

# Asim Dilawar Bakhshi

Defence Faculty

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7

## About

Dr. Asim Dilawar Bakhshi is working as Defence Faculty in the Military College of Signals. Dr. Asim Dilawar Bakhshi has a PhD in Digital Signal Processing. Dr. Asim Dilawar Bakhshi has published 23 research articles & conference papers having a citation count of 210, carried out 1 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in Digital Signal Processing</b> UET Lahore , Pakistan	2007 - 2012
<b>BE</b>	1993 - 1996
<b>F.Sc</b>	1990 - 1992
<b>Matric (SSC)</b>	1987 - 1990

## Experience

<b>Defence Faculty</b> Military College of Signals	2022- Present
<b>Defence Faculty</b> Military College of Signals	2021 - 2022
	- Present

## Professional Memberships

<b>PEC</b>	Since 1996
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## Research Projects

### National Projects

<b>AI STP- Web Appl Security Evaluation and Health Informatics</b> Funding Agency: Army Amount: PKR 15,060,000.00 Status: Approved_inprocess	2022
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### International Projects

## Research Articles

<b>AI-CADS: An Artificial Intelligence based framework for automatic early detection and severity evaluation of coronary artery disease</b> Muhammad Sajid Ali Hassan Dilshad Ahmed Khan Shoab Ahmed Khan Asim Dilawar Bakhshi Sayed Tanveer Abbas Gilani Muhammad Usman Akram Mustansar Ali Ghazanfar Biomedical Signal Processing and Control, Volume:106, Article Number: 107705, Pages:10 Impact Factor: 4.9   Quartile: 1 DOI: <a href="https://doi.org/10.1016/j.bspc.2025.107705">https://doi.org/10.1016/j.bspc.2025.107705</a>	2025
<b>MangiSpectra: A Multivariate Phenological Analysis Framework Leveraging UAV Imagery and LSTM for Tree Health and Yield Estimation in Mango Orchards</b> Muhammad Munir Afsar Ejaz Hussain Javed Iqbal Muhammad Shahid Iqbal Asim Dilawar Bakhshi	2025

*Remote Sensing*, Volume 17(4), Article Number 703

**Impact Factor:** 4.200 | **Quartile:** 1 | **Citations:** 1

**DOI:** <https://doi.org/10.3390/rs17040703>

**AI-CADR: Artificial Intelligence Based Risk Stratification of Coronary Artery Disease using Novel Non-invasive Biomarkers**

2024

*Muhammad Sajid Ali Hassan Dilshad Ahmed Khan Shoab Ahmed Khan Asim Dilawar Bakhshi Muhammad Usman Akram Mishal Babar Farhan Hussain Wadood Abdul*

*IEEE Journal of Biomedical and Health Informatics*, Volume:28, Issue:12, Page(s):7543-7552

**Impact Factor:** 6.700 | **Quartile:** 1 | **Citations:** 3

**DOI:** <https://doi.org/10.1109/JBHI.2024.3453911>

**High-Precision Mango Orchard Mapping Using a Deep Learning Pipeline Leveraging Object Detection and Segmentation**

2024

*Asim Dilawar Bakhshi Muhammad Shahid Iqbal Ejaz Hussain Javed Iqbal Muhammad Munir Afsar*

*Remote Sensing*, Volume 16(17), Article Number 3207

**Impact Factor:** 4.200 | **Quartile:** 1 | **Citations:** 3

**DOI:** <https://doi.org/10.3390/rs16173207>

**A deep learning-based framework for object recognition in ecological environments with dense focal loss and occlusion**

