General

Faisal Z. Qureshi
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Faculty of Science
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Synopsis

I am a professor of computer science at Ontario Tech University, where I lead the Visual Computing Lab. My lab develops computational models of visual perception for autonomous systems that must act purposefully in a world that is difficult to model. Our current work spans computer vision, machine learning and hyperspectral imaging. From 2020 to 2025 I held a guest professorship at Mid Sweden University, and I hold adjunct appointments at the Information Technology University (Lahore) and the Institute of Space Technologies (Islamabad), and a status-only appointment at the University of Toronto.

Since joining Ontario Tech in 2008, I have received more than $840 thousand in individual funding and more than $2 million in group funding. I have published more than 70 refereed articles, most first-authored by my students, and my work has received three best paper awards. In 2025 the Canadian Image Processing and Pattern Recognition Society gave me its Life-time Achievement (Service) Award, and in 2026 I was elected a full member of Sigma Xi.

I have supervised or co-supervised three doctoral students and more than twenty-five master's students to completion, along with more than thirty undergraduate researchers. I teach undergraduate and graduate courses from computer graphics and algorithms to computer vision and machine learning. Students have twice nominated me for the Student Choice Award, and my graduate students nominated me for the Excellence in Graduate Supervision Award. I am committed to equity, diversity and inclusion in research training: I co-supervise graduate students at the Information Technology University in Lahore, regularly examine doctoral theses at institutions in Pakistan, and take part in outreach that introduces high school students to computer science.

As undergraduate program director, I led the creation of the data science specialization and the renewal that renamed the program from computing science to computer science. I served two terms as graduate program director (2019 to 2021 and 2024 to 2026), during which I streamlined graduate course offerings. I founded the department's seminar series in 2009 and have served on the presidential search committee, dean search committees and Academic Council. I am Vice President of the Canadian Image Processing and Pattern Recognition Society, have twice co-organized the Conference on Computer and Robot Vision, and have organized workshops at CVPR. I have also served as an external doctoral examiner in Canada and abroad.

Curriculum Vitae
November 2, 2026

F.Z. Qureshi

Employment

Full Professor **July, 2020 – present**
Ontario Tech University
Formerly University of Ontario Institute of Technology

Guest Professor **October, 2020 – October, 2025**
Mid Sweden University

Associate Professor **July, 2013 – June, 2020**
University of Ontario Institute of Technology

Assistant Professor **July, 2008 – June, 2013**
University of Ontario Institute of Technology

Software Developer **April, 2007 – June, 2008**
Autodesk Canada Co., Toronto, Ontario, Canada

Scientific Officer **May, 1996 – March, 1997**
Informatics Complex (Robotics Division), Islamabad, Pakistan

Other Relevant Experience

Adjunct Faculty Member Appointment **July, 2026 – present**
Information Technology University, Lahore, Pakistan

Graduate Program Director, Computer Science **July, 2024 – June, 2026**
Ontario Tech University

Adjunct Appointment **April, 2022 – present**
Center for Artificial Intelligence, Institute of Space Technologies, Islamabad, Pakistan

Status-Only Appointment **December, 2021 – present**
Department of Cell and Systems Biology, University of Toronto, Toronto, Canada

Vice President **July, 2026 – present**
Secretary **June, 2020 – June, 2026**
Canadian Image Processing and Pattern Recognition Society (CIPPRS)

Graduate Program Director, Computer Science **July, 2019 – June, 2021**
University of Ontario Institute of Technology

Undergraduate Program Director **July, 2015 – June, 2017**
Computer Science, Faculty of Science, University of Ontario Institute of Technology

Visiting Professor **July, 2014 – June, 2015**
Department of Computer Science, University of Toronto

Computer Trainee Officer **May, 1995 – May, 1996**
Computer Training Centre, Islamabad, Pakistan

Education

Ph.D. Computer Science, University of Toronto, **2007**.
Thesis: "Intelligent Perception in Virtual Sensor Networks and Space Robotics"

M.Sc. Computer Science, University of Toronto, **2000**.
Thesis: "Constructing Anatomically Accurate Face Models using Computed Tomography and Cyberware Data"

M.Sc. Electronics, Quaid-e-Azam University, **1995**.
Thesis: "TACS: A Tone Actuated Computer Control System"

B.Sc. Mathematics & Physics (Minor), Punjab University, **1992**.

Honors and Awards

Honors and Recognition

Elected Full Member, Sigma Xi, The Scientific Research Honor Society, October 2026.

Life-time Achievement (Service) Award, Canadian Image Processing and Pattern Recognition Society, May 2025.

Nominated for the Excellence in Graduate Supervision Award by past and present graduate students, Ontario Tech University, March, 2023.

Nominated for the Student Choice Award, Ontario Tech University, May, 2021.

Nominated for the Student Choice Award, Ontario Tech University, May, 2019.

Paper Awards and Citations

CRV 2017 Computer Vision Best Paper for "Fast estimation of large displacement optical flow using dominant motion patterns & sub-volume patchmatch filtering," selected by the awards committee as the best computer vision paper of the 14th Conference on Computer and Robot Vision (CRV 17), Edmonton, May, 2017.

ICDSC 2007 Outstanding Paper for "Virtual Vision and Smart Cameras," selected by the program committee as one of the best papers of the First ACM/IEEE International Conference on Distributed Smart Cameras, Vienna, Austria, September 2007. A refereed journal-length version was published in the Proceedings of the IEEE, 2008, Special Issue on "Distributed Smart Cameras."

VSSN 2005 Outstanding Paper for article "Surveillance Camera Scheduling: A Vir-

tual Vision Approach," selected by the program committee as one of the best papers of the Third ACM International Workshop on Video Surveillance and Sensor Networks (VSSN 05), Singapore, November 2005. An extended version was published in the ACM SIGMM journal Multimedia Systems, 2006, Special Issue on "Multimedia Surveillance Systems."

Scholarships

Connaught Scholarship, University of Toronto, 2001 (1 Year).

Commonwealth Scholarship, 1997 (4 Years). (Declined for the last two years.)

Pakistan Government Servants' Benevolent Fund Scholarship, 1991 (4 Years).

Academic Achievements

Distinction, Post Graduate Diploma, Computer Training Center, Islamabad, Pakistan, 1996.

President's Gold Medal, Quaid-e-Azam University, Islamabad, Pakistan, 1995.

First Position, M.Sc. Electronics, Quaid-e-Azam University, Islamabad, Pakistan, 1995.

Research Grants

† indicates internal grants.

Individual

May 2026–Apr 2028, "Beyond Vision: Hyperspectral Unmixing, Compression, and Foundation Models," $49,000, NSERC Discovery Development Grant.

Oct 2021, "Understanding Gene Model Maps," $15,000, Lab2Market and Mitacs Accelerate.

May 2020–Apr 2025, "Visual Perception in Ad Hoc Networks of Smart Cameras," 5-year grant ($120,000), NSERC Discovery Grant.

Mar 2020–Feb 2022, "A data-driven framework for integrating visual inspection into injection moulding pipeline," $120,000, Mitacs Accelerate.

Sep 2017–April 2019, "Development and Testing of Crops Demonstrating Improved Biomass Hydrolysis for Biofuel Production," $26,666, Mitacs Elevate.

Feb 2018, "GPU Hardware for Deep Learning Research," $5,000, NVIDIA Academic Hardware Program.

May 2017–Dec 2017, "Cloud processing for comparative genomics," 6-month Grant ($24,970 cash + $27,000 in-kind), NSERC Engage.

Nov 2015, "GPU Hardware for Deep Learning Research," $8,000, NVIDIA Academic Hardware Program.

Oct 2015–Mar 2016, "Pedestrian detection and segmentation in videos captured by cameras exhibiting large, uncontrolled motion," 6-month Grant ($24,998 cash + $20,000 in-kind), NSERC Engage.

May 2015–Apr 2016, "Intelligent traffic control through multi-modal vehicle detection and classification," 1-year Grant ($25,000 cash + $18,000 in-kind), OCE VIP.

May 2015–Apr 2020, "Next Generation Smart Camera Networks," 5-year Grant ($90,000), NSERC Discovery Grant.

Dec 2014–May 2015, "Camera-based vehicle detection and classification," 6-month Grant ($24,978 cash + $38,100 in-kind), NSERC Engage.

Feb 2011–Feb 2013, "Theory and Applications of Smart Camera Networks," 3-year (US$60,000), Xerox Corporation University Affairs Committee.

May 2009–Apr 2014, "Virtual Vision and Smart Camera Networks," 5-year Grant ($105,000), NSERC Discovery Grant.

May 2009–Aug 2009, "Simulating Reality for Camera Networks Research," 4-month Grant ($7,000), Shared Hierarchical Academic Research Computing Network Undergraduate Student Fellowship Award.

Jul 2008–no end date, ($60,000) UOIT Startup grant.†

GROUP

Apr 2021, "LDG/Notebooks," Ontario Tech Technology Demonstration Grant, $16,000, with K.Q. Pu (declined).

Dec 2018, "Optimized Camera Placement for Tracking Multiple Flying Objects," 1-year grant (SEK 146,600), with Najeem Lawal (PI), The Swedish Foundation for International Cooperation in Research and Higher Education STINT Grant.

May 2018, "From ePlants to eEcosystems: New Frameworks and Tools for Sharing, Accessing, Exploring and Integrating Ómic Data from Plants," 3-year grant ($1,000,000), with N. Provart (PI) and eight others, Genome Canada Grant.

May 2018, "UOIT Computational Infrastructure for Artificial Intelligence," Equipment grant ($50,000), with A. Abari-Salehi (PI) and eight others, UOIT Research Infrastructure Fund.†

May 2015, "Extracting Accurate Structural Information from Atomic Scale Imaging using Computer Vision," 1-year grant ($15,000), with I. Tamblyn (PI), Molecular Foundry User Grant.

