ACM DSP

Vijayalakshmi Saravanan
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SUMMARY OF SKILLS

Results-oriented researcher with a strong background in academia and global experience spanning over more than 10 years in High-performance Computing and Big Data Analytics. Demonstrated expertise in experimental and mathematical modeling, applying advanced algorithmic techniques and statistical tools to Big Data design. Proven track record in Research & Development, specializing in big data, AI, HPC and energy-aware design and solutions. Proficient in analyzing Big Data using tools such as Python, PyTorch, R, Statistical Analysis, Hadoop, MapReduce, and data visualization. Highly adaptable to fast-paced environments, leveraging exceptional analytical, communication, and leadership skills.

SUMMARY OF QUALIFICATIONS

- **Doctor of Philosophy (Ph.D.) in Computer Science and Engineering**
  - VIT University, India (September 2009 - 2014)
  - Malardalen University, Sweden (Doctoral Exchange Student, September 2009 - 2011)
  - Ryerson University, Canada (Doctoral Exchange Student)
  - Visiting Research Student at University of Rochester, USA (Fall 2010)
- **Master of Science (M.S)** in Information Technology and EC
  - MS University (Now Anna University), Tirunelveli, India (2000 - 2002)
- **Bachelor of Engineering (B.E) in Electrical and Electronics Engineering**
  - Bharathiar University (Now Anna University), Coimbatore, India (1995 - 1999)

CERTIFICATIONS

- **EMC certified "Data Scientist" professional**; EMC verified certificate Data Science Associate (EMCDSA) - License number: M70DB0XZ1NVEYV4S.
- **EMC Data Lakes** for Big Data (http://educast.emc.com/verify/dh0QW51T)
- **Postdoctoral Scholars Teaching Training for Academic Careers Certificate Program**, University at Buffalo (UB), The Graduate School Office of Postdoctoral Scholars, March 2016 – April 2016
- **AI for Everyone**, deeplearning.ai
- **Machine Learning**, Stanford University, Online, Coursera
- **CITI** (Collaborative Institutional Training Initiative) program, Biomedical Responsible Conduct of Research, Nov 2022
- **CITI** (Collaborative Institutional Training Initiative) program, Biomedical Research Investigators and Key Personnel Conduct of Research, Nov 2022

EMPLOYMENT HISTORY

- **SRP Visiting Faculty (VFP), Brookhaven National Lab (BNL)**, USA, June 6, 2022 - Present
- **Assistant Professor (Tenure-Track), Department of Computer Science, University of South Dakota**, USA, August 22 - Present
- **Visiting Assistant Professor, Full-time, Department of Computer Science, Vassar College**, NY, USA, August 20, 2020 - June 30, 2021
- **Adjunct Faculty, Department of Software Engineering**, **Rochester Institute of Technology**, Rochester, NY, August 23, 2019 - May 5, 2020
- **Assistant Prof in Practice, Department of Computer Science**, University of Texas, San Antonio **(UTSA),** USA, Sep 1, 2017 - May 14, 2018
- **Postdoctoral Fellow, Department of Computer Science and Engineering**, **University at Buffalo**, Buffalo, USA, Dec 2015 - Dec 2016
- **Postdoctoral Fellow, Department of Electrical and Computer Engineering**, **University of**

Waterloo, Waterloo, Canada, Dec 2016 - Dec 2017

- **Visiting Researcher, Ryerson University**, Canada, May 2011 - 2022
- **Assistant Prof (Sr), School of Computing Science and Engineering**, **VIT University**, Vellore, India, June 2007 - Jan 2015
- **Sr. Lecturer, Department of Computer Science and Engineering**, **Amrita Vishwa Vidyapeetham**, Coimbatore, India, June 2004 - May 2007
- **Project Officer, Department of Computer Science and Engineering, IIT Madras**, June 2006 - Dec 2006
- Lecturer, Various Engineering Colleges, India, June 1999 - June 2004

TECHNICAL SKILL SETS

- Big Data/Deep Learning: TensorFlow, PyTorch, Python
- Skills and Tools: R, MapReduce, Hadoop, Statistical Tools, Scaling and Performance Analysis, Predictive Modeling, Visualization, PL/SQL, Tableau, MongoDB
- Operating Systems: Windows '98, Linux, Windows NT
- Languages: Java, C#, .NET, ASP.NET, ADO.NET, C++, C, FORTRAN, BASIC
- WAP Technologies: WML, WML Script
- RDBMS: Oracle, Access
- Web Technologies: HTML, Front Page 2000
- Server-side Programming: JSP, Servlets, ASP
- GUI Development: Visual Basic 6.0
- Simulators: Gem5, ESESC, M-SIM, SMPCache, Sim-Panalyzer, Multi2sim, SSPPC, SESC, and Simple-Scalar.

