40, GTX 200, and Tegra (Jetson TK1)

NVIDIA CUDA Teaching Center Award 2014 and 2015

- To strengthen GPU curriculum at undergraduate and graduate level using multiple courses
 - o High Performance Computing
 - o Computer Graphics
 - o GPU Programming

NSF sponsored Early Adaptor Award from IEEE TCPP 2015, 2013, and 2012

- Early Adaptor Awards from IEEE Technical Committee on Parallel Processing to strengthen Parallel and Distributed Curriculum using multiple core and elective courses:
 - o High Performance Computing and Concurrent and Distributed Systems (2012)
 - o Algorithms, Operating Systems, Computer Architecture, and Data Structures (2013)
 - o Software Engineering (2015)

Blackberry Academic Tier Award

- Received equipment from blackberry to strengthen curriculum for Mobile Computing

PUBLICATIONS

Book

Jawwad Shamsi and Muhammad Ali Khojaye.
Big Data Systems. Taylor and Francis CRC Publishers ISBN. 9781498752701. March 2021

Book Chapters

1. J. Shamsi, M. Hanif, S. Zeadally, "Fog Computing: Data Analytics for time sensitive applications", Book Chapter, Convergence of Artificial Intelligence and Internet of Things, editors G. Mastorakis, C. Mavromoustakis, J. Batalla and E. Pallis, Springer, 2020.
2. Kashif Laeeq and Jawwad A Shamsi. "A Study of Security Issues, Vulnerabilities, and Challenges in the Internet of Things". In *Securing Cyber-Physical Systems*. Taylor and Francis. Oct 2015.
3. Shamsi J and Brockmeyer M. "Principles of Network Monitoring". In *Selected Topics in Communication Networks and Distributed Systems*. ISBN 978-981-283-943-5. World Scientific Press 2010.

Journals

4. Jawwad A. Shamsi. Effective Learning through Automatic Grading of Textual Answers: Issues, Challenges, and Solutions. *IEEE IT Professional* (Under Review)
5. Jawwad A . Shamsi. Resilience in Smart City Applications: Faults, Failures, and Solutions. *IEEE IT Professional*. 2020.
6. Narmeen Zakaria and Jawwad Shamsi. SDN based Secure and Agile Framework for Protecting Smart City Applications from DDoS Attacks. *Journal of Network and Computer Applications* . Vol 145. Nov 2019. Impact Factor 5.27.
7. Nausheen Shoaib and Jawwad A. Shamsi. *Understanding Network Requirements for Smart City Applications: Challenges and Solutions*. *IEEE IT Professional Journal* (Impact Factor: 1.661) 2019.
8. Shahzeb Khan, and Jawwad A. Shamsi. "Health Quest: A Generalized Clinical Decision Support System with Multi-Label Classification." *Journal of King Saud University-Computer and Information Sciences* (2018).