May 2011–May 2013, "Improved Physical Models and Software for Bloodstain Pattern Analysis," 3-year grant ($434,766) with F. Gaspari (PI), B. Allen, S. Forbes, and D. Aruliah, Canadian Police Research Centre Grant. (cash and in-kind)

Dec 2008–Aug 2009, "Handling Occlusions in Visual Monitoring Systems," 6-month Grant ($37,500) with K. El-Khatib (Co-PI), Ontario Centres of Excellence, Centre of Communications and Information Technologies. (cash and in-kind)

May 2009–Aug 2009, "An Online Testing and Evaluation Environment for Computer Programming Courses," 4-month Grant ($7,000) with J.S. Bradbury (Co-PI), Teaching Innovation Fund, UOIT.†

Teaching Experience

University of Ontario Institute of Technology, Oshawa, Ontario, Canada

Courses Taught **July, 2008 – present**

- Machine Learning
- Computational Photography
- Advanced Topics in High-Performance Computing (machine learning)
- Programming Workshop 2
- Computer Vision
- Computer Vision 1
- Principles of Computer Science
- Computer Vision and Games
- Collaborative Design and Research
- Advanced Computer Graphics
- Advanced Topics in Digital Media
- Topics in Digital Media
- Computer Architecture 2
- Ethics, Law, and Social Impact of Computers
- Analysis and Design of Algorithms
- Simulation and Modeling
- Computer Architecture 1

Guest Lectures **July, 2008 – present**

- Introduction to Computer Science
- Science in Context
- Survey of Computer Science

University of Toronto, Toronto, Ontario, Canada

Courses Taught **September, 2004 – August, 2007**

- Computer Graphics

- Introduction to Visual Computing

Guest Lectures **January, 2004 – April, 2004**

- Computer Graphics
- Introduction to Scientific, Symbolic & Graphical Computation

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Publications

My publication record spans flagship and top-tier disciplinary journals, including the Proceedings of the IEEE, IEEE TPAMI, IEEE TGRS, and the ISPRS Journal of Photogrammetry and Remote Sensing, competitive peer-reviewed conferences for rapid dissemination, and widely accessible multidisciplinary platforms like PLOS ONE, IEEE Access, and specialized IEEE remote sensing journals to maximize global impact.

† indicates a (co-)supervised student.

Refereed Journal Papers

[J23] "Self-Attention Enhanced Student-Teacher Framework for Visual Anomaly Detection in Industrial Images," H.A. Amjad†, I. Shallari, M. O'Nils, **F.Z. Qureshi**, *IEEE Access*, **14**, March, 2026, 13pp.

[J22] "Meta-Learned Implicit Neural Representations for Scalable and Fast Hyperspectral Image Compression," S. Rezasoltani†, **F.Z. Qureshi**, Lecture Notes in Computer Science, 2025.

[J21] "AdVision: An Efficient and Effective Deep Learning based Advertisement Detector for Print Media," F.Z. Sayyad†, I. Shallari, S.J. Mousavirad, M. O'Nils, **F.Z. Qureshi**, *Machine Learning with Applications*, **21**, September, 2025, 12pp.

[J20] "A Prognostic Framework for Rotating Machines Considering Multi-Component Fault Scenarios," A. Lycksam†, M. O'Nils, **F.Z. Qureshi**, *IEEE Access*, **13**, May, 2025, 11pp.

[J19] "Contextual knowledge-informed deep domain generalization for bearing fault diagnosis," A. Lundstrom†, M. O'Nils, **F.Z. Qureshi**, *IEEE Access*, **12**, December, 2024, 11pp.

[J18] "Hyperspectral Image Compression Using Sampling and Implicit Neural Representations," S. Rezasoltani†, **F.Z. Qureshi**, *IEEE Transactions on Geoscience and Remote Sensing*, **63**, December, 2024, 12pp.

[J17] "20 years of the Bio-Analytic Resource for Plant Biolog," A. Sullivan, M. Lombardo, A. Pasha, V. Lau, J. Zhuang, A. Christendat, B. Pereira, T. Zhao, Y. Li, R. Wong, **F.Z. Qureshi**, N. Provart, *Nucleic Acids Research*, **53**, October, 2024.

[J16] "Hyperspectral Pixel Unmixing with Latent Dirichlet Variational Autoencoder," K. Mantripragada†, **F.Z. Qureshi**, *IEEE Transactions on Geoscience and Remote Sensing*, **62**, January, 2024, 13pp.

[J15] "An interactive threshold-setting procedure for improved multivariate anomaly detection in time series," A. Lundstrom†, M. O'Nils, **F.Z. Qureshi**, *IEEE Access*, **10**, October, 2023, 11pp.

[J14] "Improving Deep Learning Based Anomaly Detection on Multivariate Time Series Through Separated Anomaly Scoring," A. Lundstrom†, M. O'Nils, **F.Z. Qureshi**, A. Jantsch, *IEEE Access*, **10**, October, 2022, 11pp.

[J13] "The Effects of Spectral Dimensionality Reduction on Hyperspectral Pixel Classification: A Case Study," K. Mantripragada†, P. Dao, Y. He, **F.Z. Qureshi**, *PLOS ONE*, **17**(7), July, 2022, 24pp.

[J12] "3D Feet Detection Methods for a Semi-Autonomous Powered Wheelchair Navigation," C. Vilar, S. Krug, **F.Z. Qureshi**, M. O'Nils, *Journal of Imaging*, **7**(12), December, 2021, 17pp.

[J11] "A Temporal Boosted YOLO-Based Model for Birds Detection around Wind Farms," H. Alqaysi†, I. Fedorov, **F.Z. Qureshi**, M. O'Nils, *Journal of Imaging*, **7**(11), October, 2021, 13pp.

[J10] "Improving Hyperspectral Image Segmentation by Applying Inverse Noise Weighting and Outlier Removal for Optimal Scale Selection," P.D. Dao, K. Mantripragada†, Y. He, **F.Z. Qureshi**, *ISPRS Journal of Photogrammetry and Remote Sensing*, **171**, January, 2021, 348–366.

[J9] "A Stream Algebra for Performance Optimization of Large Scale Computer Vision Pipelines," M.A. Helala†, **F.Z. Qureshi**, K.Q. Pu, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **44**(2) August, 2020, 905–923.

[J8] "A Residual-Dyad Encoder Discriminator Network for Remote Sensing Image Matching," N. Khurshid, Mohbat, M. Taj, **F.Z. Qureshi**, *IEEE Transactions on Geoscience and Remote Sensing*, **58**(3), November, 2019, 14pp.

[J7] "Automatic Parsing of Lane and Road Boundaries in Challenging Traffic Scenes," M.A. Helala†, **F.Z. Qureshi**, K.Q. Pu, *SPIE Journal of Electronics Imaging*, **24**(5), October, 2015, 15pp.

[J6] "Stereo Reconstruction of Droplet Flight Trajectories," L.A. Zarrabitia†, **F.Z. Qureshi**, D.A. Aruliah, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **27**(4), April, 2015, 847–861.

[J5] "Integrating Consumer Smart Cameras into Camera Networks: Opportunities and Obstacles," Andrea Prati, **F.Z. Qureshi**, *Computer*, April, 2014, 26–32.

[J4] "Software Laboratory for Camera Networks Research," W. Starzyk†, **F.Z. Qureshi**, *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **3**(2), June, 2013, 272–284, (Special issue on "Computational and Smart Cameras").

[J3] "Smart Camera Networks in Virtual Reality," **F.Z. Qureshi**, D. Terzopoulos, *Proceedings of the IEEE*, **96**(10), October, 2008, 1640–1656, (Special Issue on "Smart Cameras").

[J2] "Intelligent Perception and Control for Space Robotics: Autonomous Satellite Rendezvous and Docking," **F.Z. Qureshi**, D. Terzopoulos, *Journal of Machine Vision Applications*, **19**(3), February, 2008, 141–161.

[J1] "Surveillance Camera Scheduling: A Virtual Vision Approach," **F.Z. Qureshi**, D. Terzopoulos, *ACM Multimedia Systems Journal*, **12**(3), December, 2006, 269–283 (Special Issue on "Multimedia Surveillance Systems").

Refereed Conference & Workshops Publications

[C51] "ATLAS: Hyperspectral Image Compression via Adaptive Transfer of Low-rank Abundance Splatting," J. Rempel†, **F.Z. Qureshi**, *2nd Workshop on Advances in Representation Learning for Earth Observation (co-located with NeurIPS 2026)*, Paris, France, December, 2026, 14pp.

[C50] "CascadedViT: Cascaded Chunk-FeedForward and Cascaded Group Attention Vision Transformer," S. Sivakumar†, **F.Z. Qureshi**, *23rd Conference on Robots and Vision*, Vancouver, British Columbia, Canada, May, 2026, 10pp.

[C49] "Revisiting Person Re-ID: ConvNeXt with AIBN and TNorm in IICS/IIDS Frameworks," **F.Z. Qureshi**, R. Dehghani†, *In Proc. 15th International Conference on Pattern Recognition Applications and Methods*, Marbella, Spain, March, 2026, DOI: 10.5220/0014228200004067, 11pp.

[C48] "TLAC: Two-stage LMM Augmented CLIP for Zero-Shot Classification," A. Munir†, **F.Z. Qureshi**, F.H. Khan, M. Ali, *8th Multimodal Learning and Applications Workshop (co-located with CVPR 2025)*, Nashville, TN, June, 2025, 11pp.

[C47] "Single Hyperspectral Image Super-Resolution utilizing Implicit Neural Representations," B. Perederei†, **F.Z. Qureshi**, *Proc. 14th International Conference on Pattern Recognition Applications and Methods*, Porto, February, 2024, DOI: 10.5220/0013121200003905, 8pp.

[C46] "Hyperspectral Image Compression Using Implicit Neural Representation and Meta-Learned Based Network," S. Rezasoltani†, **F.Z. Qureshi**, *Proc. 14th International Conference on Pattern Recognition Applications and Methods*, Porto, February, 2024, DOI: 10.5220/0013153900003905, 9pp.

[C45] "Attention Based Simple Primitives for Open-World Compositional Zero-Shot Learning," A. Munir†, **F.Z. Qureshi**, M.H. Khan, . M. Ali, *Proc. 25th Conference on Digital Image Computing Techniques & Applications (DICTA24)*, Perth, November, 2024, 8pp.