2024

*Muhammad Munir Afsar Asim Dilawar Bakhshi Ejaz Hussain Javed Iqbal*

*Neural Computing and Applications*, Volume 36, Issue 16, Pages 9591-9604

**Impact Factor:** 4.500 | **Quartile:** 2 | **Citations:** 2

**DOI:** <https://doi.org/10.1007/s00521-024-09582-5>

**Medical image fusion using non subsampled contourlet transform and iterative joint filter**

2021

*Abdul ghafoor Asim Dilawar Bakhshi Nuwayrah Jawaid Saghir M Munawwar Iqbal Ch*

*Multimedia Tools and Applications*, Pages 1-15

**Impact Factor:** 2.577 | **Quartile:** 2 | **Citations:** 10

**DOI:** <https://doi.org/10.1007/s11042-021-11753-8>

**IoTBoT-IDS: A novel statistical learning-enabled botnet detection framework for protecting networks of smart cities**

2021

*Asim Dilawar Bakhshi Javed Ashraf Marwa Keshk Nour Moustafa Mohamed Abdel-Basset Hasnat Khurshid Reham R. Mostafa*

*Sustainable Cities and Society*, Volume 72, Article Number 103041

**Impact Factor:** 10.696 | **Quartile:** 1 | **Citations:** 140

**DOI:** [doi.org/10.1016/j.scs.2021.103041](https://doi.org/10.1016/j.scs.2021.103041)

**Novel Deep Learning-Enabled LSTM Autoencoder Architecture for Discovering Anomalous Events From Intelligent Transportation Systems**

2021

*Asim Dilawar Bakhshi Javed Ashraf Nour Moustafa Hasnat Khurshid Abdullah Javed Amin Beheshti*

*IEEE Transactions on Intelligent Transportation Systems*, Volume 22, No. 7, Pages 4507-4518

**Impact Factor:** 9.551 | **Quartile:** 1

**DOI:** [1109/TITS.2020.3017882](https://doi.org/10.1109/TITS.2020.3017882)

**An Application of Peircean Triadic Logic: Modelling Vagueness**

2019

*Asim Dilawar Bakhshi Asim Raza Basit Koshul*

*Journal of Logic, Language and Information*, Volume 28, Pages 389-426

**Impact Factor:** 0.440 | **Quartile:** 4

**DOI:** [10.1007/s10849-019-09287-2](https://doi.org/10.1007/s10849-019-09287-2)

**Active contour-based clutter defiance scheme for correlation filters**

2019

*Ahmed Bilal Awan Asim Dilawar Bakhshi Muhammad Abbas Saad Rehman*

*Electronics Letters*, Volume 55, Issue 9, Pages 525-527

**Impact Factor:** 1.316 | **Quartile:** 3 | **Citations:** 4

**DOI:** [10.1049/el.2018.7955](https://doi.org/10.1049/el.2018.7955)

**Composite filtering strategy for improving distortion invariance in object recognition**

2018

*Asim Dilawar Bakhshi Ahmed Bilal Awan Saad Rehman*

*IET Image Process*, Volume 12, Issue 8, Pages 1499–1509

**Impact Factor:** 2.004 | **Quartile:** 3 | **Citations:** 8

**DOI:** [10.1049/iet-ipr.2017.1147](https://doi.org/10.1049/iet-ipr.2017.1147)

**A template matched-filter based scheme for detection and estimation of t-wave alternans**

2014

*Sajid Bashir Asim Dilawar Bakhshi Mohammad Ali Maud*

*Biomedical Signal Processing and Control*, Volume 13, Pages 247-261

**Impact Factor:** 1.419 | **Quartile:** 3 | **Citations:** 17

**DOI:** <https://doi.org/10.1016/j.bspc.2014.05.003>

**Application of continuous-time wavelet entropy for detection of cardiac repolarisation alternans**

2013

*Asim Dilawar Bakhshi Sajid Bashir Asim Loan Muhammad Ali Maud*

*IET Signal Processing*, Volume 7, Issue 8, Pages 783-790

**Impact Factor:** 0.691 | **Quartile:** 3 | **Citations:** 6

**DOI:** [doi.org/10.1049/iet-spr.2012.0128](https://doi.org/10.1049/iet-spr.2012.0128)

**Non-linear trend estimation of cardiac repolarization using wavelet thresholding for improved T-wave alternans analysis**