9. Lareb Usman and Jawwad A. Shamsi. A Comparison of Learning Techniques for Android Malware Detection Using Apache Spark in *Journal of Engineering Science and Technology*. (ISI indexed) 2019
10. Jawwad Shamsi and Mohammad Ali Khojaye. Understanding Privacy Violations in Big Data Systems. *IEEE IT Professional* (Impact Factor: 1.661), May/June 2018
11. Nausheen Shoaib, Jawwad Shamsi, Tahir Mustafa, Akhter Zaman, Jazib ul Hasan, and Mishal Gohar. *GDPI: Signature based Deep Packet Inspection using GPUs*. *International Journal of Advanced Computer Science and Applications (IJACSA)* – Volume 8 No 11 November 2017
12. Soomaiya Hamid, Narmeen Zakaria Bawany. Jawwad Ahmed Shamsi. RECSN: Resilient Controller for Software Defined Networks. *International Journal of Advanced Computer Science & Applications*. 2017
13. Hina Hameed, Nouman Durrani, Sehrish Hina, and Jawwad Shamsi. Towards Efficient Graph Traversal using a Multi- GPU Cluster. *International Journal of Advanced Computer Science & Applications*. 2017
14. Narmeen Zakaria, Jawwad Shamsi, Khaled Salah. DDoS Attack Detection and Mitigation using SDN: Methods, Practices, and Solutions. *Arabian Journal of Science and Engineering*. (Impact Factor: 0.86) Feb 2017
15. Noman Durrani, Feroz Zahid, and Jawwad Shamsi. PAVM: A Framework for Policy-Aware Virtual Machine Management. *Wiley Journal of Network Management*. (Impact Factor 1.18) 2016.
16. Jawwad Shamsi and Zafar Nasir. Unleashing the Pakistan Software Industry: Growth Prospects and Challenges. *IEEE IT Professional* (Impact Factor: 1.661)
17. Jawwad Shamsi, Sherali Zeadally, Fareha Sheikh, Angelyn Flowers. Attribution in Cyberspace: Techniques and Legal Implications. *Security and Communication Networks*. Wiley 2016. (Impact Factor: 1.061)
18. Jawwad Shamsi, Sherali Zeadally, and Zafar Nasir, Interventions in Cyberspace: Status and Trends. *IEEE IT Professional* . 18, no. 1 (2016): 18-25. (Impact Factor: 1.661)
19. Narmeen Zakaria, and Jawwad Shamsi. Smart City Architecture: Vision and Challenges. *International Journal of Advanced Computer Science & Applications*. 2015 (ISI Indexed)
20. Noman Durrani and Jawwad Shamsi. Volunteer Computing: Requirements, Challenges, and Solution. *Elsevier Journal of Network and Computer Applications*, 2014. (Impact Factor: 3.5)
21. Jawwad Shamsi, Mohammad Ali Khojaye, and Ali Qasmi. Data Intensive Cloud Computing: Requirements, Expectations, Challenges, and Solutions. *Springer Journal of Grid Computing* 2013 (Impact Factor: 2.76)