[C44] "SpACNN-LDVAE: Spatial Attention Convolutional Latent Dirichlet Variational Autoencoder for Hyperspectral Pixel Unmixing," S. Chitnis†, K. Mantripragada†, **F.Z. Qureshi**, *International Geoscience and Remote Sensing Symposium (IGARSS)*, Athens, July, 2024, 6pp.

[C43] "An Iterative Method for Hyperspectral Pixel Unmixing Leveraging Latent Dirichlet Variational Autoencoder," K. Mantripragada†, P. Adler, P. Olsen, **F.Z. Qureshi**, *International Geoscience and Remote Sensing Symposium (IGARSS)*, Pasadena, July, 2023, 8pp.

[C42] "Hyperspectral Image Compression Using Implicit Neural Representations," S. Rezasoltani†, **F.Z. Qureshi**, *Proc. 20th Conference on Robots and Vision (CRV23)*, Montreal, June, 2023, 8pp.

[C41] "Structure Guided Image Inpainting using Edge Prediction," K. Nazeri, E. Ng, T. Joseph†, **F.Z. Qureshi**, M. Ebrahimi,*In Proc. International Conference on Computer Vision Workshop on Advances in Image Manipulation (AIM19)*, Seoul, Nov, 2019, 10pp.

[C40] "Joint Spatial and Layer Attention for Convolutional Networks," T. Joseph†, K.G. Derpanis, **F.Z. Qureshi**, *Proc. 30th British Machine Vision Conference (BMVC19)*, Cardiff, Sep, 2019, 14pp.

[C39] "Compact Neural Network Solutions to Laplace's Equation in a Nanofluidic Device," M. Magill, **F.Z. Qureshi**, HW. de Haan, *Proc. NIPS Workshop on Compact Deep Neural Network Representation with Industrial Applications (CDNNRIA 19)*, Montreal, Dec, 2018, 4pp.

[C38] "Neural Networks Trained to Solve Differential Equations Learn General Representations," M. Magill, **F.Z. Qureshi**, H.W. de Haan, *Proc. The Thirty-second Annual Conference on Neural Information Processing Systems (NIPS 18)*, Montreal, Dec, 2018, 8pp.

[C37] "Real-time Video Summarization on Commodity Hardware", W. Taylor†, **F.Z. Qureshi**, Proc. 12th ACM International Conference on Distributed Smart Cameras (ICDSC 18), Eidenhoven, September, 2018, 8pp.

[C36] "Fast estimation of large displacement optical flow using dominant motion patterns & sub-volume patchmatch filtering," M.A. Helala†, **F.Z. Qureshi**, *Proc. 14th Conference on Computer and Robot Vision (CRV 17)*, Edmonton, May, 2017, 8pp.

[C35] "An index structure for fast range search in hamming space," E.M. Reina†, K.Q. Pu, **F.Z. Qureshi**, *Proc. 14th Conference on Computer and Robot Vision (CRV 17)*, Edmonton, May, 2017, 8pp.

[C34] "A formal Algebra implementation for distributed image and video stream processing," M.A. Helala†, K.Q. Pu, **F.Z. Qureshi**, *Proc. 10th International Conference on Distributed Smart Cameras (ICDSC 16)*, Paris, September, 2016, 8pp.

[C33] "Constructing Image Mosaics Using Focus Based Depth Analysis," M.A. Helala†, **F.Z. Qureshi**, *Proc. IEEE Winter Applications of Computer Vision Conference (WACV 16)*, Lake Placid, March, 2016, 7pp.

[C32] "Automatic Video Editing for Sensor-Rich Videos," W. Taylor†, **F.Z. Qureshi**, *Proc. IEEE Winter Applications of Computer Vision Conference (WACV 16)*, Lake Placid, March, 2016, 9pp.

[C31] "Towards Efficient Feedback Control in Streaming Computer Vision Pipelines," M. Helala†, K.Q. Pu, **F.Z. Qureshi**, *Proc. Workshop on User-Centered Computer Vision (co-located with ACCV 14)*, Singapore, November, 2014, 16pp.

[C30] "Accelerating Cost Volume Filtering using Salient Subvolumes and Robust Occlusion Handling," M. Helala†, **F.Z. Qureshi**, *Proc. 12th Asian Conference on Computer Vision (ACCV 14)*, Singapore, November, 2014, 16pp.

[C29] "A Negotiation Protocol with Conditional Offers for Camera Handoffs," **W. Starzyk**, **F.Z. Qureshi**, *Proc. Eighth ACM/IEEE Conference on Distributed Smart Cameras (ICDSC 14)*, Venice, Italy, November, 2014, 1–8.

[C28] "A Stream Algebra for Computer Vision Pipelines," M. Helala†, K.Q. Pu, **F.Z. Qureshi**, *Proc. Second Workshop on Web-scale Vision (Co-located with CVPR 2014)*, Columbus, OH, June, 2014, 1–8.

[C27] "Topic Models for Image Localization," Z. Wang†, **F.Z. Qureshi**, *Proc. Tenth Conference on Computer and Robot Vision (CRV 13)*, Regina, Canada, May, 2013, 1–8.

[C26] "I Remember Seeing This Video: Image Driven Search in Video Collections," Z. Wang†, **F.Z. Qureshi**, *Proc. Tenth Conference on Computer and Robot Vision (CRV 13)*, Regina, Canada, May, 2013, 1–6.

[C25] "Droplet Tracking from Unsynchronized Cameras," L.A. Zarrabeitia†, **F.Z. Qureshi**, D.A. Aruliah, *Proc. 2nd International Conference on Pattern Recognition Applications and Methods (ICPRAM 13)*, Barcelona, Spain, February, 2013, 1–8.

[C24] "Mosaic of Near Ground UAV Videos Under Parallax Effects," M.A. Helala†, L.A. Zarrabeitia†, **F.Z. Qureshi**, *Proc. 6th International Conference on Distributed Smart Cameras (ICDSC 12)*, Hong Kong, October, 2012, 1–6.

[C23] "Road Boundary Detection in Challenging Scenarios," M.A. Helala†, K.Q. Pu, **F.Z. Qureshi**, *Proc. Ninth IEEE Conference on Advanced Video and Signal-Based Surveillance (AVSS 12)*, Beijing, Canada, September, 2012, 1–6.

[C22] "A Virtual Vision Simulator for Camera Networks Research," W. Starzyk†, A. Domurad†, **F.Z. Qureshi**, *Proc. Ninth Conference on Computer and Robot Vision (CRV 12)*, Toronto, Canada, May, 2012, 1–8.

[C21] "Extraction of Blood Droplet Flight Trajectories from Videos for Forensic Analysis," L.A. Zarrabeitia†, D.A. Aruliah, **F.Z. Qureshi**, *Proc. 1st International Conference on Pattern Recognition Applications and Methods (ICPRAM 12)*, Algarve, Purtugal, February, 2012, 1–12.

[C20] "Learning Proactive Control Strategies for PTZ Cameras," **F.Z. Qureshi**, W. Starzyk†, *Proc. 5th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 11)*, Ghent, Belgium, August, 2011, 1–6.

[C19] "Multitasking Smart Cameras for Intelligent Video Surveillance Systems," W. Starzyk†, **F.Z. Qureshi**, *Proc. 8th IEEE International Conference on Advanced Video and Signal-Based Surveillance (AVSS 11)*, Klagenfurt, Austria, August, 2011, 1–6.

[C18] "Negotiating Privacy Preferences in Video Surveillance Systems," Mukhtaj S. Barhm†, Nidal Qwasmi, **F.Z. Qureshi**, Khalil El-Khatib, *Proc. 24th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems (IEA-AIE 2011)*, Syracuse, NY, USA, June, 2011, 2:511–521.

[C17] "Collaborative Sensing via Local Negotiations in *Ad Hoc* Networks of Smart Cameras," **F.Z. Qureshi**, *Proc. 4th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 10)*, Atlanta, GA, USA, September, 2010, 1–8.

[C16] "Object-Video Streams for Preserving Privacy in Video Surveillance," **F.Z. Qureshi**, *Proc. 6th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS 09)*, Genovo, Italy, Septebmer, 2009, 1–6.

[C15] "Planning Ahead for PTZ Camera Assignment and Control," **F.Z. Qureshi**, D. Terzopoulos, *Proc. Third ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 09)*, Como, Italy, August, 2009, 1–8.

[C14] "Multi-Camera Control Through Constraint Satisfaction for Persistent Surveillance," **F.Z. Qureshi**, D. Terzopoulos, *Proc. 5th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS 08)*, Santa Fe, NM, USA, Septebmer, 2008, 1–8.

[C13] "A Simulation Framework for Camera Sensor Networks Research," **F.Z. Qureshi**, D. Terzopoulos, *Proc. 11th Communications and Networking Simulation Symposium (CNS 2008)*, Ottawa, Canada, April, 2008, 41–48.

[C12] "Virtual Vision: Visual Sensor Networks in Virtual Reality," **F.Z. Qureshi**, D. Terzopoulos, *Proc. ACM Symposium on Virtual Reality Software and Technology (VRST 2007)*, Newport Beach, CA, November, 2007, 247–248.

[C11] "Smart Camera Networks in Virtual Reality," **F.Z. Qureshi**, D. Terzopoulos, *Proc. First ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 07)*, Vienna, Austria, September, 2007, 1–8.

[C10] "Distributed Coalition Formation in Visual Sensor Networks: A Virtual Vision Approach," **F.Z. Qureshi**, D. Terzopoulos, *Proc. Third IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 07)*, Santa Fe, NM, June, 2007, 1–21.

[C9] "Surveillance in Virtual Reality: System Design and Multicamera Control," **F.Z. Qureshi**, D. Terzopoulos, *Proc. IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR 07)*, Minneapolis, MN, June, 2007, 1–8.