TECHNICAL JOURNAL PUBLICATIONS

1. Vijayalakshmi Saravanan, Perry Siehien, Shinjae Yoo, Hubertus Van Dam, Thomas Flynn, Christopher Kelly, Khaled Z Ibrahim, “An Evaluation of Real-time Adaptive Sampling Change Point Detection Algorithm using KCUSUM”, arXiv:2402.1029, https://doi.org/10.48550/arXiv.2402.10291 (under review).
2. Vijayalakshmi Saravanan, “Harnessing Multimodal Data for Suicide Prediction: A Fusion of Text and Image Data Analysis” Cognitive Computation (under review)
3. D. Salvakkam, **V. Saravanan**, P.K. Jain, and R. Pamula, "Enhanced Quantum-Secure Ensemble Intrusion Detection Techniques for Cloud Based on Deep Learning," **Cognitive Computation**, 2023.
4. V.G. Díaz, R.D.J. Samuel, A. Manickam, **V. Saravanan**, A.K. Luhach, S. Krishnamoorthy, "Robot Based Transurethral Bladder Tumor Resection with automatic detection of Tumor Cells," **Measurement**, 2023.
5. P. Jain, W. Quamer, **V. Saravanan**, and R. Pamula, "Employing BERT-DCNN with sentic knowledge base for social media sentiment analysis," **Journal of Ambient Intelligence and Humanized Computing**, 2022.
6. **V. Saravanan**, R.D.J. Samuel, S. Krishnamoorthy, et al., "Deep learning assisted convolutional auto-encoders framework for glaucoma detection and anterior visual pathway recognition from retinal fundus images," **J Ambient Intell Human Compu**t, 2022.
7. M. Xue, G. Xiu, **V. Saravanan**, and C.E. Montenegro-Marin, "Cloud computing with AI for banking and e-commerce applications," **The Electronic Library**, vol. 39, no. 4, pp. 539-552, 2021.
8. G. Manogaran, P.M. Shakeel, M.A. Burhanuddin, S. Baskar, **V. Saravanan**, R.G.C. Oscar, and S. Martínez, "ADC-CF: Adaptive Deep Concatenation Coder Framework for Visual Question Answering," **Pattern Recognition Letters**, vol. 152, pp. 348-355, December 2021.
9. G. Manogaran, B.S. Rawal, **V. Saravanan**, P.M. Kumar, Q. Xin, and P.M. Shakeel, "Token-based Authorization and Authentication for Secure Internet of Vehicles Communication," **ACM Transactions on Internet Technology**, 2021.