22. Zafar Nasir, Munir Hussain Saho, and Jawwad Shamsi. Cloud Computing for E-Health. Sindh University Research Journal March 2013 ([ISI indexed](#))
23. Noman Durrani, Jawwad Shamsi, and Samreen Fatima. Volunteer Computing for heterogenous devices. Sindh University Research Journal March 2013 ([ISI Indexed](#))
24. Sheeraz Ahmed and Jawwad Shamsi. Green Computing for ISPs. Sindh University Research Journal March 2013. ([ISI Indexed](#))
25. Jawwad Shamsi and Monica Brockmeyer. Predictable service overlay networks: Predictability through adaptive monitoring and efficient overlay construction and management. In Elsevier JPDC 72(1), 2012. ([Impact Factor: 1.12](#))
26. Shaikat Wasi, Zubair A Shaikh, and Jawwad A Shamsi Contextual Event Information Extractor for Emails. Sindh University Research Journal, 2011. ([ISI Indexed](#))
27. Jawwad Shamsi and Monica Brockmeyer. "PSON: Predictable Service Overlay Networks". ACM Sigmetrics Performance Evaluation Review Dec 2007.

Conference/Workshops

28. Shazia Usmani, Jawwad A Shamsi. News Headlines Categorization Scheme for Unlabelled Data. ICETST 2020
29. Tania Iram, Jawwad Shamsi, Usama Alvi, Saif Ur Rahman Saleem and Maaz Ansari. Controlling Smart-City Traffic using Machine Learning. FIT 2019.
30. Tooba Siddique and Jawwad A. Shamsi. *Generating Abstractive Summary Using Sequence to Sequence Attention Model*. FIT (2018)
31. Jawwad Shamsi, Zain ul Hassan, Narmeen Zakaria, and Nausheen Shoaib. A comprehensive course on Big Data for Undergraduate students. Edupar 2018. IPDPS workshop 2018.
32. Jawwad Shamsi. A Laboratory based course on GPU Programming: Methods, Practices, and Lessons. Edupar 2017. IPDPS workshop.
33. Arhum Savera, Salman Edhi, Ahmed Zia, Tahseen, and Jawwad Shamsi. Bumpster: A Mobile Cloud Computing System for Speed Breakers and Ditches. In IEEE CloudNA 2016
34. Jawwad Shamsi. PDC Topics in Algorithms. Poster Edupar 2016. IEEE IPDPS. Chicago, USA.
35. Narmeen Zakaria Bawany and Jawwad A. Shamsi. Application Layer DDoS Attack Defense Framework for Smart City using SDN. In 3rd International Conference on Computer Science, Computer Engineering, and Social Media. Greece. 2016.
36. Narmeen Zakaria Bawany, Sheeraz Ahmed, Jawwad A. Shamsi. Mitigating Malware for Effective Utilization of Network Resources at ISPs. In 3rd International Conference on Computer Science, Computer Engineering, and Social Media. Greece. 2016.
37. Rafay Niazi, Tahir Waseem, Jawwad Shamsi, and Mubashir Khan. Signature-based detection of Privilege Escalation Attacks on Android. Conference on Information Assurance and Cyber Security. CIACS 2015
38. Fareha Sheikh, Habiba Fazal, Fatima Taqvi, and Jawwad Shamsi. Power-Aware Server Selection in a Nano Data Center. IEEE CloudNA. IEEE LCN Workshop 2015, FL, USA
39. Jawwad Shamsi, Nouman Durrani, Nadeem Kafi. Novelties in Teaching High Performance Computing. IEEE IPDPS. EduPar 2015.
40. Jawwad Shamsi, Nouman Durrani, Nadeem Kafi. Novelties in Teaching High Performance Computing. IEEE IPDPS. Poster. EduPar 2015.
41. Wajeeta Lohana, Jawwad Shamsi, Tahir Qasim, Furrukh Hassan. Context-aware DNA Compression. IEEE IPDPS HiComb 2015.
42. Nouman M Durrani, Tasmiyah Iqbal, Jawwad A Shamsi and Nadeem Khan. Towards Real-time Result Verification using Checkpointing in Volunteer Computing Systems. IEEE ISORC 2015
43. Jawwad Shamsi, Syed Ali Raza, Hassan Farid, Taha Munir, Abbas Mehdi. MACNET: Mobile Ad-hoc Collaborative Networks. IEEE Collaboratecom 2014. Miami, October 2014.
44. Jawwad Shamsi, Atika Burney, Bilal Butt, Furqan Khan: Teaching Big Data Curriculum: Methods, Practices, and Lessons. Big Data EduCon LaS Vegas, October 2014.
45. Jawwad Shamsi, Sufian Hameed, Waleed Rehman, Farooq Zuberi, KaiserAltaf, and Ammar Amjad. ClickSafe: Providing Security against clickjacking attacks. IEEE HASE, USA, 2014.
46. Nouman Durrani Nadeem Kafi, Jawwad Shamsi, Waleej Haider, Asad Abbasi. Secure Multi-hop Routing Protocols in Wireless Sensor Networks: Requirements, Challenges and Solutions. ICDIM 2013.

