
CONTACT INFORMATION	Oulu, Finland	 +358-41-7077204  muzammil.behzad@{oulu.fi, gmail.com}  http://www.muzammilbehzad.com
RESEARCH INTERESTS	Computer Vision, Machine/Deep Learning, Generative AI, Signal and Image Processing	
EDUCATION	Ph.D. in Technology (Fully-funded) University of Oulu , Oulu, Finland.	Sep. 2018 - May 2022
	<ul style="list-style-type: none">• Thesis with Distinction, CGPA: 5.00/5.00, Award-winning Thesis• Thesis Topic: <i>Deep Learning for Understanding Emotions from 3D/4D Faces</i>• Supervisor: Prof. Guoying Zhao (Ph.D., Chinese Academy of Sciences, China)• Courses: Affective Computing, Machine Learning, Deep Learning, Human Computer Interaction, Machine Vision, Teaching Assistant for Computer Graphics.	
	Exchange Student (Fully-funded) Brown University , Providence, U.S.	Feb. 2019 - May 2019
	<ul style="list-style-type: none">• Exchange Student in Semester Program: <i>Computer Vision</i>• Hosted by Institute for Computational and Experimental Research in Mathematics	
	M.S. in Electrical Engineering (Fully-funded) King Fahd University of Petroleum and Minerals , Dhahran, Saudi Arabia.	Sep. 2014 - Jan. 2017
	<ul style="list-style-type: none">• CGPA: 3.821/4.00, Thesis Topic: <i>Compressed Sensing Based Image Denoising</i>• Supervisor: Prof. Tareq Y. Al-Naffouri (Ph.D., Stanford University, U.S.)• Courses: Stochastic Processes, Digital Signal Processing, Image Processing, Digital Communications I, Digital Communications II, Adaptive Filtering and Applications.	
	B.S. in Electrical Engineering (Partially-funded) COMSATS University Islamabad (CUI) , Islamabad, Pakistan.	Sep. 2009 - Aug. 2013
	<ul style="list-style-type: none">• CGPA: 3.87/4.00 (90.53%), Distinction - Double Medalist, Valedictorian• Final Year Project: <i>GPS & GSM Based Vehicle Tracking System</i> (available online)• Supervisor: Prof. Mahmood Ashraf Khan (Ph.D., Aston University, U.K.)• Major: Wireless Communications and Embedded Systems	
PROFESSIONAL EXPERIENCE (8+ YEARS)	AI Scientist Silo AI , Oulu, Finland.	April 2022 - Present
	<ul style="list-style-type: none">• Working in European flagship AI company for scoping, implementing and delivering production-grade solutions for clients in various industries to build trustworthy highly innovative solutions and products• Developing CV projects (object detection and segmentation, autonomous vehicles, anomaly detection, visual quality control, annotation tools, etc.), creating and maintaining Python SDK packages, maintaining repos, updating cloud pipelines.• Anomaly detection: Real-time setup in an industrial environment for continuous monitoring of live camera images, ensuring swift identification of anomalies. [Detection, OpenCV GrabCut Segmentation, Contrast Enhancement, Outlier Detection, Histogram Analysis, Edge Detection]• Enterprise Annotation: Designed for demanding CV tasks with Python SDKs for powerful workflows leveraging several state-of-the-art algorithms for pre-annotation and annotation refinement. [DEXTR, Deep GrabCut, Mask R-CNN, Detectron, MM-Detection, YOLO]• Defect detection: Object detection, segmentation and classification of surface defects for visual quality control. [YOLO Detection, Segmentation and Classification]	

- **3D Avatars:** Deep learning model for 3D avatars, fetching multi-view images to retrieve relevant parts from a catalog within the VR/AR industry. [Multi-instance learning (MIL), GCP, FiftyOne, Unreal Engine, Blender, MakeHuman]
- **Classical image processing:** Pipeline for vision-based anomaly detection, specifically focused on identifying misalignments in overlapping micro-plates, ensuring precise detection of irregularities. [Gradients Analysis, Thresholding, Outlier Detection, Image Pre/Post-Processing Optimization]
- **3D Part Matching:** Utilizing cross-matching of linear embeddings for rendered 3D objects to efficiently identify similar objects within the manufacturing and automation industry. [ResNet, SimCLR, BYOL, ViT, Barlow Twins, MS Azure, Streamlit Dashboard, OCCWL, TriMesh]
- **CV Curriculum:** Developed a comprehensive computer vision curriculum for entry/intermediate/expert-level for internal employees, with cutting-edge resources on methodologies and hands-on notebooks.
- **Generative AI/LLMs (Enthusiast):** LLaMa/LLaVa, FLAN-T5, Prompt Engineering, ICL: In-Context Learning (ZeroShot/OneShot/FewShot Inference), PEFT/Instruction Fine-tuning, RLHF/Catastrophic Forgetting