10. X. Shen, H. Yu, X. Liu, Q. Bin, A.K. Luhach, and **V. Saravanan**, "The optimized energy-efficient sensible edge processing model for the Internet of Vehicles in smart cities," **Sustainable Energy Technologies and Assessments**, vol. 47, 2021.
11. F. Wang, N. Yang, P.M. Shakeel, and **V. Saravanan**, "Machine learning for mobile network payment security evaluation system," **Wiley publication**, Jan 2021.
12. P.K. Jain, W. Quamer, R. Pamula, **V. Saravanan** et al., "SpSAN: Sparse self-attentive network-based aspect-aware model for sentiment analysis," **J Ambient Intell Human Comput**, 2021.
13. W. Quamer, P.K. Jain, A. Rai, **V. Saravanan**, R. Pamula, and C. Kumar, "SACNN: Self-attentive Convolutional Neural Network Model for Natural Language Inference," **Transactions on Asian and Low-Resource Language Information Processing**, vol. 20, pp. 1-16, 2021.
14. P.K. Jain, **V. Saravanan**, and R. Pamula, "A Hybrid CNN-LSTM: A Deep learning approach in explaining consumer sentiment by qualitative user-generated contents," **Transactions on Asian and Low-Resource Language Information Processing**, 2021.
15. J. Zhao, K. Li, X. Xi, S. Wang, **V. Saravanan**, and R. Samuel, "Analysis of complex cognitive task and pattern recognition using distributed patterns of EEG signals with cognitive functions," Neural Computing and Applications, vol. 32, no. 14, pp. 10221-10230, 2020.
16. S. Zhu, **V. Saravanan**, and B. Muthu, "Achieving data security and privacy across healthcare applications using cybersecurity mechanisms," **The Electronic Library**, vol. 38, no. 5/6, pp. 979-995, 2020.
17. **V. Saravanan**, A. Anpalagan, and S. Naik, "Computational Bioengineering as a Compelling Pedagogical Tool in Computer Science Education," **Journal of Computational Science Education**, BPHTE19 workshop in **SC19**, November 17–22, 2019, Colorado.
18. A.S. Pillai, K. Singh, **V. Saravanan**, A. Anpalagan, I. Woungang, and L. Barolli, "A Genetic Algorithm-based Method for Optimizing the Energy Consumption and Performance of Multiprocessor Systems," **Journal of Soft Computing**, 2017.
19. **Vijayalakshmi Saravanan**, A. Anpalagan, D.P. Kothari, and I. Woungang (2015). An Optimizing Pipeline Stall Reduction Algorithm for Power and Performance on Multithreaded Multi-Core CPUs. ***Human centric Computing and Information Sciences (HCIS), Springer (Online)***. Total access to this article since publication: 63400, Highly Accessed.
20. **Vijayalakshmi Saravanan**, A. Anpalagan, and I. Woungang (2015). An Energy-Delay Product Study on Chip Multi-Processors for Variable Stage Pipelining. ***Human centric Computing and Information Sciences (HCIS), Springer (Online)*.**
21. **Saravanan Vijayalakshmi,** Alagan Anpalagan, D.P. Kothari, Isaac Woungang, and Mohammad S. Obaidat (2014). An analytical study of resource division and its impact on power and performance of multi-core processors. ***The Journal of Supercomputing, Springer***, 68(3):1265-1279. (Impact Factor: 0.917)
22. **Vijayalakshmi Saravanan**, A. Anpalagan, D.P. Kothari, Isaac Woungang and Mohammad S. Obaidat (2014). A Comparative Simulation Study on the Power-Performance of Multi-Core Architecture. ***The Journal of Supercomputing, Springer***. 1-23. (Impact Factor: 0.917)
23. **Vijayalakshmi Saravanan,** Aniket Shivam and Sudeep Chauhan (2014). "Reducing Power Dissipation in Multi-Core Processors using Effective core switching", International Journal of Computer and Information Technology **(IJCIT),** Vol. 3. (Impact Factor: 0.687)
24. **Vijayalakshmi Saravanan,** Mohan Radhakrishnan, A. S Basavesh and D.P. Kothari (2012). A Comparative Study on Performance Benefits of Multi-core CPUs using OpenMP. International Journal of Computer Science Issues **(IJCSI),** Vol. 10, No.1, pp.272-278. (Impact Factor: 0.242)
25. **Vijayalakshmi Saravanan,** Mohan Radhakrishnan, Mukund S, D.P. Kothari (2012). LINPACK: Performance-Power Analysis of Multi-Core Processors Using OpenMP, International Journal of Computer Applications **(IJCA),** Vol. 43, No. 1, pp.20-25. (Impact Factor: 0.821)
26. **Vijayalakshmi Saravanan,** Mohan Radhakrishnan, Vaideeswaran, and D.P. Kothari (2011). An Analysis of Power and Performance Trade-offs on Multi-core in OpenMP Programs, International Journal of Science and Advanced Technology **(IJSAT).** Vol. 1, No. 7, pp. 188-197**.**

27. **V. Saravanan**, S.K. Chandran, S. Punnekkat, and D.P. Kothari, "A Study on Factors Influencing Power Consumption in Multithreaded and Multicore CPUs," **WSEAS TRANSACTIONS** on COMPUTERS, vol. 10, no. 3, pp. 93-103, 2011.

