

## Prof (Dr.) Dhawan Singh

"An effective Research & Teaching professional with a methodical approach to problem-solving and independent decision-making. Enthusiastic and equipped with strong management skills, technical expertise across interdisciplinary fields, including Electronics & Communication Engineering (ECE), Electrical Engineering (EE), and Computer Science Engineering (CSE). A confident communicator, I engage effectively with superiors, subordinates, and students, fostering a dynamic and productive learning environment."

### Correspondence Address

ECE,EF-II, University Institute of Engineering,  
University Centre for Research and Development,  
Chandigarh University, Punjab, India  
Mobile: +91-7018743983, +91-9418459232  
[dhawan\\_deor@yahoo.co.in](mailto:dhawan_deor@yahoo.co.in); [dhawan4324@gmail.com](mailto:dhawan4324@gmail.com)



<https://dhawan4324.github.io/Resume-Dr.Dhawan-Singh/>

### Academic Credential

<b>Ph.D.</b> <b>(Electronic Engineering)</b>	Discipline of Electronic Engineering, Howard College Campus, <u>University of KwaZulu-Natal</u> , Durban-4041, South Africa	<b>Thesis Title:</b> Design and Realization for Radar Cross Section Reduction of Patch Antennas Using Shorted Stubs Metamaterial Absorbers. <a href="#">Link</a>
	<b>Times World University Rankings 2019 (401-500) Awarded in March 2019.</b>	
<b>M. Tech (ECE)</b>	Akal College of Engineering and Technology (ACET), <u>Eternal University</u> , Baru Sahib, District-Sirmour (H.P), India-173101	<b>Thesis Title:</b> A Low-Cost Design and Monitoring of Automatic Irrigation System Based on Wireless ZigBee Technology.
<b>M.Sc. (Electronics)</b>	School of Study in Electronics, <u>Jiwaji University</u> , Gwalior (M.P), India in 2006 secured 65 % marks.	
<b>UGC-NET</b>	Qualified NET in <b>Electronic Science (88)</b> with 66.29 % in December 2014.	

### Work Experience

Organisation	Exp. (years)	Period	Designation
Chandigarh University	2.9	2023 – Currently	Professor
Chitkara University, Punjab	4	2019 – 2023	Associate Professor
UKZN, South Africa.	3	2016 – 2019	Ph.D. Researcher/ Demonstrator
Eternal University, India	7	2009 – 2016	Assistant Professor
Shah Infosys, Mohali	2.6	2006 – 2009	Embedded Software developer

### Additional Qualification & Other Achievements

Qualifications	Description

Google Scholar Citation	(Total-1017, with h-index (14), i10-index (22)). <a href="https://scholar.google.co.za/citation?user=y80jQngAAAAJ&amp;hl=en">https://scholar.google.co.za/citation?user=y80jQngAAAAJ&amp;hl=en</a>
Scopus Citation	Publications-48, Citations-540, H-index-10. Address: <a href="https://www.scopus.com/authid/detail.uri?authorId=57195940099">https://www.scopus.com/authid/detail.uri?authorId=57195940099</a>
Research Gate	(RG Score- 8.21) <a href="https://www.researchgate.net/profile/Dhawan_Singh">https://www.researchgate.net/profile/Dhawan_Singh</a>
Professional Affiliations	<a href="#">Google Scholar</a> ; <a href="#">Research Gate</a> ; <a href="#">ORCiD</a> ; <a href="#">Scopus</a> ; <a href="#">linkedin</a>
Professional Members	IEEE Member ID: 94115020; IAENG Member ID: 215991, RSRI Member LM: AA0336