Scientific Researcher

Sep. 2018 - Mar. 2022

University of Oulu, Oulu, Finland.

- Working in the Center for Machine Vision and Signal Analysis (CMVS) towards deep learning-aided facial expression analysis in the real world.

Research Scholar

Nov. 2021 - Jan. 2022

University College London, London, U.K.

- Carry out research collaboration with Prof. Eva Krumbhuber

Research Scholar

Feb. 2019 - May 2019

Brown University, Providence, U.S.

- Participating in the *Computer Vision* program hosted by Institute for Computational and Experimental Research in Mathematics (ICERM).

Full-time Researcher

May 2018 - Aug. 2018

Pukyong National University, Busan, South Korea.

- Worked for Samsung on real-time image processing and computer vision applications.

Research Associate

Sep. 2013 - May 2018

COMSATS University Islamabad (CUI), Islamabad, Pakistan.

- Undergraduate projects' supervision, BSCS and BSSE projects' coordination, research work and teaching: Digital Image Processing, Computer Graphics, Object Oriented Programming, Introduction to Computer Programming.

Visiting Research Scholar

Summers of 2015 & 2016

King Abdullah University of Science and Technology, Thuwal, Saudi Arabia.

- MS thesis research work - visiting research group of Prof. Tareq Y. Al-Naffouri

Graduate Teaching Assistant

Jan. 2015 - Jan. 2016

King Fahd Univ. of Petr. and Min. (KFUPM), Dhahran, Saudi Arabia.

- Stochastic Processes - Spring 2015 and Digital Communications I - Fall 2015.

Research and Project Intern

Jun. 2012 - Jun. 2013

Centre for Advance Studies in Telecommunication, Islamabad, Pakistan.

- Worked on: Final Year Project, GPS & GSM Based Embedded Systems, PCB, Hardware and Circuit Designing, Thesis and Research Work.

Network Intern

Jul. 2011 - Sep. 2011

National Telecom Corporation (NTC), Islamabad, Pakistan.

- Worked on: Networking Project, Routing Protocols, C/C++ Programming, Practical Implementation on Simulation Software.

AWARDS AND ACHIEVEMENTS

Fully-funded Ph.D. Degree at University of Oulu, Finland 2018 - 2022

Finalist 3-Minute Thesis Award at European Signal Processing Conf. (EUSIPCO) 2021

Winner 3-Minute Thesis Award at IEEE Int. Conf. on Image Processing (ICIP) 2020

Recipient of Two IBM Developer Badges for Machine Learning and Data Science 2020

Recipient of Intel® EdgeAI Scholarship 2019 - 2020

Fully-funded Exchange Semester at Brown University, U.S. Feb. 2019 - May 2019

Fully-funded M.S. Degree at KFUPM, Saudi Arabia Sep. 2014 - Jan. 2017

Employee of the Year & Best Supervised Project Award in CUI 2014

Valedictorian - Honor of Giving Graduation Speech in my Convocation at CUI 2013

Institute Silver Medal Award in B.S. Electrical Engineering 2013

Campus Silver Medal Award in B.S. Electrical Engineering 2013

Laptop awarded by Gov. of Pakistan for holding the top Position in B.S. 2013

Runner Up in National-level Line Tracking Robotics Competition ROBIA'12 2012

1st Position in Inter-Departmental Debate/Declamation Competition 2012

Talent Award for Batch Position Holder by SAFE (NGO) at CUI 2010

Prize Money Merit-Scholarships by CUI During B.S. Studies 2009 - 2013

RESEARCH GRANTS

Finnish Foundation for Technology Promotion, Finland [**5000 Euros**] 2022

Tauno Tönning Foundation Grant, Finland [**4000 Euros**] 2021

CMVS International Res. Visit Grant by Univ. of Oulu, Finland [**5000 Euros**] 2021