CONFERENCE PUBLICATIONS

1. **Vijayalakshmi Saravanan**, Acharya, Pramod, Paudel, Laxman and Paramasivam, Praveen "Predictive Precision: LSTM-Based Analytics for Real-time Stock Market Visualization", in IEEE BigData 2023 Workshops, Sorrento, Italy.
2. **Vijayalakshmi Saravanan**, Gang Wan, and Anju S Pillai, "An Exploration of an Enhanced Scheduling Algorithm Approach with Feasibility Analysis on a Single CPU System," in 15th IEEE International Symposium on Embedded Multicore/Many-core Systems-on-Chip (**MCSoC 2022**), sponsored by IEEE, Universiti Sains Malaysia (USM), Penang, Malaysia, December 19-22, 2022.
3. **Vijayalakshmi Saravanan**, Anju S Pillai, and Sagar Naik, "Mathematical Modeling of an Application Specific Processor Architecture with Power Optimization," in 7th **International Women in Engineering (WIE) Conference** on Electrical and Computer Engineering 2021, Dhaka, Bangladesh, December 3-4, 2021.
4. Sweta Dey, Sujata Pal, **Vijayalakshmi Saravanan**, "Computational Offloading with Deep Supervised Learning for Edge enabled IoT," in Technological Advances in Science, Medicine and Engineering Conference 2021, Boston, USA.
5. Shixiong Jiang, **Vijayalakshmi Saravanan**, Pengzhan Yan, and Ramalingam Sridhar, "Fully Parallel Content Addressable Memory Design Using Multi-Bank Structure," in Proceedings of the 20th **International SYSTEM-ON-CHIP Conference (SOCC**), Seattle, WA, USA, September 6-9, 2016.
6. **Vijayalakshmi Saravanan**, Rahul Ravichandran, and Vignesh Muralidharan, "A dynamic algorithm to reduce power consumption in multi-core processors," in Proceedings of the International Conference on Circuit, Power, and Computing Technologies (**ICCPCT**), March 19-20, 2015 (Erratum submitted).
7. **Saravanan Vijayalakshmi**, Alagan Anpalagan, Isaac Woungang, and D. P. Kothari, "Power Management in Multi-Core Processors using Automatic Dynamic Pipeline Stage Unification," in Proceedings of the International Symposium on Performance Evaluation of Computer and Telecommunication Systems (**SPECTS**), Toronto, Canada, pp.120-127, 2013.
8. **Vijayalakshmi Saravanan**, S. Kaushik, Sai Krishna, and D.P. Kothari, "Performance Analysis of Multi-Threaded Multi-core CPUs," in Proceedings of the First International Workshop on Many-core Embedded Systems held in conjunction with the 40th International Symposium on Computer Architecture (**ISCA 2013**), Tel-Aviv, Israel, pp. 49-53, 2013.
9. **Vijayalakshmi S**, Prabu D, and Vinodhvenkatesh T M, "A Unified Framework for Analysis of MPEG-4 Algorithms and CODEC Development," in Proceedings of the 4th IEEE International Conference on Computer Sciences and Convergence Information Technology (**ICCIT '09**), Seoul, Korea, November 24-26, 2009.
10. **Vijayalakshmi S** and Prabu D, "A Novel Application Framework for the Image Manipulation and Protection for the Internet Application," in Proceedings of the International Conference on Information Science and IT Conference (**InSITE 2009**), Macon, Georgia, USA, June 12-15, 2009.
11. **Vijayalakshmi.S**, T. Senthil Kumar, "An Implementation of Embedded Web server," in Proceeding of the International Conference on Resource Utilization and Intelligent Systems **INCRUIS-06**, Perundurai, India, January 2006.
12. **Vijayalakshmi S**, T. Senthil Kumar, G. Jayakumar, "VLSI Based Implementation of Web Enabled Camera Using Embedded Web Server," in Proceeding of the National Conference on Network Security (**NCNS 2005**), Kochi, India, February 2005.

CONFERENCE PRESENTATIONS

1. **Vijayalakshmi Saravanan**, Shinjae Yoo, Hubertus Van Dam, Christopher Kelly, Siehien Perry, Vikrm Kalyan and Aniket Kumar Ramesh "Real-Time Change Point Detection in Molecular

Dynamics Streaming Data" accepted for the research poster presentation at the SC23, Denver, Nov 14-17, 2023.

