Resume

Dr. Anita Khanna

Associate Professor
Electrical Engineering
ECE Department,
SoS Engineering & Technology
GGU, Bilaspur (C. G.)
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Educational qualification:

Doctorate of Philosophy (Ph.D)	2023
Electrical Engineering	
National Institute of Technology,	
Raipur, Chattisgarh	

Master of Engineering in Electronics & Communication Engineering	2010
National Institute of Technical Training & Research	
Panjab University, Chandigarh	

Bachelor of Technology in Electrical Engineering:	1990
National Institute of Technology,	
Surathkal, Karnataka	

Subjects taught: Basic Electrical Engineering, Electric machine, signals and systems, Control system, VLSI, Network theory, Python Programming

Research areas: Image processing, machine learning, deep learning

Publications:

International Journals:

1. Pragati Patharia, Prabira Kumar Sethy, K. Lakshmipathi Raju, Anita Khanna, Ashoka Kumar Ratha, Santi Kumari Behera and Aziz Nanthaamornphong (2025), "Hybrid Darknet53-SVM model with random Grid Search optimization for enhanced colorectal cancer histological image classification", *Discover Artificial Intelligence*, vol 5:181, pp 1-15.

2. Giriraj Gautam, Anita Khanna (2024). "Content Based Image Retrieval System Using CNN based Deep Learning Models", *Procedia Computer Science,* vol 235, pp 3131-3141.

3. A. Khanna, Narendra Londhe, S. Gupta, "A Deep Attention-based U-Net for Airways Segmentation in Computed Tomography Images", *Current Medical Imaging, Bentham Science Publishers,* Article reference no. BMS-CMIM-2022-32, April 2022. doi: 10.2174/1573405618666220630151409

4. A. Khanna, Narendra Londhe, S. Gupta, "Automated pathological Lung volume segmentation with anterior and posterior separation in X-ray CT images", *International Journal of Biomedical Engineering and Technology (IJBET)*, volume 40, no 4, 2022.

5. Khanna, A., Londhe, N. D., Gupta, S., & Semwal, A. (2020). A deep Residual U-Net convolutional neural network for automated lung segmentation in computed tomography images. *Biocybernetics and Biomedical Engineering*, *40*(3), pp 1314–1327. https://doi.org/10.1016/j.bbe.2020.07.007

6. Khanna, A., Londhe, N. D., & Gupta, S. (2020). Automated localized approach for airway segmentation in 3D chest CT volume. *Biomedical and Pharmacology Journal*, *13*(4), 1671–1682. https://doi.org/10.13005/BPJ/2042

7. Khanna Anita, Sood Meenakshi, Swapna Devi, "US Image Segmentation Based on Expectation Maximization and Gabor Filter", International Journal of Modelling and Optimization (IJMO), 2012 Vol. 2(3): 230-233 ISSN: 2010-3697.

8. Sood Meenakshi, Khanna Anita, Pattnaik Shyam Sundar, "Performance of controllable Triangular Split Structure Metamaterial: Journal of Electrical and Electronics Engineering", Volume 5, Number 1, May 2012.

9. Deman Kosale, Anita Khanna, "Modified Variable Step size normalized least square Algorithm in the context of Acoustic Echo Cancellation", IJSCE, Vol-2, Issue-5, Nov. 2012.

10. Deman Kosale, Anita Khanna, "Performance, monitoring and analysis of OWC Link at different atmospheric conditions", IJSCE, Vol-2, Issue-5, Nov 2012.

International Conferences:

1. Vanamoju S. V. M. D, Vineetha M. V., Tekchandani H. Joshi P., Shukle P. K. and Khanna A. (2024). "Facial Emotion Recognition using YOLO based Deep Learning Classifier" First Conference on Electronics, Communication and Signal Processing (ICECSP), 8-12 Aug 2024, NIT Delhi.

2. Khanna, A., Londhe, N. D., & Gupta, S. (2018). "Detection of pulmonary vessels in 3D lung CT using improved Graph Cut". *2018 5th International Conference on Signal Processing and Integrated Networks, SPIN 2018*, 187–191. https://doi.org/10.1109/SPIN.2018.8474139

3. Anita Khanna, "Efficient Vertical Dual Axis Solar Tracking System", CIICS, American University of Sharjah, Mar 13-15 2016, Sharjah, UAE.

4. Anita Khanna, Manish Shrivastava, "Unsupervised Techniques of Segmentation on Texture Images: A comparison", ICSPCC, Waknaghat, March 15-17, 2012

5. Khanna Anita, Shrivastava Manish, "Unsupervised Segmentation of US Liver images", ICICIS, Pipariya, Oct. 27-28, 2012.

6. Shrivastava Manish, Khanna Anita, "Improvement over existing EVMs", ICINT, Chennai, April 28-29 2012.

Book Chapter:

1. Khanna, A., Londhe, N. D., & Gupta, S. (2019). *Automatic lung segmentation and airway detection using adaptive morphological operations*. *Advances in Intelligent Systems and Computing* (Vol. 748). Springer Singapore. https://doi.org/10.1007/978-981-13-0923-6_30.