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47. Sheeraz Ahmed. and Jawwad Shamsi. Green Computing for Under developed economies. ICEET SALU, 2013
 48. Zafar Nasir, Munir Saho, and Jawwad Shamsi. Cloud Computing for Health Care Services, ICEET SALU, 2013
 49. Nouman Durrani and Jawwad Shamsi. Heterogeneous Volunteer Computing ICEET SALU, 2013.
 50. Ahmed S, and Shamsi, J. Cloud Computing Solutions for Internet Service Providers. ICIIT, U.A.E, 2012.
 51. Tajweer, K. and Shamsi, J. "Counter-Terrorism Simulation Framework – An Application of OODA Loop". IEEE ICIET 2010, Karachi, Pakistan June 2010
 52. Hemani, A. and Shamsi, J. "Foundations of a generic design for Complex Event Processing". IEEE ICIET 2010, Karachi, Pakistan June 2010
 53. Jawwad Shamsi and Monica Brockmeyer. "Evaluation of QoS-Compliant Overlays under Denial of Service Attacks". Spring Simulation Conference, FL, USA, April 2010.
 54. Jawwad Shamsi. and Monica Brockmeyer "QoSMap: Achieving Quality and Resilience through Overlay Construction". In the Fourth International Conference on Internet and Web Applications and Services. (ICIW). Venice, Italy. May 24-28 2009.
 55. Jawwad Shamsi. and Monica Brockmeyer. "Overlay Networks for Real-time systems". Work in Progress. In the 14th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS) 2008.
 56. Jawwad Shamsi and Monica Brockmeyer. "Efficient and Dependable Overlay Networks". In the 13th IEEE workshop on Dependable Parallel Distributed and Network-centric Systems (DPDNS). 22nd IEEE International Parallel & Distributed Processing Symposium (IPDPS) 2008.
 57. Jawwad Shamsi and Monica Brockmeyer "QoSMap: Mapping Overlay Networks for Resiliency and Efficiency". In the 2nd Workshop on Distributed Autonomous Network Management Systems (DANMS). IEEE Global Communications Conference (Globecom) 2007.
 58. Jawwad Shamsi and Monica Brockmeyer "SyncProbe: Providing assurance of message latency through predictive monitoring of Internet paths. In the 10th IEEE High Assurance Systems Engineering Symposium (HASE) 2007.
 59. Jawwad Shamsi, Monica Brockmeyer and Chunbo Chu. "PSON: Predictable Service Overlay Networks". In the 4th International ICST Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (Qshine) 2007.
 60. Jawwad Shamsi. and Monica Brockmeyer. "Partially Synchronous Overlay Networks". Poster. In the Useinx Network Systems Design and Implementation (NSDI) 2006
 61. Jawwad Shamsi, Monica Brockmeyer and Liya Abebe. "TACON: Tactical Construction of Overlay Networks". In the Autonomic Internet Symposium. IEEE Global Communications Conference. (Globecom) 2005.
 62. Jawwad Shamsi, Chunbo Chu. and Monica Brockmeyer. "Towards Partially Synchronous Overlays: Issues and Challenges". In the first International Workshop on Advanced Architectures and Algorithms for Internet Delivery and Applications, (AAA-IDEA) June 2005.
 63. Jawwad Shamsi. and Monica Brockmeyer. "DSSimulator: Achieving million node Simulation of Distributed Systems". In the Spring Simulation Conference (Spring Sim) 2005.
 64. Jawwad Shamsi Hasina and Abdu. "Foundations of generic framework for Distributed Applications". In the 18th International Conference on Computers and Their Applications 2003.

Talks / Tutorials

1. Network Requirements for Smart Cities. ICOST Dec 2019
2. GPUs for Big Data Systems, ICIC Oct 2019
3. IoT and Digital Economy. July 2019.
4. Big Data Analytics. NCEAC, August 2018
5. Big Data Analytics. Hamdard University. May 2018
6. Cyber Security Challenges. Pakistan Academy of Engineers 2017.
7. Innovative Applications of Computer Science in Medical Sciences. ICBEM 2017
8. Advancements in GPGPU Computing. Innovations in Electrical Engineering and Computational Technologies, 2017
9. PDC Topics at NUCES. Lightning Talk. IPDPS 2016
10. Privacy concerns in modern World. ICICT, 2015
11. *Introduction to GPGPU Computing*. Frontiers of Information Technology. FIT 2014, Islamabad,