2. **Vijayalakshmi Saravanan,** "An Analysis of Change Point Detection in High Performance Computing" has been accepted to the WHPC Workshop at SC23, Nov 14-17, 2023, Denver.
3. **Vijayalakshmi Saravanan**, Shinjae Yoo, Hubertus Van Dam, Christopher Kelly, Vijnathi Katamaneni, Rahman MD Minhazur, and Diing Agany, "CODAR/NWChemEx: Online Streaming Change Point Detection for Molecular Dynamics," presented at the **ECP Annual meeting**, Jan 17-20, 2023, Houston, TX, USA.
4. **Vijayalakshmi Saravanan**, "An Efficient Optimizing Hybrid Deep Learning Model for Big Data in Healthcare and Urban Intelligence," accepted in **Sustainable Research Pathways (SRP)** Workshop -Shin Institute in collaboration with Berkeley Lab, Dec 1-3, 2021.
5. **Vijayalakshmi Saravanan**, "A Study on Impact of 3D Stacking on Multi-core processors," accepted in **CWWMCA MICRO19**, 2019, Ohio, USA.
6. Anju S Pillai, **Vijayalakshmi Saravanan**, and Kshirasagar Naik, "Power-aware IoT Devices for the Future," presented at the 2nd **MobiSys Women's Workshop**, June 19, 2017, Niagara Falls, USA.
7. **Vijayalakshmi Saravanan** and Sridhar Ramalingam, "A Comparative Power-Performance Analysis of Microarchitecture Effects on Heterogeneous CPU-GPU," poster presentation at **SC16** technical research poster presentation, Nov 14-17, 2016, Salt Lake City, Utah, USA.
8. **Vijayalakshmi Saravanan**, "A Comparative Scalability Study on 3D Stacked Multi-Core Processor Architecture," poster presentation at **UbiComp 2015 Broadening Participation Workshop (BPW),** Sept 8, 2015, Osaka, Japan.
9. **Vijayalakshmi Saravanan**, "PhD Thesis entitled Power-Performance of Multi-threaded Multi-Core Processor: Analysis, Optimization and Simulation," shortlisted for the "Best Thesis Award" in the Fifth International Conference on Soft Computing for Problem Solving, **SocProS 2015**, Dec 18-20, 2015, Saharanpur Campus of IIT Roorkee, India.
10. **Vijayalakshmi Saravanan**, "Power-Performance of Multi-Threaded Multi-Core Processor: Analysis, Optimization and Simulation," in Proceedings of the International Conference on High Performance Computing & Simulation (**HPCS 2013**), Doctoral Dissertation Colloquium, Helsinki, Finland, 2013.
11. **Vijayalakshmi Saravanan**, "Performance Analysis of Multi-Threaded Multi-core CPUs," in Proceedings of the First International Workshop on Many-core Embedded Systems to be held in conjunction with the 40th International Symposium on Computer Architecture (**ISCA 2013**), Tel-Aviv, Israel, 2013.
12. **Vijayalakshmi Saravanan**, "Implementing VSP in Multicore Processors for Enhanced Energy Savings," poster presentation at Student Research Symposium, **HiPC 2011 & HiPC 2012**, Pune, India, 2012.
13. **Vijayalakshmi Saravanan**, "An Optimal Core Analysis of Power-Performance on Multi-core CPUs," poster presentation in **ACM Student Research Competition (SRC), GHC**, Baltimore, USA, 2012.
14. **Vijayalakshmi Saravanan**, "An Analysis of Optimizing Power-Performance on Multi-core CPUs," poster presentation in **ACM Student Research Competition (SRC), SIGCSE**, North Carolina, Raleigh, USA, 2012.
15. **Vijayalakshmi Saravanan**, "Poster presentation at Resource fair, **BE (Broader Engagement) SC11**," Nov 12-18, 2011, Seattle, USA.
16. Abhilash Thekkilakattil, Anju S Pillai, **Vijayalakshmi Saravanan**, and Huseyin Aysan, "Eureka: A Team of Autonomous Mobile Agents Competing in CyberRescue," in Proceedings of the 30th IEEE Real-Time Systems Symposium **(RTSS)**, Washington, D.C., USA, 2009.

EDITED BOOKS AND BOOK CHAPTERS

- **Saravanan, V**., Anpalagan, A., & Woungang, I. (2016). Big Data in Massive Parallel Processing: A Multi-Core Processors Perspective. In R. Segall & J. S. Cook Neha Gupta (Eds.), BIG DATA

STORAGE AND VISUALIZATION TECHNIQUES. IGI Global.