Riitta and Jorma J. Takanen Foundation Grant, Finland [**2500 Euros**] 2020

CMVS International Res. Visit Grant by Univ. of Oulu, Finland [**5000 Euros**] 2020

ICERM International Semester Program by Brown University, US [**5700 USD**] 2019

TECHNICAL SKILLS

Artificial Intelligence, Computer Vision, Machine/Deep Learning

- PyTorch, PyTorch Lightning, Keras, TensorFlow, TensorBoard, Distributed Processing, OpenCV, GCNs, Transformers, Supervised/Self-supervised learning, Regression Analysis

Programming and Development

- Python, C/C++, MATLAB, R, HTML, Assembly, VS-Code, Sublime, Atom, GitHub, GitHub Copilot, Cloud Computing (AWS, GCP, Azure), GitHub Copilot, Bitbucket, JIRA Tracking, Kanban Boards, Confluence, Docker Containers, etc.

Computer Networking (CCNA-Certification)

- IP Addressing, OSI/TCP Model, Routing, Switching, Subnetting, Supernetting, Routing Protocols, Network Programming, Socket Programming, TCP Handshaking

Operating Systems, IDEs and Applications

- IBM Watson, Windows, Linux, L^AT_EX(OverLeaf, Miktex, WinEdt, TeXStudio), Anaconda, Spyder, Jupyter Notebook, Packet Tracer

Embedded Systems & Robotics

- PCB & Circuit Designing & Fabrication, Mounting & Synchronising GPS/GSM Kits, Proteus, Microcontroller Programming, CodeVisionAVR, Soldering

Wireless Communication and Sensor Networks

- Wireless Sensors, RFID Module/Kits/Tags, Communication/Routing Protocols, Energy-efficient Wireless Communication, Programming/Simulations

MANAGEMENT, WORKSHOPS, CONFERENCES AND TRAININGS

Technical Recruit Lead for recruitment in University of Oulu, Finland 2021

Technical Recruit Lead for recruitment in University of Oulu, Finland 2020

Attended Resource-aware Machine Learning School by TU Dortmund, Germany 2020

Attended 30th British Machine Vision Conference (BMVC), Cardiff, U.K. 2019

Workshop: Opt. Methods in Comp. Vis. & Im. Proc., Brown University, U.S. 2019

Participated in ICERM's Journal Club as Member, Brown University, U.S. 2019

Workshop: Julia Programming, Massachusetts Inst. of Technology (MIT), U.S. 2019

Workshop: Computational Imaging, ICERM, Brown University, U.S. 2019

My Invited Talk: Spontaneous Micro-expression Recognition, Brown Uni., U.S. 2019

Workshop: Professional Development Ethics, ICERM, Brown University, U.S. 2019
 Workshop: Image Descrip. for Consumer & Overhead Imagery, Brown Uni., U.S. 2019
 Workshop: Theory & Pract. in Mach. Lear. & Comp. Vision, Brown Uni., U.S. 2019
 Represented Pakistan in **Festival of Cultures**, University of Oulu, Finland 2018-19
Attended Speedup Your Literature (IRIS.AI), University of Oulu, Finland 2018
Attended InfoTech Brainstorming Conference, University of Oulu, Finland 2018
Attended IEEE International Conference on Consumer Electronics, South Korea 2018
 Pioneer Team Member, **CUI Hybrid Learning Pioneered for Pakistan** 2017-18
Attended & Presented Research Paper at 32nd IEEE AINA conference, Poland 2018
 Delivered Many Presentations on **CUI's Hybrid Learning Model** 2017-18
Represented CUI in Frontiers of Information Technology Conference 2013 & 2017
 Workshop: Indoor Positioning and Navigation, **KAUST Enrichment Program** 2017
 Attended **iPakistan: Innovative Forum for Computer Scientists** by CUI 2016
Organized and Captained Multi-national KFUPM Premier League (Cricket) 2016
 Represented Pakistan in **Festival of Cultures** in KFUPM, Saudi Arabia 2015
 Participated and Represented CUI in **3rd Pak-China Business Forum** 2014
 Organized All-Pakistan Robotics Competition 'ROBIAN' Twice at CUI 2012 & 2013
 Organized CUI's 46th **Graduation Convocation** as Usher 2012
 Organized Inter & Intra-University Debate/Declamation Contests at CUI 2012
 Attended Workshop on Robotic Designing in CUI 2012