12. NOSQL vs New SQL. 10th International Conference on Innovations on Information Technology, (IIT), UAEU, 2014
13. Cyber Intrusions. Concepts. Modern Communication and Computing Technologies (MCCT) 2014. QUEST, NawabShah.
14. Cyberwar and Concepts. ICICT. IBA 2013
15. Big Data Challenges. IMTIC 2013
16. Data Intensive Cloud Computing. IMTIC 2012
17. Understanding Cyber Security. INMIC 2011
18. Data Intensive Cloud Computing INIMC 2011
19. Hadoop for Data Intensive Tasks. ICCT 2011
20. Understanding MapReduce. ICCT. SALU 2011
21. "Research Challenges in Cloud Computing". IEEE ICIET 2010 Conference. Karachi. June 2010.
22. "Predictable Service Overlay Networks". Merit Members Conference. Ann Arbor, MI, June 2008.

Services at FAST-NUCES

- Director : Karachi Campus (Nov 2018 - Present)
- Coordinator: Graduate Studies Committee (Jan 2018- Oct 2018)
- Chair Board of Studies, FAST NUCES (Sept 2015- Dec 2017)
- **Head of The Computer Science Department.** FAST NUCES (May 2012- Dec 2017)
- MS Program Coordinator - FAST NUCES (Jan 2010 – April 2012)
- Faculty In-charge: ACM Student Chapter (2010-2012)
- Faculty In-charge: Open Source University Meetup - OSUM (2009-2010)
- Member : Faculty Selection Committee (2010,2011)
- Member : Graduate Committee (2010-2012)
- Member : Course Allocation Committee (2010-2012)
- Member : Library Committee (2010)
- Organizer and PC Member : ICIET 2010 (Oct 2009- June 2010)
- Proposed MS Computer Networks
- Proposed coursework in Cloud Computing, Network and Cyber Security, Mobile Application Development, and Routing and Switching.

Services at Other Universities/ Organizations

- Grant Proposal Review: IGNITE (formerly ICTRDF)
- Expert Member Board of Studies: NED University of Engg & Technology, Institute of Business Management (IOBM), and SZABIST.
- PhD. Program Reviewer. Computer Science. Institute of Business Administration.
- Thesis and FYP Evaluation: DHA Suffa University, SZABIST

EDUCATION

PhD. Computer Science

Distributed Systems & Networking

Wayne State University, MI, USA

Advisor: Dr. Monica Brockmeyer

CGPA 3.86

July 2009

Course Work: Distributed Systems (700 and 800 level), Wireless Networks, Broadband and Network Architecture, Systems and Network Security, Operating Systems, Network and Concurrent Programming, Algorithm Analysis, Theory of Computing, Mobile Agents and Scholarly Writing.

Research Work:

- PhD. Thesis Predictable Service Overlay Networks. Internet (PlanetLab) based overlay network that provide predictable and bounded communication latency to distributed applications. This provides real-time assurance of bounded communication latency and QoS to the applications.
 - o Overlay construction mechanism to build resilient, efficient overlay networks that provide high Quality of Service (QoS).
 - o Active monitoring technique to measure one-way latency, detect packet loss, and estimate communication bound.
 - o Evaluation of real-time and non-real-time applications.

- Topological aware construction for Internet-based Overlays which permits reduced latency and better availability for Unstructured P2P systems.
- Simulation platform for distributed applications which allows simulation of more than 1 million nodes on a single PC.

MS Computer Science

University of Michigan- Dearborn

Dec 2002

Advisor: Dr. Hasina Abdu

Course Work: C++, Windows Programming, Database Systems, Computer Networks, Software Engineering, E-Commerce & Web Development.