- **Saravanan, V**., Hussain, F., & Naik, S. (2019). Role of Big Data in Internet of Things Networks. In Handbook of Research on Big Data and the IoT.
- **Saravanan, V**., Nuvurriti, M., Barde, K., Pillai, A. S., & Woungang, I. (2021). Forecasting the Diabetes Mellitus at Real-time Using Machine Learning Algorithms. In AIM-EC 2021 (Artificial Intelligence and Machine Learning for Edge Computing).
- **Saravanan, V**., Aneja, I., HongYang, Pillai, A. S., & Singh, A. (2020). Impact of Big Data in Healthcare System—A Quick Look into Electronic Health Record Systems. In Machine Learning and the Internet of Medical Things in Healthcare.
- **Saravanan, V**., Nuneviller, M., Pillai, A. S., & Anpalagan, A. (2019). Foundation of Big Data and Internet of Things: Applications and Case Study. In Securing IoT and Big Data: Towards Next Generation Intelligence.
- **Saravanan, V**., Singh, I., Szarek, E., HaK, J., & Pillai, A. S. (2019). A Novel Implementation of Sentiment Analysis towards Data Science. In Machine and Deep Learning (ML/DL) Algorithms for Intelligent IoT Applications.
    - **Edited Books**
- **Saravanan, V**., Anpalagan, A., et al. (Eds.). (2019). Securing IoT and Big Data: Towards Next Generation Intelligence. CRC Press, Taylor & Francis Group.
- Singh, A., Singh, K. K., Rahman, A., & **Saravanan, V**. (Eds.). (2020). Machine Learning & Internet of Things (IoT) for Urban Intelligence. CRC Press, Taylor & Francis Group.
- Singh, A., **Saravanan, V.**, & Rahman, A. (Eds.). (2021). Machine Learning in Visual Communication & Image Representation. degruyter publications.
- Shanker, U., Pandey, S., **Saravanan, V**., & Ramalingam, R. (Eds.). (2021). Role of Data-Intensive Distributed Computing Systems in Designing Data Solutions. EAI/ Springer ICC book series. Retrieved from [https://www.springer.com/series/15427]

COLLABORATIVE RESEARCH PROJECT GRANTS

- **FAIR** (Funding for Accelerated and Inclusive Research) funded by U.S Department of Energy (DoE)
    - **Title:** "An Efficient Storage-Driven Machine Learning Model for Performance in the Era of Multimodal Scientific Data"
    - Principal Investigator (PI): Vijayalakshmi Saravanan
    - Grant amount: $750000
    - DoE Link: https://science.osti.gov/-/media/funding/pdf/Awards-Lists/2931-FAIR-Award-List.pdf
- Collaborative Research Project:
  Title: Data as a Service: Designing Ready-to-serve Data Solutions (engineering, analytics, and orchestration)
  Research University: Banaras Hindu University (BHU), India
  Principal Investigator (PI): Dr. Sarvesh Pandey, BHU, India; Co-PIs: Dr. Udai Shanker, M.M.M.V, India; Dr. Vijayalakshmi Saravanan, Vassar College, USA

GRANTS AND HONORS RECEIVED

- **DOE SRP-HPC ECP fellow**, 2022, 2023
- **Recipient of SoBigData++ Award for Diversity and Inclusion (DEI)** for the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2023) will be held in Turin, Italy in September 2023. SoBigData++ has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements No. 871042
- Schlumberger Foundation "**Faculty for the Future" Post-Doctoral Fellowship Award**, University at Buffalo, US (2015-2017)