CERTIFICATIONS

- Google Project Management: Professional Certificate *from Google* 2024
- Capstone: Applying Project Management in the Real World *from Google* 2024
- Agile Project Management *from Google* 2024
- Project Execution: Running the Project *from Google* 2024
- Project Planning: Putting It All Together *from Google* 2024
- Project Initiation: Starting a Successful Project *from Google* 2024
- Foundations of Project Management *from Google* 2024
- Generative AI: Impact, Considerations, and Ethical Issues *from IBM* 2024
- Generative AI: Foundation Models and Platforms *from IBM* 2024
- Generative AI: Prompt Engineering Basics *from IBM* 2024
- Generative AI: Introduction and Applications *from IBM* 2023
- Generative AI with Large Language Models *from deeplearning.ai* 2023
- Google Cloud Big Data and Machine Learning Fundamentals *from GoogleCloud* 2022
- Machine Learning with Python *from IBM via Coursera* 2020
- Python for Data Science and AI *from IBM via Coursera* 2020
- Python Data Structures *from University of Michigan via Coursera* 2020
- Crash Course on Python *from Google via Coursera* 2020
- What is Data Science? *from IBM via Coursera* 2020
- AI For Everyone *from deeplearning.ai via Coursera* 2020
- Mathematics for Machine Learning *from Imperial College London via Coursera* 2019
- Deep Learning for Business *from Yonsei University via Coursera* 2019
- Programming for Everybody *from University of Michigan via Coursera* 2019
- Machine Learning *from Stanford University via Coursera* 2018
- CCNA Discovery, Security, and IT Essentials *from CISCO Regional Academy* 2012

PROFESSIONAL MEMBERSHIP

- Member**, European Alliance for Innovation (EAI) since 2024
- Member**, European Association for Signal Processing (EURASIP) since 2021
- Member**, European Association for Artificial Intelligence (EurAI) since 2020
- Member**, Finnish Artificial Intelligence Society (FAIS) since 2020
- Member**, The British Machine Vision Association (BMVA) since 2019
- Member**, The European Telecommunications Standards Institute (ETSI) since 2019
- Student Member**, Institute for Electrical & Electronics Engineers (IEEE) since 2016

Member, Society for Industrial and Applied Mathematics (SIAM) since 2015
Lifetime Member, Pakistan Engineering Council (PEC) since 2013