### Professional Skills

Skill Sets	Tools
Cloud Platforms	AWS, Microsoft Azure, Openshift, Arduino
Electromagnetic Simulation Tools	CST Microwave Studio, HFSS, ADS, Antenna Magus
IDE Simulation Tools	MATLAB, Turbo C/C++, Keil uVision, Arduino IDE, TinkerCad
Siemens Automation tools	Sipass, Si-VMS, Desigo-CC.
Operating Systems	Windows-based all operating systems
Editing Tool Packages	Microsoft office, Latex (MiKTeX and Texmaker)
Languages	C, C++, Embedded C, VHDL, Assembly Languages for (8051, 8085/86)
Microprocessors & Microcontroller Boards	8085/86, 8051, PIC, AVR, ARM7 family
PCB Designing Tool	Arduino, MKR 1000, Raspberry Pi, STM32 OrCad, Proteus, Tinkercad, Altium, Multisim

### Certification

AI-900	<a href="https://www.credly.com/badges/0505ecba-d137-4694-b67d-ad7647d1ad02">https://www.credly.com/badges/0505ecba-d137-4694-b67d-ad7647d1ad02</a>
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### Awards and Recognitions

- Mentored Team “Electrocutor” in the finale of Smart India Hackathon 2022 under hardware section from August 25 to 29, 2022.
- Since January 2022, I've been a member of the Editorial Board of the American Journal of Science, Engineering, and Technology (AJSET).
- Delivered a session during National Level Faculty Development Program on “Internet of Things- A hands on Approach Using MKR1000” from 16<sup>th</sup> to 20<sup>th</sup> Dec 2019.
- Awarded as one of the **UKZN's Top 11 Published Student Researchers (Ranked 7)** and interview included in the UKZN Research Report 2018.
- Resource Person for Scientific Project Report on 26<sup>th</sup> Children Science Congress with focal theme on Science, Technology, and Innovation for a Clean, Green, and Healthy Nation from 9<sup>th</sup>-12<sup>th</sup> October 2018 in Chawgan, Chamba (H.P), India.
- Reviewer of Elsevier (AEU), Springer (wireless personal communication), EDAS, ACES Conference & Journal Management System, IJECE, IJET.
- Awarded **ZAR 4500/- funding to participate in IEEE PLENARY SESSION** for IEEE Region 8 held on 18<sup>th</sup> Sep 2017 in Cape Town, South Africa.

- Awarded with Honors Degree of “Master of Technology in ECE” at Eternal University, Baru Sahib, India.

### Courses Taught (B.E./B.Tech/M.E./M.Tech.)

- Building Technologies (Access Control, CCTV)
- IoT (Arduino, Blynk Cloud)
- Deployment of private Cloud using OpenShift
- Digital Electronics
- Antenna & Wave Propagation
- Microcontroller & Embedded Systems
- Analog Communication
- T.V. Engineering
- Circuit theory
- Python, C Language
- Analog Electronics
- Microprocessors
- Electromagnetic Theory
- Digital Communication
- Digital Signal Processing
- Microwave and Propagation

### Courses Curriculum Designed

- B.Tech ECE/CSE/EE
- M.Tech ECE/CSE

### Research Profile

#### Specialization & General Research Area:

Metamaterial Antennas Design: Theory, Analysis & Modeling of miniaturized Microstrip Antennas, Embedded systems & Robotics.

#### Research Fields:

- Metamaterial Absorbers (MMA), Frequency Selective Surfaces (FSS), Electronic Band-Gap Structure (EBG), Microstrip Antennas, Defected Ground Structures (DGS), 5G, MIMO.

### Student Research – Doctoral Degrees

S.N o .	Name of Student	Year of Completion	Title of Thesis	Co-Supervisors (if any)
1	Dr. Neeru	Sept 2023	Circularly Polarized Multiband Microstrip Antenna with Rf Energy Harvesting For Low Power Sensors Applications	Dr. Geetanjali

### Student Research – Masters Degrees

S.N o	Name of Student	Year of Completion	Title of Thesis	Co-Supervisors (if any)
1	Sahil Sharma	2023	Automatic Hosting of Static Website on AWS S3 Using Terrform	-
2	Sreyas Aggarwal	2023	Security and privacy implications of fog computing systems using IFogSim	-
3	Akshay Sharma	2025	Automation and Integration of Symmetric and Asymmetric	-