Research Work

- MS Thesis: Foundations for a generic Middleware for Distributed Systems. An XML based interoperable middleware platform which permits communication among applications running under different platforms.
- Projects: Web Search Engine, E-Commerce, Information Security and Quality of Service

BE Electrical
1998

N.E.D. University

July

- Karachi, Pakistan
- Course Work and Research: C++, Computer Architecture, Microprocessor & Micro controller, Telecommunication, and Electronics, Electrical Consultancy

- **GRADUATE and UNDERGRADUATE STUDENT SUPERVISION**
Current and Graduated PhD Students

08/09- Present

- Nauman Durrani - Volunteer Computing (Graduated Oct 2017)
- Narmeen Zakaria – DDoS Attack Mitigation using Software Defined Networking (Expected Decmeber 2018)
- Shazia Usmani
- Naheed Azeem
- Nausheen Shoaib (In Progress)
- Anam Qureshi (In Progress)

PhD. Students Supervision Related to ML/DL

1. Network Traffic Analysis in Smart Cities
2. Stock Market Prediction Using News Analysis
3. Malware Detection in IoTs using Machine Learning.
4. Scheduling Mixed Critical Events in Smart Cities.

MS Thesis Supervision Related to ML/DL

1. Automatic Grading of Short Answers using Similarity Techniques. Safia. Spring 2020
2. Reality Mining: Predicting Consumer behavior for Sales. Zeeshan Damani Spring 2020.
3. A learning Management system for Adaptive learning. Ahsan Iqbal. Spring 2020.
4. Aliya Amin: Predicting Strokes and Diabetes using Machine Learning MS Thesis 2019.
5. Hina Khurshid . DNN-based Autograder for Short Answers. Fall 2018
6. Anomaly Detection on BlockChain Data. Erum Jamal. Fall 2018
7. Disease Diagnosis sing Deep Learning. Nimra Sultan.Fall 2018
8. Health Quest: NLP Model for clinical decision support system. Shahzeb. Spring 2017
9. A comparison of Machine Learning Techniques for Android Malware Detection using Apache Spark. Laraib Usman Fall 2017
10. A comparative Analysis of Abstractive Text summarization: Sequence to Sequence Attention Model. Tooba Siddique. Spring 2017.
11. Context-Aware compression for Bio-Informatics. Wajeeta Lohana. 2013.

- **Undergraduate Students Supervision Topics**

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- Content-based filtering
 - Internet for Blind
 - SMS via Internet
 - Heterogeneous framework for Mobile Development
 - Volunteer Cloud
 - Collaborative framework for Mobile Applications
 - Lightweight MapReduce
 - Volunteer Storage Network
 - Protection Against Click Jacking Attacks
 - Gesture-based Recognition for Smart Homes
 - Simulating Advanced Metering Infrastructure
 - Volunteer Computing Model
 - Speed Breaker Early Warning System
 - Heterogeneous GPU Computing
 - DDOS Attack Detection and Mitigation using Entropy
 - Software Defined Networking
 - High Speed Network using Infiniband
 - Deep Learning Based Malware Detection
 - Android Security

PRE-PhD. EMPLOYMENT

Instructor/ Teaching Assistant Wayne State University 08/03 – 06/09
MI, USA

- Taught Undergraduate and Graduate courses in Advanced Computer Networks, Operating Systems, C++ Programming, and Introduction to Computers
- Conducted Research in Distributed System, Networks, Simulation, QoS, Security, Overlay Networks, and Network Monitoring

Research Assistant Wayne State University 01/03 – 06/09
MI, USA

Undergraduate Students Supervision during PhD

- Brandon Szeliga (Summer 2006) – Network Monitoring and Measurements
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- Alison Flynn (Summer 2005) - Simulation for Distributed Systems
- Liya Abebe (Fall 2004) – Tactical Construction for Overlay Networks
- Benessa Defend (Summer 2004) – Network Measurements
- Pamela Coldfelter (Summer 2004) – Network Measurements

Graduate Assistant/ Java Developer University of Michigan - Dearborn 06/02 – 12/02

- Developed Java RMI based middleware platform which promotes interoperability

Programmer/ System Analyst Voice Processing, MI, USA 08/00 – 04/02

- Developed and supported speech recognition IVR, touch-tone and web and CGI applications with real time databases using Nuance Speech Recognition Engine.
- Administered DNS, SMTP, IIS, Apache, TIS Firewall and Proxy Servers.