SELECTED
ACADEMIC &
RESEARCH
PROJECTS

Computer Vision, Machine Learning and Deep Learning

1. Self-Supervised Contrastive Learning with Rendered Multiviews from 3D Models
2. Annotation Refinement with Object Detection and Segmentation
3. Cloud-based Deep Learning Model Development and Deployment
4. Vision-based Anomaly Detection in Industrial Setup
5. 3D Object Detection for Autonomous Vehicles
6. Annotation Refinement for Interactive Data Labeling
7. Self-supervised Learning Model for 3D/4D Facial Affect Recognition
8. Optimized Multi-view Transformer for Deep Learning [GitHub Repository](#)
9. Faster Distributed Training for Deep Learning [GitHub Repository](#)
10. Real-time Face Mesh Detection [GitHub Repository](#), [Live Demo](#)
11. Real-time Face Mask Detection for COVID-19 [GitHub Repository](#), [Live Demo](#)
12. Optimized Anomaly Detection in Real-time Industry Settings
13. Body Gesture Recognition with Self-supervised Graphs
14. PyTorch Dataloader for Simultaneous/Multiple Datasets [GitHub Repository](#)
15. Regression Analysis with IBM Watson Studio [GitHub Repository](#)
16. Data Manipulation with Generative Adversarial Networks (GANs) [GitHub Repository](#)
17. Regression Dashboard for Analyzing Economic Data [GitHub Repository](#)
18. LC4D: Landmarks-assisted 4D Facial Expression Recognition
MATLAB2019a, 3D/4D Point Clouds, GoogLeNet and VGGNet (BU-4DFE Dataset of 6 emotional Classes with 224x224 Images), Landmarks-assisted Collaborative end-to-end Deep Framework, Accuracy = 96.7%
19. CCDN: Collaborative 4D Facial Expression Recognition
MATLAB2019a, 3D/4D Point Clouds, VGGNet (41 Layers Trained on pre-processed BU-4DFE Dataset of 6 emotional Classes with 224x224 Images), Cross-domain Dynamic Image Representations of Input 4D Face Scans, Accuracy = 96.5%
20. AlexNet based Face Recognition on Self-Generated Live Webcam Dataset
MATLAB2018b, Fine-tuning AlexNet's (5 Convolutional and 10 FC Layers Trained on ImageNet Dataset of 1000 Classes with 227x227 Images), Retraining FC Layers with 10 Subjects (1000 M/F Samples Each), Input Image Pre-processed for Face Detection via Viola-Jones Detector , [Live Demo of Recognition System](#)
21. Analysing Transfer Learning and Fine-Tuning Techniques
Python 3.5 (mainly using TensorFlow, TensorBoard, Keras, in Spyder), Collecting CIFAR10 Dataset (60,000 32x32 images in 10 classes, 6000 Images/Class), Pre-trained Model ResNet-50 v3-fp32, Fine Tuning of ResNet's Final-layer (Training/ Testing/CrossEntropy Accuracy of 87.05%/86.75%/0.43, 38.92%/34.65%/1.48 and 16.40/15.84%/1.99 at 10,000, 1,000 and 100 steps, respectively)

22. Deep Learning Methods for Fashion MNIST Recognition
Python 3.5 (mainly using TensorFlow, TensorBoard, Keras, in Spyder), Collecting Fashion MNIST Dataset (70,000 28x28 Images in 10 Classes), Exploring and Pre-processing the Data, Training a Neural Network Model (Layers: Input = 28*28, Hidden = 128, Output = 10, Parameters: 5 Epochs, Training Size = 60,000), Visualizing over TensorBoard (Training Accu. = 89.03%, Testing Accu. = 87.06%)
23. Multi-modal Emotion Analysis System
Python 2.7 (mainly using SciPy, NumPy, Matplotlib, sklearn, skimage in Jupyter Notebook), Feature-level Method to Combine Facial and Speech features (Happy and Sad Emotions), Feature Fusion for Linear SVM Classifier via Principal Component Analysis (Accu. = 98.21%) and Canonical Correlation Analysis (Accu. = 92.31%)
24. Emotion Understanding from Speech Signals
Python 2.7 (mainly using SciPy and NumPy in Jupyter Notebook), Extracting Prosodic and Mel-Frequency Cepstral Coefficients Features from Speech Dataset (10 speakers with Happy and Sad Emotions), Classifiers: SVM with Polynomial Kernel (Accu. = 86.21%), Random Forest (Accu. = 88.31%) and Neural Network having 3 Hidden Layers of 50 Units Each with 20,000 Iterations (Accu. = 90.35%)
25. Emotion Recognition from eINTERFACE Dataset
Python 2.7 (mainly using scikit-image, DLib in Jupyter Notebook), Faces Detection, Pre-processing and Registration on eINTERFACE Dataset, LBP Features for SVM Classifier (Accuracy = 72.25%)

Wireless Sensors Networks (WSNs), Wireless Communication

1. Performance Optimization in WSNs via Layer-Adaptive Communication
MATLAB, Performance Optimization, Wireless Sensor Networks
2. Energy-efficient Hemisphere Zoning with Advanced Divide-and-Rule Scheme
MATLAB, Energy-efficient Wireless Communication, Sensor Networks
3. Distributed PCA and Consensus Based System for WSNs
MATLAB, Principal Component Analysis, Sensor Networks
4. Reliable Energy Efficient Critical Data Routing
MATLAB, Communication Protocols, Wireless Body Area Networks
5. Threshold Sensitive Density Controlled DDR for WSNS
MATLAB, Communication Protocols, Energy-efficient Wireless Communication