[C8] "Virtual Vision and Smart Cameras Networks," **F.Z. Qureshi**, D. Terzopoulos, *Working Notes of the International Workshop on Distributed Smart Cameras (DSC 2006)*, Boulder, CO, USA, October, 2006, 62–66. (Held in conjunction with the *4th ACM Conference on Embedded Networked Sensor Systems (SenSys 2006).*)

[C7] "Surveillance Camera Scheduling: A Virtual Vision Approach," **F.Z. Qureshi**, D. Terzopoulos, *Proc. Third ACM Workshop on Video Surveillance and Sensor Networks (VSSN 05)*, Singapore, November, 2005, 131–139.
Selected as a **best paper** *and invited for submission to a special issue of the ACM Multimedia Systems Journal.*

[C6] "Towards Intelligent Camera Networks: A Virtual Vision Approach," **F.Z. Qureshi**, D. Terzopoulos, *Proc. Second Joint IEEE International Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance (VS-PETS 05)*, Beijing, China, October, 2005, 177–184.

[C5] "A Computer Vision System for Space-bourne Safety Monitoring," **F.Z. Qureshi**, D. Macrini, D. Chung, J. Maclean, S. Dickinson, P. Jasiobedzki, *Proc. Eighth International Symposium on Artificial Intelligence, Robotics and Automation in*

Space (i-SAIRAS 2005), Munich, Germany, September, 2005, 1–8 (Electronic Format).

[C4] "Cognitive Vision for Autonomous Satellite Rendezvous and Docking," **F.Z. Qureshi**, D. Terzopoulos, P. Jasiobedzki, *Proc. Ninth IAPR Conf. on Machine Vision Applications (MVA 2005)*, Tsukuba Science City, Japan, May, 2005, 314–319.

[C3] "A Cognitive Vision System for Space Robotics," **F.Z. Qureshi**, D. Terzopoulos, P. Jasiobedzki, *Proc. ECCV 2004 Workshop on Applications of Computer Vision*, Prague, Czech Republic, May, 2004, 120–128.

[C2] "The Cognitive Controller: A Hybrid, Deliberative/Reactive Control Architecture for Autonomous Robots," **F.Z. Qureshi**, D. Terzopoulos, R. Gillette, *Proc. 17th International Conference on Industrial & Engineering Applications of Artificial Intelligence & Expert Systems (IEA/AIE 2004)*, Ottawa, Canada, May, 2004, 1102–1111.

[C1] "Development of an Off-line Programming (OLP) System for a Serial Link Robot Manipulator," **F.Z. Qureshi**, M. Asif, M. Ahmed, A. Rauf, *Proc. IEEE (Pakistan Section)*, Islamabad, Pakistan, 1997, 1–4.

arXiv Pre-Prints

[B3] "Prompt-Based Continual Compositional Zero-Shot Learning," S. Maryam†, S. Nadeem†, **F.Z. Qureshi**, M. Ali, 2025, arXiv:2512.09172 [cs.CV], 19pp.

[B2] "Latent Dirichlet Transformer VAE for Hyperspectral Unmixing with Bundled Endmembers," G. Giannetti†, **F.Z. Qureshi**, 2025, arXiv:2511.17757 [cs.CV], 10pp.

[B1] "Compositional Zero-Shot Learning: A Survey," A. Munir†, **F.Z. Qureshi**, M. Ali, M.H. Haris, 2025, arXiv:2510.11106 [cs.CV], 36pp.

Book Chapters

[B4] "Virtual Vision for Camera Networks Research," **F.Z. Qureshi**, D. Terzopoulos, in Academic Press Library in Signal Processing: Image, Video Processing and Analysis, Hardware, Audio, Acoustics and Speech Processing, Vol. 4, R. Chellappa, S. Theodoridis (eds.). Elsevier, January, 2014, Ch. 21, 609–625.

[B3] "Object Video Streams: A Framework for Preserving Privacy in Video Surveillance," **F.Z. Qureshi**, in Intelligent Multimedia Surveillance: Current Trends and Research, P. Atrey, M. Kankanhalli, A. Cavallaro (eds.). Springer, New York, 2013, Ch. 4, 67–82.

[B2] "Proactive PTZ Camera Control: A Cognitive Camera Network that Plans Ahead," **F.Z. Qureshi**, D. Terzopoulos, in Distributed Video Sensor Networks, B. Bhanu, C.V. Ravishankar, A.K. Roy-Chowdhury, H. Aghajan, D. Terzopoulos (eds.). Springer, New York, 2011, Ch. 19, 273–287.

[B1] "Virtual Vision: Virtual Reality Subserving Computer Vision Research for Camera Sensor Networks," D. Terzopoulos, **F.Z. Qureshi**, in Distributed Video Sensor Networks, B. Bhanu, C.V. Ravishankar, A.K. Roy-Chowdhury, H. Aghajan, D. Terzopoulos (eds.). Springer, New York, 2011, Ch. 11, 163–177.

Short Papers and Abstracts

[S7] "Improving Hyperspectral Image Segmentation by Applying Inverse Noise Weighting and Outlier Removal for Optimal Scale Selection," P.D. Dao, K. Mantripragada†, Y. He, **F.Z. Qureshi**, *Conference abstract at American Association of Geographers Remote Sensing Specialty Group Student Honors Competition*, April, 2020, 1pp.

[S6] "Guest Editorial," B. Bhanu, B. Lovell, A. Prati, **F.Z. Qureshi**, *Special issue on Distributed Smart Sensing for Mobile Vision—IEEE Sensors Journal*, May, 2015, 2631.

[S5] "Editorial Introduction," B. Bhanu, A. Prati, **F.Z. Qureshi**, *Special issue on Image Understanding for Real-World Distributed Video Networks—Computer Vision and Image Understanding Journal*, April, 2015, 46–47.

[S4] "Guest Editorial," E.Y. Lam, H. Aghajan, A. Prati, **F.Z. Qureshi**, V. Tam, *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, **3**(2), June, 2013, 1–2.

[S3] "Demo: A Distributed Virtual Vision Simulator," W. Starzyk†, A. Domurad†, **F.Z. Qureshi**, *5th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 11)*, Ghent, Belgium, August, 2011, 1–2.

[S2] "Activity Aware Video Collection to Minimize Resource Usage in Smart Camera Nodes (Extended Abstract)," **F.Z. Qureshi**, *Workshop on Resource Aware Sensor and Surveillance Networks (RAWSNET 11)*, Klagenfurt, Austria, August, 2011, 1–2.

[S1] "On the Role of Negotiations in *Ad Hoc* Networks of Smart Cameras," **F.Z. Qureshi**, *IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 10)*, Santa Barbara, CA, USA, June, 2010, 1–2.

Dissertations

[3] "Intelligent Perception in Virtual Sensor Networks and Space Robotics," Ph.D. Thesis, Department of Computer Science, University of Toronto, Toronto, Canada, January, 2007.

[2] "Constructing Anatomically Accurate Face Models using Computed Tomography and Cyberware Data," M.Sc. Thesis, Department of Computer Science, University of Toronto, Toronto, Canada, January, 2000.

[1] "TACS: A Tone Actuated Computer Control System," M.Sc. Thesis, Department of Electronics, Quaid-e-Azam University, Islamabad, Pakistan, January, 1995.

Creative Works: Cover Illustrations

[1] "Pedestrian Segmentation and Tracking," color image on the cover of the proceedings of the *Second Joint IEEE International Workshop on Visual Surveillance and Performance Evaluation of Tracking and Surveillance (VS-PETS 05)*, R. Chellappa, J. Ferryman, T. Tan (eds.), IEEE Computer Society Press, Beijing, China, October, 2005.

Invited Talks

[T31] Seminar, "Hyperspectral Unmixing Using Latent Dirichlet Variational Autoencoders," Information Technology University, Lahore, July, 2024.

[T30] Invited Keynote, "Two Applications of Deep Learning: Lessons Learned," Computer Engineering Conference at Mid Sweden University, Sundsvall, May, 2023.

[T29] Invited Short Course, "Deep Learning Primer," Center for Artificial Intelligence, Institute of Space Technologies, Islamabad, September, 2022.

[T28] Public Lecture, "Unreasonable Effectiveness of ConvNets on Object Recognition," Center for Artificial Intelligence, Institute of Space Technologies, Islamabad, June, 2022.

[T27] Public Seminar, "Hyperspectral Image Analysis for Remote Sensing: Lessons Learned," Mid Sweden University, Sundsvall, Sweden, March, 2022.

[T26] "A Tale of Two (Deep) Architectures," Mid Sweden University, Sundsvall, Sweden, December, 2019.

[T25] Public Seminar, "Deep Learning Meets Computer Vision," Mid Sweden University, Sundsvall, Sweden, December, 2019.

[T24] "A Stream Algebra for Computer Vision Systems," Department of Computing Science, University of Alberta, Edmonton, June, 2018.

[T23] "Disruptive Technologies," Ajax-Pickering Board of Trade, November, 2016.

[T22] "3D stereo tracking and trajectory reconstruction of multiple particles using locally approximated motion models," Alpen-Adria-Universität Klagenfurt, Institute of Networked and Embedded Systems, Pervasive Computing, Klagenfurt, Austria, January, 2016.

[T21] "Accelerated Cost-Volume Filtering for Depth Estimation," Dept. of Computer Science, Lahore University of Management Sciences, Lahore, March, 2015.

[T20] "An Algebra for Vision Streams," National Institute of Vacuum Technology, National Center for Physics, Islamabad, March, 2015.

[T19] "Virtual Vision: Smart Camera Networks in Virtual Reality," Dept. of Computer Science, COMSAT Institute of Information Technology, Islamabad, March, 2015.

[T18] "Virtual Vision: Smart Camera Networks in Virtual Reality," Dept. of Computer Science, Quaid-e-Azam University, Islamabad, March, 2015.

[T17] "Accelerating Cost Volume Filtering Using Salient Subvolumes and Robust Occlusion Handling," Syed Babar Ali School of Science and Engineering, Lahore University of Management Sciences, Lahore, March, 2015.