- **Erasmus-Mundus EU-Government Fellowship** for pursuing doctoral studies in Computer Science and Engineering, Malardalen Hogskola, Vasteras, Sweden (2009-2011)
- Grant to attend **SC15 BE poster workshop** held at the Lawrence Berkeley National Laboratory in Berkeley, California, April 9-10, 2015.
- Recipient of Travel and Participation Grant to attend **SC11 (Super Computing) & SC12 BE program**, USA.
- Token of appreciation certificate from **ACM CRA (Computing Research Association)** for the successful conduction of the first international N2Women workshop Mobicom/MobiHoc held at Chicago, USA, 2010
- Recipient of **Asia Open-Source Software (AOSS)** International training program sponsored by CICC, Japan at Bangkok, Singapore, Malaysia (2006-2009) and recognized as a "Best Speaker".
- Ph.D. thesis entitled "Power-Performance of Multi-Threaded Multi-Core Processor: Analysis, Optimization and Simulation" named first runner-up at the Best thesis award presentation in the Fifth International Conference on Soft Computing for Problem Solving, **SocProS 2015**, held in the Saharanpur Campus of IIT Roorkee, India during December 18-20, 2015.
- **Travel grant recipient** to attend and present research paper at the Mobisys Women Workshop, Niagara Falls, NY, USA, June 19-23, 2017.
- **Travel grant recipient** to attend **SIGKDM Broadening Participation in Data Mining program** in Nova Scotia, Canada, August 12-13, 2017.
- **Travel grant recipient** to attend **SIGCOMM N2Women Workshop**, Los Angeles, USA, August 20, 2017 & Sensys N2Women 2019, NYC, US
- **Travel grant recipient** to attend and present a poster at the **MICRO51 CWWMCA & MICRO 52** Workshop, Japan, October 20-24, 2018, Columbus, Ohio
- **Travel grant recipient** to attend **SIGCOMM 2019**, Beijing, China, August 2019
- **UB Dean Office Engineering** Partnership Fund to attend **SC16**, Utah, USA
- **Springer HCIS Journal Most accessed paper award**: "An optimizing pipeline stall reduction algorithm for power and performance on multi-core CPUs" (Feb 2018) https://hcis-journal.springeropen.com/articles/10.1186/s13673-014-0016-8.
- **Name listed in Women in Computer Architecture** (2019): https://www.sigarch.org/wp-content/uploads/2019/12/2019-WiCArch-Candidates.pdf
- Name displayed in **Who's Who in the World** 2011 (28th Edition)

SERVICES DEPARTMENT/UNIVERSITY

- Division Chair, USD
- C&I Member, USD
- Faculty Search Committee, Member, USD
- ABET

PROFESSIONAL MEMBERSHIP

- **ACM (*Senior Member***), N2Women, *Member & Conference Workshop co-chair*, USA, 2010 –2011, ABI (Anita Borg Institute) *Systers*, CSI (*Life Member*),
- **IEEE *(Senior Member)*** & IEEE-WIE VIT affinity group, *Chair*, India
- National Postdoctoral Association (NPA), Affiliate Individual Member, Postdoc, USA.
- **National Postdoctoral Association (NPA), Workshop Co-chair**, 16th Annual Conference, Ohio USA, April 6-8,2018
- **ACM Distinguished speaker**

PROFESSIONAL SERVICE

- **Program committee member for SC24 Doctoral Showcase Posters, Technical Programs**

Committee and Technical program subcommittee, Panels.

- **Program committee member for SC23 Doctoral Showcase Posters**, Denver, CO, Nov 12-17, 2023
- **IEEEXtreme Proctor**
- **Mentor/Guide for IASc** (Indian Academy of Sciences) Summer Research Fellowship (SRF) Programme 2010-2015
- Potential reviewer for Scholarship Awards and **Poster Committee Member of ABI GHC** 2014-2017
- Program committee member for Compute 2010, 2011 & 2012 ACM conference. **ACM SRC Jury for 2020**
- **Program committee/Board member** for the first international **N2Women workshop** Mobicom/MobiHoc held at Chicago, USA, 2010
- **NeTS Panel** Service and/or Ad Hoc Reviewer
- **Lead Editor** for **Pattern Recognition Letters**, Springer Multimedia Tools, and Applications, and Edited Book in CRC Press, Taylor and Francis series, USA

  - **INVITED TALKS**

- **ATAL-AICTE FDP** (Faculty Development Program) workshop on Blockchain at IIT Ropar: Applications of Blockchain - (BIG) Data-driven perspectives
- **ATAL-AICTE FDP** (Faculty Development Program) workshop on Introduction to Big Data Analytics
- **IEEE-WIE** E-Symposium 2020 - Returning Mothers
- **IEEE-ACM-CSI** Chapter talk on "Using ML and Data Science to Combat Covid-19.
- **ACM DSP** talk on Future Worlds AI & ML at Sacramento, CA, USA, Feb 2021
- **ACM-W** talk on Energy-Efficient Processor Design and Solutions for General Purpose and Big Data/IoT Computing at Duke University, USA, Feb 2021
- **ACM DSP** talk on Introduction to Data Science using Python Programming at Rockland Community College ACM Club Meeting, Apr 2021.

PERSONAL DETAILS

Nationality: **Canadian**
Status in USA: **Green Card (LPR), USA**