Research Assistant University of Michigan-Dearborn, USA 01/00- 07/00

- Configured DNS, NIS, Apache, SMTP, Majordomo, SSH, Kerberos, Proxy and Firewalls
 - Configured Dual homed gateways as static routers on Linux, Windows NT and BSD.
- Environment: Linux, BSD, Win NT, Win 98 and MAC based Multi Operating System Lab.

- System Admin and Programmer** University of Michigan –Dearborn, USA 9/99 – 12/99
- Windows programming project for Ford Motor Company
 - Network Administrator for Mardigian Libraray

AWARDS / SCHOLARSHIPS/ GRANTS

- NSF / Intel sponsored Travel Grants:
 - o IPDPS (2013-2018)
 - Vancouver, Canada, 2018, Orlando, FL, 2017, Chicago, IL, 2016, Hyderabad, India 2015, Phoenix, AZ 2014, Boston, 2013
- HEC Travel Grants:
 - o IPDPS, 2018
 - o IPDPS 2017, USA
 - o LCN 2015, USA
 - o HASE, 2014, USA
- V Drive: A model for SaaS using volunteer resources. ICTRDF. Final Year Project
- Amazon AWS Educational Grant 2010, 2011, 2012, 2013, and 2014
- Intel Many Core Lab Access Grant 2012 and 2013
- General Motors Graduate Scholarship – Computer Science Wayne State University May 2009
- Summer Dissertation Fellowship – Graduate School - Wayne State University 2009
- Graduate Student Housing Allowance (2008-2009) and (2005-2006)
- IEEE RTAS Student Travel Grant 2008
- ACM Sigmetrics Student Travel Grant June 2007
- Usenix Travel Grant: NSDI (May 2006) and OSDI (Nov 2006)
- Graduate Assistantship – Wayne State University (2003-2009)
- Travel Awards – Department of Computer Science and College of Science (2005 – 2009)
- Graduate Assistantship – University of Michigan-Dearborn (2000 and 2002)
- Undergraduate Scholarship – NED University (1994-1998)

SERVICES

- PC Member:
- INMIC 2017, EduHPC 2017, Eduppar 2017, ICIW 2017, NSWM 2017
- Edupar 2016,
- Co-Chair: IEEE IIT 2015, BigData and Smart Applications Track. UAE
- Chair: SDN Workshop on Big Data. IIT 2015
- International Symposium on High Performance Mobile Computing and Wireless Network 2015
- IEEE Workshop on Cloud-Based Networks and Applications (IEEE CloudNA 2015)
- MobiWiS 2013, IWCDM 2013, ICICT 2013, ICIW 2013, INMIC 2011-2013, ICICT 2013
- Resource Person: ICCET SALU 2011.
- Faculty In-charge ACM Chapter- FAST NUCES
- Program Committee: ICIW 2010, 2011, 2012, 2013, 2014, and 2015
- Interviewer : President's Scholarship nominations- Wayne State University (2008 and 2009)
- Wayne State Alumni Society
- ACM – Wayne State Chapter (2006)

Reviewer (Journals):

- IEEE Network and IEEE Computer
- Journal of Super Computing (Springer)
- Journal of Grid Computing (Springer)
- Journal of Parallel and Distributed Computing (Elsevier)
- Journal of Network and Computer Applications(Elsevier)
- Journal of Homeland Security
- Security and Communication Networks (Wiley)
- Journal of Software Quality Assurance,
- IEEE Transactions on Parallel and Distributed Computing
- Journal of High Performance Computing and Networking (JHPCN)

Reviewer (Conferences):

- DANMS Workshop, IEEE Globecom, ACM Transactions on the Web – ACM TWEB, IFIP EUC, Workshop on Security in Systems and Networks (SSN), FIT, IC3.

Editorial Board : IARIA Journal