[T16] "3D Stereo Tracking and Trajectory Reconstruction of Multiple Particles using Locally Approximated Motion Models," University of Windsor, Windsor, ON, July, 2014.

[T15] "Privacy Protective Video Surveillance Systems," Privacy by Design User Forum, Toronto, December, 2013.

[T14] "Virtual Vision: A Tutorial," 6th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 12), Hong Kong, October, 2012.

[T13] "Virtual Vision: Smart Cameras in Virtual Reality," University of British Columbia, Vancouver, BC, April, 2012.

[T12] "Virtual Vision: Smart Cameras in Virtual Reality," Xerox Research Centre, Webster, NY, June, 2011.

[T11] "Proactive Camera Control for Collaborative Sensing," Distributed Video Sensor Networks (An Interdisciplinary workshop sponsored by NSF, ARO and ONR), University of California at Riverside, May, 2009.

[T10] "Virtual Vision for Smart Camera Sensor Network Research," Mitacs Seminar Series, McGill University, Montreal, Canada, February, 2009.

[T9] "3D Virtual Environments for Camera Network Research," Virtual Researcher on Call Program between the University of Ontario Institute of Technology and the Peel Region District School Board, Oshawa, Canada, November, 2008.

[T8] "Intelligent Perception in Virtual Sensor Networks and Space Robotics," Faculty of Science Colloquium, UOIT, Oshawa, Canada, March, 2008.

[T7] "Virtual Vision: A New Paradigm for Camera Sensor Network Research," University of Windsor Seminar Series, Windsor, Canada, February, 2007.

[T6] "Applications of Computers & AI: Intelligent Perception in Camera Networks and Space Robotics," Sunnybrook & Women's Hospital Life Long Journey Lecture Series, Toronto, Canada, June, 2006.

[T5] "Towards Intelligent Camera Networks: A Virtual Vision Approach," Space Vision and Advanced Robotics Workshop, MDRobotics Ltd., Brampton, Canada, May, 2006.

[T4] "Tracking Objects with a Network of Steerable Cameras," Space Vision and Advanced Robotics Workshop, MDRobotics Ltd., Brampton, Canada, May, 2004.

[T3] "CoCo – A Hybrid Architecture for Designing High-Level Controllers," Montreal-Toronto Computer Vision Workshop, McGill University, Montreal, May, 2003.

[T2] "Cognitive Controller," Space Vision and Advanced Robotics Workshop, MDRobotics Ltd., Brampton, Canada, April, 2002.

[T1] "Behavior and Cognitive Modeling for Autonomous Agents," Space Vision and Advanced Robotics Workshop, MDRobotics Ltd., Brampton, Canada, April, 2001.

Contributed Presentations

[P29] "CascadedViT: Cascaded Chunk-FeedForward and Cascaded Group Attention Vision Transformer," *23rd Conference on Robots and Vision*, Vancouver, British Columbia, Canada, May, 2026.

[P28] "Revisiting Person Re-ID: ConvNeXt with AIBN and TNorm in IICS/IIDS Frameworks," *15th International Conference on Pattern Recognition Applications and Methods*, Marbella, Spain, March, 2026.

[P27] "Single Hyperspectral Image Super-Resolution utilizing Implicit Neural Representations," *14th International Conference on Pattern Recognition Applications and Methods (ICPRAM)*, Porto, February, 2025.

[P26] "Hyperspectral Image Compression using Implicit Neural Representation and Meta-Learned Based Network," *14th International Conference on Pattern Recognition Applications and Methods (ICPRAM)*, Porto, February, 2025.

[P25] "SpACNN-LDVAE: Spatial Attention Convolutional Latent Dirichlet Variational Autoencoder for Hyperspectral Pixel Unmixing," *International Geoscience and Remote Sensing Symposium (IGARSS)*, Athens, July, 2024. (Presented by my student S. Chitnis†.)

[P24] "Real-time Video Summarization on Commodity Hardware," *12th ACM International Conference on Distributed Smart Cameras (ICDSC 18)*, Eidenhoven, 2018.

[P23] "Fast Estimation of Large Displacement Optical Flow Using Dominant Motion Patterns & Sub-Volume PatchMatch Filtering," *14th Conference on Computer and Robot Vision (CRV 17)*, Edmonton, May, 2017. (Presented by my student M.A. Helala†.)

[P22] "An Index Structure for Fast Range Search in Hamming Space," *14th Conference on Computer and Robot Vision (CRV 17)*, Edmonton, May, 2017.

[P21] "A formal Algebra implementation for distributed image and video stream processing," *10th International Conference on Distributed Smart Cameras (ICDSC 16)*, Paris, 2016. (Presented by my student M.A. Helala.†)

[P20] "Constructing Image Mosaics Using Focus Based Depth Analysis," IEEE Winter Applications of Computer Vision Conference (WACV 16), Lake Placid, March, 2016. (Presented by my student M.A. Helala.†)

[P19] "Automatic Video Editing for Sensor-Rich Videos," IEEE Winter Applications of Computer Vision Conference (WACV 16), Lake Placid, March, 2016, (Presented by my student W. Taylor.†)

[P18] "Towards Efficient Feedback Control in Streaming Computer Vision Pipelines," Workshop on User-Centered Computer Vision (co-located with ACCV), Singapore, November, 2014. (Presented by my student M.A. Helala.†)

[P17] "A Stream Algebra for Computer Vision Pipelines," 2nd Workshop on Web-scale Vision and Social Media (co-located with CVPR), Columbus, OH, June, 2014.

[P16] "Topic Models for Image Localization," Tenth Conference on Computer and Robot Vision (CRV 13), Regina, May, 2013. (Presented by my student Z. Wang.†)

[P15] "Mosaic of Near Ground UAV Videos Under Parallax Effects," 6th ACM/IEEE International Conference of Distributed Smart Cameras (ICDSC 12), Hong Kong, October, 2012.

[P14] "Road Boundary Detection in Challenging Scenarios," 9th IEEE International Conference on Advanced Video and Signal-Based Surveillance (AVSS 12), Beijing, China, September, 2012. (Presented by my student M. Helala.†)

[P13] "Extracting 3D Blood Flight Trajectories from Videos for Forensic Analysis," 1st International Conference on Pattern Recognition Applications and Methods (ICPRAM 12), Vilamoura, Algarve, Portugal, February, 2012. (Presented by my student L. Zarrabeitia.†)

[P12] "Activity Aware Video Collection to Minimize Resource Usage in Smart Camera Nodes (Extended Abstract)," *Workshop on Resource Aware Sensor and Surveillance Networks (RAWSNET 11)*, Klagenfurt, Austria, August, 2011.

[P11] "Learning Proactive Control Strategies for PTZ Cameras," *5th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 11)*, Ghent, Belgium, August, 2011. (Presented by my student W. Starzyk.†)

[P10] "Negotiating Privacy Preferences in Video Surveillance Systems," *24th International Conference on Industrial Engineering and Other Applications of Applied Intelligent Systems (IEA-AIE 2011)*, Syracuse, NY, June, 2011.

[P9] "Collaborative Sensing via Local Negotiations in *Ad Hoc* Networks of Smart Cameras," *4th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 10)*, Atlanta, GA, September, 2010.

[P8] "Planning Ahead for PTZ Camera Assignment and Control," *Third ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 09)*, Como, Italy, September, 2009.

[P7] "Multi-Camera Control Through Constraint Satisfaction for Persistent Surveillance," 5th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS 08), Santa Fe, NM, September, 2008.

[P6] "A Simulation Framework for Camera Sensor Networks Research," 11th Communications and Networking Simulation Symposium (CNS 2008), Ottawa, Canada, April, 2008.

[P5] "Distributed Coalition Formation in Visual Sensor Networks: A Virtual Vision Approach," Third IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS 07) Santa Fe, NM, USA, June, 2007.

[P4] "Virtual Vision and Smart Cameras Networks," International Workshop on Distributed Smart Cameras (DSC 2006), Boulder, CO, USA, October, 2006.

[P3] "Surveillance Camera Scheduling: A Virtual Vision Approach," Third ACM Workshop on Video Surveillance and Sensor Networks (VSSN 05), Singapore, November, 2005.

[P2] "The Cognitive Controller: A Hybrid, Deliberative/Reactive Control Architecture for Autonomous Robots," 17th International Conference on Industrial & Engineering Applications of Artificial Intelligence & Expert Systems (IEA/AIE 2004), Ottawa, Canada, May, 2004.

[P1] "A Cognitive Vision System for Space Robotics," Workshop on Applications of Computer Vision, European Conference on Computer Vision (ECCV 04), Prague, Czech Republic, May, 2004.

Professional Activity

Conference Organization

Associate Editor, *International Conference on Pattern Recognition*, 2022.

Co-Chair, *13th Conference on Computer and Robot Vision*, Victoria, June, 2016.

Co-Chair, *12th Conference on Computer and Robot Vision*, Halifax, June, 2015.

Co-Chair, *Third IEEE Workshop on Camera Networks and Wide Area Scene Analysis*, 2013. (Co-located with CVPR13.)

Co-Chair, *Second IEEE Workshop on Camera Networks and Wide Area Scene Analysis*, 2012. (Co-located with CVPR12.)

Co-Chair, *First IEEE Workshop on Camera Networks and Wide Area Scene Analysis*, 2011. (Co-located with CVPR11.)

Co-Chair, *IBM CASCON Workshop on Software Modeling for Embedded and Mobile Sensor Systems*, November, 2011.

Technical Program Chair, *7th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 13)*, 2013.

Technical Program Chair, *6th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 12)*, 2012.

Publicity Chair, *10th IEEE International Conference on Advanced Video and Signal-Based Surveillance*, 2013.

Publicity Chair, *IEEE International Workshop on Advances in Automated Multimedia Surveillance for Public Safety (AAMS-PS)*, 2011.

Poster/Demo Chair, *The 18th Symposium on Virtual Reality Software and Technology*, 2012.

Treasurer, *The 18th Symposium on Virtual Reality Software and Technology*, 2012.

Member, HETRU/MHR Conference Organizing Committee, *Second Annual Conference on What Really Works in Technology-Enhanced Health Education: Effective Use of Simulations and e-Education Strategies to Improve Teaching and Learning*, 2009.

