

Mr. Akhil Walia

Faculty

Indian Institute of Information Technology, Una

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ACADEMIC QUALIFICATIONS: -

Degree Obtained	Discipline	Board/University	Year of Passing	%age/ CGPA
Ph. D.	Biometrics	NIT Hamirpur	2023	Submitted
M. Tech.	Signal Processing and Control	NIT Hamirpur	2016	8.32
B. Tech.	Electronics and Communication Engineering	Sri Sai University Palampur	2014	84%
Senior Secondary	Science	CBSE	2010	75.6%
Matriculation	General	CBSE	2008	82%

TEACHING EXPERIENCE: -

Position	Institution	From	To	Nature of Work
Guest Faculty	Indian Institute of Information Technology, Una	Jun 2023	Present	Teaching and research

RESEARCH PUBLICATIONS: -

Journals:

- **Akhil Walia** and Amit Kaul, “Dual Window Fourier Transform (DWFT): A tool to analyze non-stationary signals”, Circuits Systems and Signal Processing, vol. 41, no. 11, pp- 6075-6097, 2022.
- **Akhil Walia** and Amit Kaul, “PPG based Windkessel model Parameter Identification via unscented Kalman filtering”, Int. J. of Biomedical Engineering and Technology, 2021. (Accepted)
- **Akhil Walia** and Amit Kaul, “PPG and Fingerprint: Robust Bimodal Biometric System”, Int. J. of Biometrics, 2022. (Accepted)

- **Akhil Walia** and Amit Kaul, “PPG Biometric Recognition: Statistical Modeling-based Feature Extraction Approach”, Multimedia Tools and Applications, 2022. (Under Review).

Conferences:

- **Akhil Walia** and Amit Kaul, “Human Recognition via PPG Signal using Temporal Correlation”, Published in: 5th IEEE International Conference on Signal Processing, Computing and Control (ISPCC 2k19) at JUIT Waknaghat, India, October,10-12, 2019.
- **Akhil Walia** and Amit Kaul, “QRS detection using Dual Window Fourier Transform”, Published in: 4th IEEE International Conference on Electronics, Communication and Aerospace Technology (ICECA 2020) at RVS Technical Campus, Coimbatore (India), November, 5-7, 2020.

Book Chapters:

- Amit Kaul and **Akhil Walia**, “PPG-Based Biometric Recognition: Opportunities with Machine and Deep Learning,” AI and Deep Learning in Biometric Security. CRC Press, 313-331, 2021.

SHORT TERM COURSES/ TRAINING PROGRAMS:

- Participated in Global Initiative for Academic Networks (GIAN) course on “Advanced Pattern Recognition Techniques for Biometrics” at IIT Indore during 5th – 9th March 2018.
- Participated in STC on Communication Networks & Signal Processing at NIT Hamirpur during 11th – 16th December 2017.
- Attended six days workshop on “Real Time Simulation in Electrical Domain using Typhoon HILL and MATLAB Simulators” organized by Department of Electrical Engineering, NIT Hamirpur during 3rd – 08th October, 2017.
- Participated in STC on Digital Signal Processing with Applications on MATLAB at NIT Hamirpur during 18th July – 23th July 2016.
- Attended one day workshop on “Electronics System Design & Manufacturing” at SSU Palampur on 10th October 2013.
- Attended National Level Workshop on “Network Implementation & Security” organized by Association for Computer Machinery- IIT Delhi and Network Bulls at SSU Palampur during 28th-29th September 2013.
- Attended six weeks training at Doordarshan High Power Transmitter, Dharamshala (H.P).

RESEARCH INTERESTS:

- Biometrics
- Biomedical Signal Analysis
- Digital Signal Processing

EXTENSION/ OUTREACH ACTIVITIES: -

- Active Reviewer for “Circuits Systems and Signal Processing” Journal.
- Qualified GATE-2014 exam with 96.2 percentile.

DETAILS: -

- Google Scholar: <https://scholar.google.com/citations?user=QPbNKDAAAAAJ&hl=en>
- ORCID : <https://orcid.org/0000-0001-9048-8713>

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