Other Achievements:

1. Peer reviewer in the technical committee of 3rd International Conference on Computer Technology and Development (ICCTD), Nov 25-27, 2011 at Chengdu, China.

2. Session chair at CIICS, American University of Sharjah, Mar 13-15 2016, Sharjah, UAE.

3. Organised online webinar on "Quality Assurance with NBA Accreditation", 13th Nov, 2021

4. Organised online NITTTR Chandigarh sponsored 5 days FDP on "Outcome basedCurriculum Design", 05-09 Sept 2022.

5. Conducted workshop on "5G and Cloud Technologies", 19th Feb 2025.

6. Talk on "Effectine Pedagogy" in Faculty Induction Programme 17-11-2024 to 27-12-2024 in UGC-MMTTC, GGV on 19th Dec 2024.

7. Reviewer in ThinkAI 2024 International Conference, 27-28 Dec 2024.

8. Reviewer in Fourth International Conference on Power, Control and Computing Technologies, 20-22 Jan 2025, Dept of Electrical Engineering, Nit Raipur.

9. Resource person in 2 weeks FDP on "Application of Artificial Intelligence in Computer Science, Electronics and Electrical Engineering" organised by Sambalpur University Institute of Information Technology, Sambalpur, 24-02-2025 to 07-03-2025.

10. Convener, one week STC on "Next-Gen Wireless Technologies: 5G and its impact on Smart Systems", Dept of ECE, GGV, 7-12 April 2025.

Professional programme details

S.No.	Programme	Duration	Organized by
1	Certificate Course In VLSI Design	21-27 Oct. 2002	Bit Mapper Integration Technologies Pvt. Ltd., Pune
2	Embedded System	06-10 Feb. 2006	Engg. Staff college, Hyderabad
3	Digital Signal Processing	17- 21 June. 2006	Institute of Technology, GGV, Bilaspur.
4	Computer Network	17-21 June. 2006	---do---
5	Multimedia Tools & Instructional, Material Development	15- 19 Feb. 2010	NITTTR, Chandigarh
6	Programme on Development of smart power grids	18-20 Oct. 2011	IIT, Kanpur
7	Medical Signal and Image Processing, NIT Raipur	22-27 Aug 2016	NIT, Raipur

9	Linear and non-linear signal processing and its application on biomedical signal, Under TEQIP - II NIT, Raipur	9-11 Sept 2016	NIT, Raipur
10	Biosensors and signal processing, TEQIP sponsored STTP NIT Raipur	22-23 Dec, 2016	NIT, Raipur
11	Deep Learning and Applications, IIT Kanpur	12-16 Jan 2017	IIT, Kanpur
12	Medical Signal and Image Processing-II, NIT, Raipur	22-27 May 2017	NIT, Raipur
13	Medical Signal and Image Processing-III, NIT, Raipur	25-30 June 2018	NIT, Raipur
14	Nptel certificate course on digital image processing	July – Oct 2019	IIT Kharagpur
15	Faculty development program on Artificial Intelligence & Machine learning using Python	18 – 22 May 2020	IIT Roorkee
16	Nptel certificate course on Deep Learning	Jan – April 2019	IIT Kharagpur
17	Faculty development program on Deep learning and machine learning in computer vision	22 – 28 Aug 2020	NIT Patna & GGU
18	STTP on Advanced machine learning for Biosignal data	08 – 10 Oct 2020	NIT Raipur
19	FDP on Digital Image processing, NPTEL	July-Oct 2019	NPTEL
20	FDP on Deep Learning, NPTEL	Jan-April 2020	NPTEL
21	FDP on Artificial Intelligence & Machine Learning Using Python,	18-22 May 2020	(Finland labs & IIT Roorkee) Online
22	FDP on Deep Learning and machine learning Applications in Computer vision, Electronics & ICT Academics,	22-28 Aug 2020	NIT Patna
23	STTP on Advanced machine learning for bio signal data	08-12 Oct 2020	Nit Raipur
24	ATAL FDP on Deep Sciences,	12-16 Oct 2020	GGU Bilaspur
25	FDP on Biomedical Image & Signal Processing,	17-21 Jan 2022	NITTTR Chandigarh
26	FDP on Writing Effective and Quality research papers, How to publish in Scopus, SCI Listed and reputed Journals,	25-29 Jan 2022	GGU
27	2 weeks Industrial Training: Integrated Telecom/ Data Network & Cyber Security	23-05-2022 to 04-06-2022	ALTTC, BSNL Ghaziabad
28	UGC Approved Short Term Professional Development Programme "Professional Development Programme on 'Implementation of NEP2020 for University and College Teachers'"	07-15 October, 2022	IGNOU

29	FDP on "Outcome Based Curriculum Design"	05/09/2022 to 09/09/2022 (One Week)	NITTTR
30	Completed NEP 2020 Orientation & Senstization Programme under Malviya Mission Teacher Training prgramme with A^+ grade	14-02-2024 to 23-02-2024	UGC – MMTTC, GGU
31	One-week FDP on "Power Electronics and Drives: Shaping the Future of Electric Vehicles:	10-16 March 2025	Ministry of Electronics & Information Technology (MeitY), Govt of India, NIT Patna