Editorial Duties and Panels

Guest Editor, *IEEE Sensors*, special issue on "Distributed Smart Sensing for Mobile Vision," 2015.

Guest Editor, *Computer Vision and Image Understanding*, special issue on "Image Understanding for Real-World Distributed Video Networks," 2015.

Guest Editor, *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, special issue on "Computational and Smart Cameras," 2013.

Penalist, *ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 14)*, 2014.

Penalist, *ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 10)*, 2010.

Grant Reviewing

Vision: Science to Applications Grants Reviewing (VISTA), York University, 2021.

King Abdulaziz City for Science and Technology (KACST) Grant Reviewer for Research Competitiveness Program, American Association for the Advancement of Science (AAAS), 2018.

NSERC Discovery Grant, 2016, 2017, 2018, 2019, 2021.

NSERC Strategic Projects, 2011, 2014.

Qatar National Research Fund (National Priorities Research Program), 2011, 2013, 2014.

NSERC Alliance Grants, 2020.

NSERC Strategic Projects, 2009, 2010.

NSERC Collaborative Research and Development Grants, 2009.

Mitacs Accelerate, 2015, 2018, 2019, 2020, 2021, 2022.

Program Committee Membership & Conference Reviewing

1st IEEE Workshop on Advances in Automated Multimedia Surveillance for Public Safety (AAMS-PS'11), 2011.

AAAI Conference on Artificial Intelligence, 2021.

ACM/IEEE Conference on Distributed Smart Cameras (ICDSC), 2014, 2015, 2016, 2017, 2019.

Asian Conference on Computer Vision (ACCV), 2016, 2018, 2024.

British Machine Vision Conference (BMVC), 2018, 2019, 2020, 2021, 2023, 2024.

Computer Graphics International (CGI), 2010, 2012.

Conference on Computer and Robot Vision (CRV), 2018, 2019, 2020, 2021.

Eurographics, 2022.

European Conference on Computer Vision (ECCV), 2008, 2016, 2024.

First IEEE Workshop on Camera Networks, 2010. (Co-located with CVPR10.)

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2006, 2007, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2019, 2020, 2021, 2022, 2023, 2024, 2025

IEEE International Conference on Advanced Video and Signal-Based Surveillance (AVSS), 2010, 2012, 2013, 2014, 2016, 2018, 2019.

IEEE International Conference on Computer Vision (ICCV), 2007, 2009, 2011, 2013, 2015, 2019, 2021, 2022, 2023.

IEEE/ISPRS workshop on Multi-Sensor Fusion for Outdoor Dynamic Scene Understanding, in conjunction with IEEE Conference on Computer Vision and Pattern Recognition, 2014.

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2019.

IEEE Winter Conference on Applications and Computer Vision (WACV), 2014, 2016, 2017, 2018, 2019, 2020, 2021, 2024.

IEEE Workshop on Advances in Automated Multimedia Surveillance for Public Safety (AAMS-PS), 2012, 2013.

IEEE Workshop on the Applications of Computer Vision, 2013.

International Conference on Distributed Computing Systems (ICDCS), 2008, 2009.

International Conference on Informatics, Electronics & Vision (ICIEV), 2012, 2013.

International Conference on Learning Representations (ICLR), 2022, 2024.

International Conference on Machine Learning (ICML), 2025.

International Conference on Pattern Recognition (ICPR), 2014, 2018, 2020, 2022.

International Conference on Robotics and Automation (ICRA 11), 2011.

International Society for Photogrammetry and Remote Sensing, 2013.

Neural Information Processing Systems (NeurIPS), 2019, 2023, 2024.

Journal Reviewing

Acta Astronautica

Advances in Multimedia Journal

Canadian Society of Forensic Science Journal

Canadian Young Scientist Journal

Computer Animation and Virtual Worlds

Computer Vision and Image Understanding

IEEE Access

IEEE Computers

IEEE Journal of Selected Topics in Signal Processing

IEEE Transactions of Geoscience and Remote Sensing

IEEE Transactions on Automation Science and Engineering

IEEE Transactions on Circuits and Systems for Video Technology

IEEE Transactions on Communications

IEEE Transactions on Multimedia

IEEE Transactions on Pattern Analysis and Machine Intelligence.

IEEE Virtual Reality

Image Communication Journal

International Journal of Computer Mathematics

International Journal of Optomechatronics

International Journal of Trust Management in Computing and Communications

IPSJ Transactions on Computer Vision and Applications

Journal of Aerospace Engineering

Journal of Remote Sensing

Künstliche Intelligenz (special issue on Space Robotics)

Machine Vision and Applications

Multimedia Systems Journal

Multimedia Tools and Applications

Pattern Recognition Letters

Transactions on Intelligent Systems and Technology.

Transactions on Sensor Networks

Training of Highly Qualified Personnel

PhD Students

H. Butt, Ph.D. Computer Science, in progress.

S. Nadeem, Ph.D. Computer Science, Information Technology University, in progress. (Co-supervised with M. Ali)

S. Rezasoltani, Ph.D. Computer Science, July, 2025
Thesis title: *Hyperspectral Image Compression using Implicit Neural Representations* (**Ontario Tech Best Doctoral Thesis 2026**)

K. Mantripragada, Ph.D. Computer Science, June, 2025
Thesis title: *Latent Dirichlet Variational Autoencoder: a novel approach for Hyperspectral Image Analysis and Pixel Unmixing Exploring Deep Learning Architectures* (**Nominated for thesis award**)

A. Lycksam, Ph.D. Computer Engineering, Mid Sweden University, June, 2025. (Co-supervised with M. O'Nils)
Thesis title: *From Concepts to Conditions: Bridging the Gap in AI-Based Maintenance Systems*

H. Alqaysi, Ph.D. Electronics, Mid Sweden University, January, 2022. (Co-supervised with M. O'Nils)
Thesis title: *Cost Optimization of Volumetric Surveillance for Sky Monitoring Towards Flying Object Detection and Positioning*

M. Helala, Ph.D. Computer Science, September, 2018. (Co-supervised with K.Q. Pu)
Thesis title: *Towards Efficient and Scalable Computer Vision Systems*

L. Zarrabeitia, Ph.D. Computer Science, ABD. (Co-supervised with D. Aruliah)

M.Sc. Students

D. Zajac, M.Sc. Computer Science, In progress.

A. Linardatos, M.Sc. Computer Science, In progress. (Co-supervised with H. Davoudi)

N. Shah, M.Sc. Computer Science, In progress. (Co-supervised with C. Collins)

G. Giannetti, M.Sc. Computer Science, June, 2026
Thesis title: *Latent Dirichlet Transformer VAE for Hyperspectral Unmixing with Bundled Endmembers*

Sauda Maryam, M.Sc. CS, Information Technology University, January, 2026. (Co-supervised with M. Ali)
Thesis title: *Prompt-Based Continual Compositional Zero-Shot Learning*

Hafiz A. Amjad, M.Sc. Computer Science, August, 2025
Thesis title: *An Attention-Enhanced Student-Teacher Framework for Structural and Logical Anomaly Detection in Industrial Settings*

S. Nadeem, M.Sc. Computer Science, December, 2024.
Thesis title: *Hybrid Architecture for Human Action Recognition Using Skeleton Data* (**Nominated for thesis award**)

N. Ejaz, M.Sc. Computer Science, May, 2024.
Thesis title: *A Few-Shot Learning Method for Single-Object Visual Anomaly Detection*

N. Tabaraki, M.Sc. Computer Science, May, 2024.
Thesis title: *A Study of Meta-Learning Methods on the Problem of Video Matting*

Matthew Chan, M.Sc. Computer Science, April, 2024. (Co-supervised with C. Collins)
Thesis title: *Characterizing Midair Handwriting in Virtual Reality*

C. Karia, M.Sc. Computer Science, December, 2023.
Thesis title: *Predicting Multi-Person Human Dynamics* (**Nominated for thesis award**)

R. Dehghani, M.Sc. Computer Science, October, 2023.
Thesis title: *An Investigation into the Use of ConvNext within IICS/IIDS Framework for Person Re-ID*

H. Jafarian, M.Sc. Computer Science, May, 2023.
Thesis title: *Error Estimation for Single-Image Human Body Mesh Reconstruction* (**Nominated for thesis award**)

Z. Hashmi, M.Sc., Information Technology University, December, 2022. (Co-supervised with M. Ali)
Thesis title: *Conditional Primitive Embeddings for Compositional Zero-Shot Learning*

M. Talpur, M.Sc. Computer Science, November, 2022.
Thesis title: *A Modular Approach to Image Matting*

M. Lombardo, M.Sc. Computer Science, January, 2022.
Thesis title: *Parsing Genetic Models*

M. Baeenah, M.Sc. Computer Science, February, 2020.
Thesis title: *Multi-character Prediction Using Attention*

T. Joseph, M.Sc. Computer Science, June, 2019. (Co-supervised with K.G. Derpanis)
Thesis title: *Joint Spatial and Layer Attention for Convolutional Networks*

W. Taylor, M.Sc. Computer Science, April, 2018.
Thesis title: *Achieving Real-Time Video Summarization on Commodity Hardware*

D. Nemirovsky, M.Sc. Computer Science, August, 2017. (Co-supervised with I. Tamblyn)
Thesis title: *Analysing and Inferring Atomic Structure from Nanoscale Imagery*

R. Shanks, M.Sc. Computer Science, December, 2015. (Co-supervised with M. Green)
Thesis title: *Towards Parallax-Based Unencumbered Displays*

E.R. Reina, M.Sc. Computer Science, Completed, November, 2014. (Co-supervised with K.Q. Pu)
Thesis title: *An index structure for fast range search in hamming space*

J. Stadler, M.Sc. Computer Science, Completed, October, 2014.
Thesis title: *A framework for video driven crowd synthesis*

W. Starzyk, M.Sc. Computer Science, Completed, October, 2014.
Thesis title: *A negotiation protocol with conditional offers for camera handoffs*