Signal and Image Processing

1. Real-Time Fast Video Deraining and Desnowing
Programming in MATLAB, Exploiting Temporal Information, Video Frames, Extracting and Grouping Patches, Code Optimization for Faster Processing
2. Compressed Sensing based Sparse Image Denoising - M.S. Thesis Project
Compressed Sensing, Image and Signal Processing, Extracting and Grouping Patches, MATLAB Programming, Thesis/Research Papers, Simulations
3. Collaborative Dual-Domain Patch Filtering for Denoising

Embedded Systems & Wireless Communication

1. GPS and GSM Based Vehicle Tracking System - B.S. Final Year Project
Wireless Communication, GPS & GSM, Embedded Systems, C/C++ Programming, Networking, PCB/Circuit Designing, Research Papers
2. RFID Based Embedded Wireless Authentication System
Embedded Systems, C/C++ Programming, Microcontroller ATmega16

3. Line Tracking Autonomous Re-programmable Robot
Embedded Systems, Assembly/C++ Programming, Microcontroller, Sensors
4. Digital/Binary Clock and Automated Kitchen Timer
Programming, Embedded Systems, PCB Designing, Digital Logic Design

Network Programming & System Architecture

1. Client-Server Secure Architecture on Linux OS
C/C++ Programming, Linux Network Programming, Socket Programming, File Transferring, OSI/TCP Model, Local-Host Client-Server Communication
2. Routing Protocols RIP/IGRP/EIGRP/OSPF Implementation
Network Programming, IP Addressing, Subnetting, Routing Protocols
3. C/C++ Programming Projects on Windows/Linux OS
Client-Server, Authentication System, Student/Faculty Management System

PUBLICATIONS

- X. Li, S. Cheng, Y. Li, **M. Behzad**, et al., “4DME: A spontaneous 4D micro-expression dataset with multimodalities”, *IEEE Transactions on Affective Computing*, 2022.
- J5 **M. Behzad**, et al., “Disentangling 3D/4D Facial Affect Recognition via Faster Multi-view Transformer”, *IEEE Signal Processing Letters*, 2021.
- J4 **M. Behzad**, et al., “Towards Reading Beyond Faces for Sparsity-Aware 4D Affect Recognition”, *NeuroComputing*, 2021.
- J3 **M. Behzad**, et al., “Performance Optimization in IoT-based Next-Generation Wireless Sensor Networks”, *Transactions on Computational Collective Intelligence*, 2019.
- J2 **M. Behzad**, M. S. Javaid, M. A. Paracha and S. Khan, “Distributed PCA and Consensus Based Energy Efficient Routing Protocol for WSNs”, *Journal of Information Science & Engg.*, Vol. 33 Issue 5, p1267-1283, 2017.
- J1 **M. Behzad**, et al., “Self-supervised Learning via Multi-view Facial Rendezvous for 3D/4D Affect Recognition”, *IEEE Face & Gesture Recog.* 2021.
- C13 **M. Behzad**, et al., “Landmarks-assisted Collaborative Deep Framework for Automatic 4D Facial Expression Recognition”, *IEEE Face & Gesture Recog.* 2020.
- C12 **M. Behzad**, et al., “Automatic 4D Facial Expression Recognition via Collaborative Cross-domain Dynamic Image Network”, *BMVC* 2019.
- C11 **M. Behzad**, et al., “Layer-Adaptive Communication and Collaborative Transformed-Domain Representations to Optimize Performance in Next-Generation WSNs”, *The 32nd IEEE Int. Conference on Advanced Information Networking and Applications (AINA)*, Krakow, Poland, 2018.
- C10 **M. Behzad**, et al., “Technology-Mediated Educational Model”, *Int. Conf. on Professional Development in Higher Education: Trends and Practices, Prospects and Innovations*, Higher Education Commission of Pakistan, 2018.
- C9 **M. Behzad**, M. Masood, T. Ballal, M. Shadaydeh and T. Al-Naffouri, “Image denoising via collaborative support-agnostic recovery”, *The 42nd IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, New Orleans, USA, 2017.
- C8 **M. Behzad** and Y. Ge, “Performance Optimization in Wireless Sensor Networks: A Novel Collaborative Compressed Sensing Approach”, *The 31st IEEE International Conference on Advanced Information Networking and Applications (AINA)*, Tamkang University, Taipei, Taiwan, 2017.
- C7