			Cryptography with Google Kubernetes Engine	
4	Rajat Mishra	2025	Enhanced Cost-Effective and Performance-Aware Cloud Service Broking in Multi Cloud Architecture	-
5	Gursimar Singh	2025	Leveraging Blockchain Technology for Cloud Compliance and Security	-

### Future Research Interest

- Nano-antennas, 5-G Antennas, Millimeter/TeraHertz Microstrip Antennas, Antenna Optimization using Genetic Algorithm.
- Active metamaterial absorber and frequency selective surfaces structure design for broadband applications.
- IOT, Automation, Smart Embedded system prototype design.

### Workshops/Short Term Courses (STC)

- Organized a workshop for 15 days on “Electrical Engineering Research” under Chitkara University, Rajpura, Punjab as a Convener/Resource Person between 14th June-2nd July, 2021.
- Participated in 2-day workshop on “Intellectual Property Rights: Issues and Challenges (IPRIC-2019)” during 28-3-19 to 29-3-19 organized by IPR Cell, Eternal University, Baru Sahib, in association with Himachal Pradesh Patent Information Center (HPPIC) and Himachal Pradesh Council for Science, Technology, and Environment, Shimla, H.P., India.
- Participated in Induction/Refresher Course on “Advances in Antenna Theory & Techniques” during 3-12-18 to 8-12-18 organized by Department of Electronics & Communication Engineering, Guru Nanak Dev Engineering College, Ludhiana, Punjab, India.
- Attended Short Term Course (STC) organized by NITTTR Chandigarh on “4G and 5G” through ICT (Information & Communication Technology) between 17<sup>th</sup>-21<sup>st</sup> September 2018 at Eternal University, Baru Sahib (H.P), India.
- Attended short-term course organized by NITTTR Chandigarh on “VLSI Design” through ICT between 24<sup>th</sup>-28<sup>th</sup> September 2018 at Eternal University, Baru Sahib (H.P), India.

### Project

1. Dhawan Singh and Aditi Thakur, Design and Simulation of Sustainable High-Efficiency Tandem Solar Cells Using Lead-Free Perovskite and GaAs for Circular Photovoltaic Systems, ministry of new and renewable energy, Submitting on/before 1<sup>st</sup> Aug 2025.

### Design and Utility Patents

2. Dhawan Singh, Abinash Singh, Ankit Garg, Aditi Thakur, Smart Access-Controlled Safety Helmet with Integrated SOS and Ignition Lock System for Two-Wheelers, 7<sup>th</sup> July 2025.
3. Dhawan Singh, Abinash Singh, Ankit Garg, Aditi Thakur, Smart IoT-Integrated Gas Cylinder Stand with Leak Detection, Weight Monitoring, and Predictive Alerts, 11<sup>th</sup> July 2025.
4. Dhawan Singh, Ankit Garg, Aditi Thakur, Bhavna Nayyer, Alok Das, Prince Pal Singh, Smart Inclusive Video Intercom System with AI-Based Facial, Voice and Sign Recognition, Submitted on 14<sup>th</sup> July 2025.