N. Parvin, M.Sc. Computer Science, Completed, October, 2013. (Co-supervised with K.Q. Pu)
Thesis title: *Robust Curved Road Boundary Detection Using Hierarchical Clustering*

Z. Wang, M.Sc. Computer Science, Completed, August, 2013.
Thesis title: *Topic Models for Image Localization*

R. Murray, M.Sc. Modeling and Computational Science, Completed, August, 2012. (Co-supervised with D. Aruliah)
Thesis title: *Computational and Laboratory Investigations of a Model of Blood Droplet Flight for Forensic Applications*

C. Little, M.Sc. Computer Science, Completed, December, 2011. (Co-supervised with M. Green)
Thesis title: *Ray Tracing Large Distributed Datasets using Ray Caches*

G. Lobo, M.Sc. Modeling and Computational Science, Completed, August, 2011. (Co-supervised with D. Aruliah)
Thesis title: *Investigation into Smoothed Particle Hydrodynamics for Non-Newtonian Droplet Modelling*

M.S. Barhm, Master's in Information Technology Security Thesis, Completed, August, 2009. (Co-supervised with K. El-Khatib)
Project title: *Introducing PASS: A Privacy Aware Surveillance System*

Undergraduate Research Assistants

S.K. Mauricio, Exchange student from Universidade de Sao Paulo, Brazil. (Co-supervised with A. Quevedo.) Project title: *On Face De-duplication in Health Records*

B. Perederei, Mitacs Globalink Research Intern, Summer 2024.

Project title: *Hyperspectral Image Super-Resolution*

S. Chitnis, Mitacs Globalink Research Intern, Summer 2023.
Project title: *Spatial Attention Convolutional Latent Dirichlet Variational Autoencoder for Hyperspectral Pixel Unmixing*

G.S. Ahmed, Mitacs Globalink Research Intern, Summer 2023.
Project title: *Deep Learning for Cloud Removal in Hyperspectral Imagery*

M.M. Rehman, Research Assistant, Summer, Fall 2019.
Project title: *An Exploration of Few Shot Learning Techniques*

K. Chan, Research Assistant, Summer, Fall 2019.
Project title: *Pose Estimation*

M. Lombardo, NSERC Undergraduate Research Award, Summer 2018.
Project title: *Content Aware Video Summarization*

M. Stergianis, NSERC Undergraduate Research Award, Summer 2017.
Project title: *Stereo Depth Estimation using Slanted Windows*

M. Stergianis, NSERC Undergraduate Research Award, Summer 2016.
Project title: *Long-term Activity Recognition in Construction Sites*

S. G. Kamyar, UTRECS, University of Toronto, Completed, Summer 2015. (Co-supervised with S. Dickinson)
Project title: *Surface Proposals*

E. Datsenko, UTRECS, University of Toronto, Completed, Summer 2015. (Co-supervised with S. Dickinson)
Project title: *Surface Proposals*

S. Singhal, Mitacs Globalink Summer Intern, Completed, Summer 2015.
Project title: *Temporal Superpixels*

P. Dugar, Mitacs Globalink Summer Intern, Completed, Summer 2015.
Project title: *Action Recognition*

W. Taylor, Summer Research Assistant, Completed, Summer 2015.
Project title: *Vehicle Detection and Tracking in Traffic Cameras*

W. Taylor, NSERC Undergraduate Research Award, Completed, Summer 2014
Project title: *New Tools for Automatic Video Editing*

W. Taylor, Work Study, Completed, Summer 2013.
Project title: *Intelligent Context Aware Video Editing*

R. Shanks, Summer Research Student, Summer 2013. (Co-supervised with M. Green)

Project title: *Investigations into High-Performance Rendering Using CUDA*

D. Nemirovsky, Summer Research Student, Summer 2013. (Co-supervised with I. Tamblyn)
Project title: *LED Based Indoor Localization*

J. Stadler, Summer Research Student, Summer 2012. (Co-supervised with A. Hogue)
Project title: *Vision-Based Lift Analysis using Microsoft Kinect*

M. Al-Sukhni, Research Assistant, Completed, April 2012. (Co-supervised with K. El-Khatib)

W. Starzyk, Summer Research Student, Summer 2011.
Project title: *Learning Proactive Control Strategies for PTZ Cameras*

A. Domurad, NSERC Undergraduate Research Award, Summer 2011.
Project title: *Pedestrian Tracking using a Visual Analysis Pipeline*
Best Poster, Faculty of Science, Student Research Showcase.

W. Starzyk, Summer Research Student, Summer 2010.
Project title: *A Cognitive Camera Network*

M.T. Kaykobad, Summer Research Student, Summer 2010.
Project title: *Dynamic Path Planning for Crowd Simulation*

A. Domurad, Summer Research Student, Summer 2010.
Project title: *Color-based Pedestrian Tracking*

K. Ajorli, Summer Research Student, Summer 2009.
Project title: *Pedestrian Tracking using OpenCV Library*

C. Little, SHARCNET Research Fellow, Summer 2009.
Project title: *Pedestrian Animation using SHARCNET HPC Environment*

Undergraduate Thesis Students

A. Ariaran, Undergraduate Thesis, In progress.

A. Zheng, Undergraduate Thesis, In progress. (Co-supervised with K. Davoudi)

J. Rempel, Undergraduate Thesis, In progress.

G. Lamain, Undergraduate Thesis, In progress. (Co-supervised with K.Q. Pu)

S. Sivakumar, Undergraduate Thesis, April 2025.
Project title: *WS-EfficientViT: Cluster Weight Shared Efficient Vision Transformer*

D. Houle-Tymeczke, Undergraduate Thesis, April 2025. (Co-supervised with S. Liv-

ingstone)
Project title: *EAT and Audio2Head: Categorical Emotional Talking Head Generation with Predicted Head Poses* (**Honors Thesis Award**)

A. Shangari, Undergraduate Thesis, April 2025.
Project title: *Tracking Shape-Changing Worms (C. Elegans) in Video Using Skeleton-Based Particle Tracking*

D. Zajac, Undergraduate Thesis, April 2025.
Project title: *Skeleton-Based Action Prediction using Knowledge Transfer*

M.M. Rehman, Undergraduate Thesis, April 2022. (Co-supervised with K.Q. Pu)
Project title: *Visualizing Zero-Shot Learning*

K. Chen, Undergraduate Thesis, April 2021.
Thesis title: *A Study of Something-Something Interactions in Videos*

P. Madan, Undergraduate Thesis, April 2021.
Thesis title: *Using Attention for Action Classification*

H. Thasarathan, Undergraduate Thesis, April 2021.
Thesis title: *An Energy Expenditure Approach for Human Pose Analysis*

R. Nation, Undergraduate Thesis, April 2021.
Thesis title: *Improving Point-to-Mesh using Autoencoders*

M. Afgan Talpur, Undergraduate Thesis, April 2020.
Thesis title: *Deep Learning on the Go*

N. Beals, Undergraduate Thesis, April 2020. (Co-supervised with C. Collins)
Thesis title: *A Vision-Based System for Non-Intrusive Posture Correction Notifications*

J. Perry, Undergraduate Thesis, April 2020. (Co-supervised with C. Collins)
Thesis title: *Gamer Skill Prediction using Gaze Tracking*

M. Lombardo, Undergraduate Thesis, April 2019.
Thesis title: *Exploring LSTMs for Video Analysis*

M. McColeman, Undergraduate Thesis, April 2019.
Thesis title: *Human Joint Prediction using Convolutional Neural Networks*

M. Stergianis, Undergraduate Thesis, April 2018.
Thesis title: *Stereo Vision: Cost Volume Filtering meetings Deep Learning*

H. Thomas, Undergraduate Thesis, April 2018.
Thesis title: *Video Summarization with Super-Frame Segmentation*

R. De Bruyn, Undergraduate Thesis, April 2017.
Thesis title: *Mobile Image Analysis*

J.M. Mendez, Undergraduate Thesis, April 2017.
Thesis title: *Genomic Diff on the Cloud*

W. Taylor, Undergraduate Thesis, Completed, April 2015.
Thesis title: *Vision-Based High-Performance Highway Vehicles Analytics*

P. Goebel, Undergraduate Thesis, Completed, April 2014.
Thesis title: *Fast Image Matching using ORB and Multi-Index Hashing*

C. Marshall, Undergraduate Thesis, Completed, April 2014.
Thesis title: *Privacy Protected Video Surveillance*

D. Nemirovsky, Undergraduate Thesis, Completed, April 2014. (Co-supervised with I. Tamblyn)
Thesis title: *Object Detection and Annotation in Videos for Location Recall*

S. Gloin, Undergraduate Thesis, Completed, April 2013. (Co-supervised with D. Aruliah)
Thesis title: *Blood Droplet Analysis Using Image Processing and Ellipse Fitting Techniques*

J. Stadler, Undergraduate Thesis, Completed, April 2012.
Thesis title: *Interactive Online Image Stitching for Panoramic Image Generation*

T. Chaung, Undergraduate Thesis, Completed, April 2012.
Title Thesis: *Dynamic Crowd Simulation*

J. Elliot, Undergraduate Thesis, Completed, April 2012. (Co-supervised with K.Q. Pu)
Thesis title: *Regression of Graph Images using Piecewise Interpolation*

A. Kidd, Directed Studies, Completed, December, 2011. (Co-supervised with J.S. Bradbury)
Project title: *Digital Signage*

W. Starzyk, Undergraduate Thesis, Completed, April, 2011.
Thesis title: *Virtual Vision Simulator for Smart Camera Network Research*

M.T. Kaykobad, Undergraduate Thesis, Completed, April, 2011.
Thesis title: *A Study on Simulating Formation and Movement of a Group of Agents*

A. Wijtowich, Undergraduate Thesis, Completed, April, 2010. (Co-supervised with K.Q. Pu)
Thesis title: *A Sliding Model for Estimating Traffic Density*

B. Chicoine, Undergraduate Thesis, Completed, April, 2010. (Co-supervised with

J.S. Bradbury and C. Collins)
Thesis title: *An Online System for Visualizing UOIT Class Schedules*

Doctoral Thesis Examiner

J. Kemp, University of Guelph, October, 2026.

J.S. Ahluwalia, Abertay University, May, 2026.