- M. Behzad**, N. Javaid, A. Sana, M. T. A. Khan, N. Saeed, Z. A. Khan, U. Qasim, “TSDDR: Threshold Sensitive Density Controlled Divide and Rule Routing Protocol for Wireless Sensor Networks”, *The 9th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA)*, Guangzhou, China, 2014.
- M. Behzad**, et al., “Design and Development of a Low Cost Ubiquitous Tracking System”, *The 9th International Conference on Future Networks and Communications (FNC)*, Niagara Falls, Ontario, Canada, 2014.
- F. Saleem, Y. Moeen, **M. Behzad**, M. A. Hasnat, Z. A. Khan, U. Qasim, N. Javaid, “IDDR: Improved Density Controlled Divide-and-Rule Scheme for Energy Efficient Routing in Wireless Sensor Networks”, *The 9th International Conference on Future Networks and Communications (FNC)*, Niagara Falls, Canada, 2014.
- A. Umar, M. A. Hasnat, **M. Behzad**, I. Baseer, Z. A. Khan, U. Qasim, N. Javaid, “On Enhancing Network Reliability and Throughput for Critical-Range Based Applications in UWSNs”, *The 9th International Conference on Future Networks and Communications (FNC)*, Niagara Falls, Ontario, Canada, 2014.
- M. M. Sandhu, M. Akbar, **M. Behzad**, N. Javaid, Z. A. Khan, U. Qasim, “REEC: Reliable Energy Efficient Critical data routing in wireless body area networks”, *The 9th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA)*, Guangzhou, China, 2014.
- M. M. Sandhu, M. Akbar, **M. Behzad**, N. Javaid, Z. A. Khan, U. Qasim, “Mobility Model for WBAN”, *The 9th IEEE International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA)*, Guangzhou, China, 2014.

SUBMITTED/
PENDING PAPERS

- J6 A. M. Alanazi, **M. Behzad**, et al., “A Collaborative Filtering-Based Method for Image Denoising”, *IEEE Transactions on Image Processing*.

ACADEMIC
POSTERS

- CP1 **M. Behzad** and T. Al-Naffouri, “Minimum Distance Based Energy efficiency Using Hemisphere Zoning with Advanced Divide-and-Rule Scheme for WSNs”, *in 6th Annual KFUPM Students Scientific Forum*, 2015.

REFEREE
SERVICES

- **Keynote Speaker**, International Conference of AI - ICoABCD 2024 - Present
- **Reviewer**, European Conference on Artificial Intelligence 2024 - Present
- **Reviewer**, The Visual Computer 2022 - Present
- **Reviewer**, IEEE Access 2021 - Present
- **Reviewer**, IEEE Transactions on Multimedia 2020 - Present
- **Reviewer**, Neurocomputing 2020 - Present
- **Reviewer**, Image and Vision Computing 2020 - Present
- **Reviewer**, IEEE ICASSP 2022 - Present
- **Track Co-chair**, International Conference on Complex, Intelligent, and Software Intensive Systems, University of Technology Sydney, Australia 2018 - 2020
- **Reviewer**, Transactions on Computational Collective Intelligence 2018 - Present
- **Reviewer**, The 13th International Conference on Complex, Intelligent, and Software Intensive Systems, University of Technology Sydney, Australia 2018 - 2019
- **Reviewer**, IEEE Networking Letters 2018 - Present
- **Reviewer**, International Conference on Advances in Signal Processing and Artificial Intelligence 2019 - Present
- **Reviewer**, The 4th International Conference on Digital Information & Communication Technology and its Applications, Thailand 2014

PERSONAL SKILLS • Languages: English (Expert), Urdu (Expert), Pushtu (Expert), Finnish (Beginner)
• Strong technical writing, formal reporting, communication, and presentation skills
• Quick learner, dedicated, highly motivated, enthusiastic, confident and team player

VOLUNTARY	Mentor KFUPM Mentorship Program, Saudi Arabia	2024-Present
COMMUNITY	Chairman of Oulu-Pakistani Culture Association (OPKY), Finland	2023-24
SERVICES	Vice Chairman of Northern Lights Cricket Association (NLCA), Finland	2023-24
	Volunteer in Voluntary Work Unit on KFUPM Volunteer's Day, Saudi Arabia	2015
	Volunteer in Pakistan Hajj Volunteer Group (PHVG) , Saudi Arabia	2014