5. **Dhawan Singh**, Abinash Singh, Himanshu Jindal, and Aditi Thakur, "Access Controlled Two-wheeler Helmet System", Utility P438, UTI0548, Submitted: 31/10/2022.
6. Abinash Singh, Himanshu Jindal, **Dhawan Singh**, All in One Smart Bus Display Kit, Utility no. UTI0439, Date: 10-SEP-2022.
7. Abinash Singh, **Dhawan Singh**, "Multifunctional Smart Bicycle Kit" Application no. P415, Utility patent, App No: UTI0462
8. Abinash Singh, Himanshu Jindal, **Dhawan Singh**, "Smart Bus Display Kit", Application no. DSGN/IN/1891, Submitted on 31/8/22, App No. 371092-001
9. Abinash Singh, Himanshu Jindal, **Dhawan Singh**, "Smart Multifunctional Lecture Stand", Application no. DSGN/IN/1892, Submitted on 31/8/22., App. No. 371091-001.
10. Abinash Singh, Himanshu Jindal, **Dhawan Singh**, "All in one Smart Lecture Stand", Utility No. P406, UTI-438, Submitted on: 21/09/22.
11. Himanshu Jindal, **Dhawan Singh**, Abinash Singh, and Aditi Thakur, "Access Controlled Smart Irrigation Module", Application no. UTI0252, P290, Submitted on 6/7/22.
12. Himanshu Jindal, **Dhawan Singh**, Abinash Singh, and Aditi Thakur, "Access Controlled Full Faced Helmet", Application no. DSGN/IN/1898, Submitted on 2/8/22, Application No. 369654-001.
13. **Dhawan Singh**, Aadit Thakur, Aditi Thakur, Wireless All-in-one Mobile Holder, Application no. 375193-001, Submitted on 24/7/22, Application No. DSGN/IN/1870.
14. **Dhawan Singh**, Madhur Tayal, Abinash Singh, Pranav Gupta, Aditi Thakur, All in One Panic Alert System, Application no. UTI0294, Submitted on 19/7/22, Application no. P342.
15. Sumit, Mohit Kalsia, and **Dhawan Singh**, "Hook+," Application: DSGN/IN/1478, Application no. **364253-001**, CBR Date: **16/5/22**, CBR No. 201625.
16. **Dhawan Singh**, Abinash Singh, Himanshu Jindal, and Aditi Thakur, "Access Controlled Smart Irrigation System", Application: DSGN/IN/1682, Application no. **364247-001**, Submitted on **16/5/22**.
17. **Dhawan Singh**, Abinash Singh, Himanshu Jindal, Aditi Thakur, and Geetanjali, "Water Purifier and Control Method Thereof", Application no. **202211012826**, Date of filing: **Feb 07, 2022**.
18. **Dhawan Singh**, Abinash Singh, Himanshu Jindal, Aditi Thakur, and Sumit, "Enhanced Water Purifier", Date of filing: **Feb 25, 2022**, Application: DSGN/IN/1478, Application No. 359406-001
19. Abinash Singh, **Dhawan Singh**, Mohit Kalsia, Smart Anti-Theft Multipurpose Lock, Date of filing: Application no. **358017-001**, Date of filing: **Feb 7, 2021**.
20. Abinash Singh, **Dhawan Singh**, Mohit Kalsia, Wireless anti-theft multipurpose lock, **Application No. 355664-001**, Date of filing: **Dec 28, 2021**.
21. **Dhawan Singh**, Abinash Singh, Himanshu Jindal, Aditi Thakur, Solar-powered Touchless Garbage Bin, Application No. **354758-001**, Date of filing: **Dec 11, 2021**.
22. **Dhawan Singh**, Abinash Singh, Himanshu Jindal, Access Controlled Smart Solar powered lawn mower, Application no. **354246-001**, Date of filing: **Dec 3, 2021**, Granted-2022.
23. Abinash Singh, **Dhawan Singh**, Mohit Kalsia, Solar Enabled Smart Bicycle Kit, Application No. **354085-001**, Date of filing: **Dec 1, 2021**.

24. Amandeep Kaur, Meenu Khurana, Geetanjali, Vinay Gautam, **Dhawan Singh**, Deepak Thakur, Tanya Gera, Isha Gupta, Neeru, Vikas Lamba, "SMART HEALTH TRACKING DEVICE" Patent File Number - 202111028801, Patent File Date - **26/06/2021**.
25. Rajeev Kumar, Gurpreet Singh Saini, Manish Sharma, **Dhawan Singh**, Daljeet Singh, and P. R. Prajapat, "LOW PROFILE ANTENNA FOR KU-BAND APPLICATIONS," Patent File Number - 335030-001, Patent File Date - 09/11/2020. Date of issue: **29/9/21, Granted.**