2013

*Asim Dilawar Bakhshi S. Bashir S.I. Shah M.A. Maud*

*Digital Signal Processing*, Volume 23, Issue 4, Pages 1197-1208

**Impact Factor:** 1.495 | **Quartile:** 2 | **Citations:** 7

**DOI:** [10.1016/j.dsp.2013.03.006](https://doi.org/10.1016/j.dsp.2013.03.006)

**Performance evaluation of diverse T-wave alternans estimators under variety of noise characterizations and alternans distributions**

2012

*Asim Dilawar Bakhshi Sajid Bashir Imran Shafi Mohammad Ali Maud*

*Australasian Physical & Engineering Sciences in Medicine*, Volume 35, Pages 439-454

**Impact Factor:** 0.885 | **Quartile:** 4 | **Citations:** 1

**DOI:** [10.1007/s13246-012-0170-0](https://doi.org/10.1007/s13246-012-0170-0)

**An improved statistical representation for ECG electrode movement and muscular activity noises in the context of T-wave alternan estimation**

2012

*Asim Dilawar Bakhshi S. Bashir M.A. Maud*

*Biomedical Signal Processing and Control*, Volume 8, Issue 3, Pages 297-301

**Impact Factor:** 1.074 | **Quartile:** 3 | **Citations:** 8

**DOI:** [doi.org/10.1016/j.bspc.2012.11.004](https://doi.org/10.1016/j.bspc.2012.11.004)

**Detection of ECG T-wave Alternans Using Maxima of Continuous-Time Wavelet Transform Ridges**

2012

*Asim Dilawar Bakhshi Abrar Ahmed Sardar Muhammad Gulfam Ali Khaqan Azhar Yasin Raja Ali Riaz Khurram Saleem Alimgeer Shahzad A. Malik Shahid A. Khan Aamir Hanif Dar*

*Przegląd Elektrotechniczny*, Volume 88, No. 12b, Pages 35-38

**Impact Factor:** -

**DOI:** NA

**Pattern synthesis optimization of 3-D ODAR based on improved GA using LSFE method**

2011

*Asim Dilawar Bakhshi Long Wei-jun Ben De Zhang Gong*

*Journal of Harbin Institute of Technology (New Series)*, Volume 18, No. 1, Pages 96-100

**Impact Factor:** -

**DOI:** [10.11916/j.issn.1005-9113.2011.01.018](https://doi.org/10.11916/j.issn.1005-9113.2011.01.018)

- Empirical mode decomposition for improved least square T-wave alternans estimation** 2018  
*Ehsan Ullah Asim Dilawar Bakhshi Muhammad Majid Sajid Bashir*  
2018 15th International Bhurban Conference on Applied Sciences and Technology (IBCAST), res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/IBCAST.2018.8312245
- Empirical mode decomposition template matched filter for detection and estimation of T-wave alternans** 2016  
*Asim Dilawar Bakhshi Muhammad Latif Sajid Bashir Hafiz M. Ali*  
Computing in Cardiology Conference (CinC). IEEE, 2016, res.country(38,)  
**Citations:** N/A  
**DOI:** 2325-887X
- A Bayesian filtering application for T-wave alternans analysis** 2015  
*Azeem Irshad Asim Dilawar Bakhshi Sajid Bashir*  
2015 12th International Bhurban Conference on Applied Sciences and Technology (IBCAST), res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/IBCAST.2015.7058508
- Aggregate spectrogram based classification of Holter ECG signals for wireless sensor networks** 2012  
*Asim Dilawar Bakhshi Mohammad Ali Maud Khalid Mehmood Aamir Asim Loan*  
2012 International Conference on Emerging Technologies, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/ICET.2012.6375455
- Cardiac arrhythmia detection using instantaneous frequency estimation of ECG signals** 2010  
*Asim Dilawar Bakhshi Muhammad Ali Maud Khalid Mehmood Aamir Asim Loan*  
2010 International Conference on Information and Emerging Technologies. IEEE, 2010, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/ICIET.2010.5625733