S.A. Tariq, COMSAT Institute of Information Technology, January, 2025.

M.A. Munir, PhD EE, Information Technology University, September, 2024.

R. Karim, PhD EECS, York University, June, 2024.

J. Iqbal, PhD EE, Information Technology University, May, 2024.

H.U. Khan, COMSAT Institute of Information Technology, December, 2023.

F. Afza, COMSAT Institute of Information Technology, February, 2023.

S.T.S. Bukhari, COMSAT Institute of Information Technology, August, 2022.

R.M.W. Ahmed, Capital University Islamabad, June, 2022.

Y.A.Y. Alzahrani, University of Windsor, December, 2021.

Z. Iqbal, COMSAT Institute of Information Technology, October, 2021.

M. Fayyaz, COMSAT Institute of Information Technology, March, 2021.

A. Tahir, COMSAT Institute of Information Technology, December, 2020.

S.M. Naqi, COMSAT Institute of Information Technology, July, 2019.

A. Khan, COMSAT Institute of Information Technology, April, 2019.

Y. Xue, University of Alberta, June, 2018.

P. Habashi, University of Windsor, May, 2018.

A. Zaheer, Lahore University of Management Sciences, Punjab, Pakistan, February, 2018.

M. Khan, COMSAT Institute of Information Technology, March, 2017.

A.S. Montero, University of Ottawa, May, 2016.

S.S. Barpanda, National Institute of Technology Rourkela, May, 2016

M. Schranz, Alpen-Adria-Universität Klagenfurt, Institute of Networked and Embedded Systems, Pervasive Computing, January, 2016.

P. Natarajan, National University of Singapore, October, 2013.

Master's Thesis Examiner (External)

D. Fichuk, M.Sc. Applied Modelling and Quantitative Methods, Trent University, September, 2019.

C. Chambers, M.Sc. Applications of Modelling in the Natural and Social Sciences, Trent University, May, 2019.

R. Bisewski, M.Sc. CS, University of Winnipeg, July, 2012.

Student Examination Committees

Committee Member, M.Sc. MCSC, A. Callanan, Ontario Tech University, September, 2026.

Thesis Examiner, Ph.D. CS, A. Maraj, Ontario Tech University, August, 2024.

Committee Member, M.Sc. CS, C.M. Culver, Ontario Tech University, August, 2024.

Thesis Examiner, M.Sc. CS, P. Salmani, Ontario Tech University, July, 2024.

Committee Member, M.Sc. CS, F. Dehghani, Ontario Tech University, April, 2024.

Thesis Examiner, M.Sc. CS, C. Orian, Ontario Tech University, November, 2023.

Thesis Examiner, M.Sc. CS, B. Ko, Ontario Tech University, September, 2023.

Committee Member, M.Sc. CS, N. Maarfavi, Ontario Tech University, May, 2023.

Thesis Examiner, M.Sc. CS, P. Louis, Ontario Tech University, May, 2023.

Thesis Examiner, M.Sc. CS, P. Nagy, Ontario Tech University, March, 2023.

Thesis Examiner, M.A.Sc. ECE, Md.J.A. Khan, Ontario Tech University, November, 2022.

Committee Member, Ph.D. MCSC, A. Nagel, Ontario Tech University, October, 2022.

Committee Member, Ph.D. MCSC, M. Magill, Ontario Tech University, August, 2022.

Committee Member, M.Sc. CS, A. Stoica, Ontario Tech University, July, 2022.

Committee Member, Ph.D. MCSC, M.R. Machado, Ontario Tech University, April, 2022.

Thesis Examiner, Ph.D. CS, T. Atele-Williams, Ontario Tech University, November, 2021.

Committee Member, M.Sc. CS, F. Wang, Ontario Tech University, July, 2021.

Committee Member, M.Sc. CSB, A. Sullivan, University of Toronto, July, 2021.

Committee Member, Ph.D. CS, A. Aminpour, Ontario Tech University, June, 2021.

Thesis Examiner, M.Sc. CS, G. Wang, Ontario Tech University, June, 2021.

Committee Member, Ph.D. MCSC, K. Mills, Ontario Tech University, March, 2021.

Committee Member, Ph.D. CS, M. Mojica, Ontario Tech University, March, 2021.

Thesis Examiner, M.Sc. CS, T. Dehkharghanian, Ontario Tech University, December, 2020.

Committee Member, M.Sc. CS, S. Sajjadi, Ontario Tech University, December, 2020.

Thesis Examiner, M.Sc. CS, B. Askari Firoozjayi, Ontario Tech University, October, 2020.

Thesis Examiner, Ph.D. CS, H. Singh, Ontario Tech University, March, 2020.

Committee Member, M.Sc. MCSC, R. Coles, Ontario Tech University, December, 2019.

Thesis Examiner, Ph.D. CS, B. Yankson, UOIT, August, 2019.

Committee Member, M.Sc. CS, R. Weagant, UOIT, August, 2019.

Committee Member, M.Sc. CS, K. Nazeri, UOIT, April, 2019.

Thesis Examiner, M.Sc. MCSC, W. Yang, UOIT, July, 2018.

Thesis Examiner, Ph.D. CS, R. Alomari, UOIT, March, 2018.

Thesis Examiner, M.Sc. MCSC, S. Kulaseharan, UOIT, November, 2017.

Committee Member, M.Sc. CS, A. Hedrick, UOIT, October, 2017.

Thesis Examiner, Ph.D., S. Aghababaei, UOIT, July, 2017.

Thesis Examiner, Ph.D. EE, S. Hamidi, UOIT, June, 2016.

Thesis Examiner, M.A.Sc. Engineering and Applied Science, M. Gilani, UOIT, April, 2016.

Thesis Examiner, M.A.Sc. Engineering and Applied Science, N. Ben Otman, UOIT, December, 2015.

Thesis Examiner, M.A.Sc. Mechanical Engineering, F. Meshkinfam, UOIT, November, 2015.

Committee Member, M.Sc. CS, C.R. Zerebecki, UOIT, January, 2014.

Committee Member, M.Sc. CS, W. Sherif, UOIT, January, 2013.

Committee Member, M.Sc. CS, M-W. Chang, UOIT, November, 2012.

Committee Member, M.Sc. CS, R. Deighton, UOIT, November, 2012.

Thesis Examiner, M.A.Sc. ECE, Z.M. Islam, UOIT, January, 2012.

Thesis Examiner, M.Sc. CS, M. Mwebesa, UOIT, December, 2011.

University Service

Hiring, Renewal and Promotion Committees

Member, Faculty of Science, Tenure and Promotion Committee, October, 2020.

Member, WR Smith Thesis Award Selection Committee, May, 2019.

Member, Dean of Faculty of Science Renewal Advisory Committee, 2018.

Member, CS Academic Associate Hiring Committee, June, 2018.

Member, Dean of Faculty of Business and IT Search Committee, 2017.

Member, Faculty of Business and IT Faculty Appointment Committee, 2017. (x3)

Reviewer, Faculty of Business and Information Technology Tenure and Promotion Application, 2017.

Reviewer, Faculty of Science Tenure and Promotion Applications, 2017. (x2)

Member, Dean of Faculty of Science Search Committee, 2013.

Member Computer Science Teaching Faculty Hiring Committee, 2013

Member, Dean of Faculty of Education Search Committee, 2011.

Member, Presidential Search Committee, 2011.

Member, Academic Council, 2010–2013. (Faculty of Science)

Committee Work

Chair, Computer Science Graduate Program Review, Internal Assessment Committee, 2019.

Member, NSERC CGS-D/PGS-doctoral Competition, University Selection Committee, 2020

Member, University Recruitment Committee, 2017. (Faculty of Science Representative)

Member, Computer Science Graduate Program Review, Internal Assessment Committee, 2013.

Member, Curriculum and Program Review Committee, 2012.

Member, Student Retention Committee, 2017, 2018, 2019.

Member, Science Research Committee, 2019.

Member, Web Committee, 2017, 2018.

Member, Faculty of Science Executive Committee, 2016.

Member, ad hoc TELE Committee, Faculty of Science, 2015.

Member, ad hoc Retention Committee, Faculty of Science, 2015.

Member, Dean of Science Advisory Committee, 2015.

Member, Faculty of Science Research Excellence Awards Nomination Committee, 2013.

Member, Undergraduate Student Research Awards, 2013

Member, NSERC/OGS Review Committee (Computer Science), 2013

Member, NSERC/OGS Review Committee, 2009, 2010.

Member, Science Honours and Awards Committee, 2010, 2011.

Outreach

Ontario University Fair, 2008–2025. (Various years)

UOIT Open House, 2009–2012,2016–2019. *Organizer and participant in various years.*

Speaker, High School Visits, 2016, 2018, 2020.

Organizer, Science Undergraduate Research Day, 2010, 2011

Science Rendezvous, 2010, 2011, 2013.

Participant, International Science Fair Team Canada Visit, 2011.

Penalist, School Career Fair, Lester B. Pearson Collegiate, October, 2009.

Participant, Computer Science Booth, Graduate Student Fair, January, 2009.

Attendee, Science Teachers' Event, September, 2008.

Judge, Student Research Showcase, 2008–2012, 2017

Judge, 3 Minute Thesis (3MT) presentations, March, 2013.

Coach, ACM Competition, 2008–2011.

Organizer, Computer Science Seminar, Winter 2010–Fall 2011.

Name Reader, UOIT Convocation, 2011, 2017.

Member, University-Community Link Unit, 2010.

Memberships

Senior Member, The Institute of Electrical and Electronics Engineers (IEEE) (www.ieee.org)

Member, Association for Computing Machinery (ACM) (www.acm.org)

Member, Canadian Image Processing and Pattern Recognition Society (CIPPRS) (www.cipprs.org)

Full Member, Sigma Xi, The Scientific Research Honor Society (www.sigmaxi.org)