### **Books**

1. **Dhawan Singh**, Ankit Garg, Aditi Thakur, Predicting Tomorrow: AI, Healthcare, Ethics, and the Role of Analytics, Kindle Book, ISBN: 9798343746280, October 4, 2024, <https://www.amazon.com/dp/B0DMFR53KP>
2. **Dhawan Singh** and Aditi Thakur, Artificial Intelligence in Life, Learning, and Virtual Worlds, Kindle Book, ISBN: 9798343999044, Oct 21, 2024, <https://www.amazon.com/dp/B0DKVKFY1X>
3. **Dhawan Singh** and Aditi Thakur, AI in the Modern World: Society, Business, Security, and Work, Kindle Book, ISBN: 9798344123042, Oct 22, 2024, <https://www.amazon.com/dp/B0DKVFF2JL>
4. **Dhawan Singh** and Aditi Thakur, Transforming Minds, Health, Work, and Systems, Kindle Book, ISBN: 9798344104652, Oct 22, 2024, <https://www.amazon.com/dp/B0DKVLH5Q6>

### **Book Chapters**

5. R. Mishra, D. Singh, A. Thakur, "Analysis of performance of scheduling algorithm in multi cloud architecture," Innovations in Computing, 1st Edition, 2025, CRC Press, Pages 8, <https://doi.org/10.1201/9781003652755>.
6. A. Garg, **D. Singh**, "Integrating Psychology in Education: A Holistic Approach to Learning, Motivation, and Well-being," in मनोविज्ञान और शिक्षा: एक समय दृष्टिकोण, JTS Publications, ISBN: 978-93-49496-87-3, June 2025.
7. A. Garg, A. K. Singh, and **D. Singh** "Cloud-Internet of Things in Smart Healthcare Systems", Integration of Cloud Computing and IoT Trends, Case Studies and Applications, ISBN 9781032647418, Publisher: CRC Press, 2024
8. **Dhawan Singh**, Aditi Thakur, Rajeev Kumar, and Geetanjali, "Design and Analyses of Dual-band Microstrip Patch Antennas for Wireless Communications," Book chapter on "**Microstrip Antenna Design for Wireless Application**" with CRC Press, Taylor and Francis Group, ISBN: 9780367554385, Published November 30, 2021 by CRC Press 352, Pages 161, <https://doi.org/10.1201/9781003093558>
9. **Dhawan Singh**, Abinash Singh, Aditi Thakur, and Himanshu Jindal, A Systematic Review on Solar Cells, Manufacturing Technologies and Production Systems, 1st Edition, CRC Press, Page 11, eBook ISBN-9781003367161, 2023.
10. Aditi Thakur, Satinderjit Kaur Gill, **Dhawan Singh**, Abinash Singh, and Aniket Soni, A Comprehensive Study on Perovskite Solar Cell, 6th International Conference on Advances in Materials and Manufacturing Technology (AMMT 2022), 6<sup>th</sup>-7<sup>th</sup> October 2022, Chitkara University, Rajpura, India, Communicated.

## Scopus/SCI Journals

11. Aditi Thakur and **Dhawan Singh**, Enhancing Power Conversion Efficiency of Lead-Free Perovskite Solar Cells: A Numerical Simulation Approach, Indian Journal of Physics, Volume 99, pages 1479–1493, (2025), DOI:10.1007/s12648-024-03365-3
12. Aditi Thakur, Satinderjit Kaur, **Dhawan Singh**, Comparative Analysis and Optimization of Lead/Lead-Free Perovskite Solar Cell, Indian Journal of Physics, 98(5), pp. 1677–1685, 2024.
13. Neeru Kashyap, **Dhawan Singh**, and Geetanjali, A Compact Multiband Annular-Slotted Patch Rectenna for Efficient Energy Harvesting, IJMOT, Vol. 18, No 3, pp. 284-291, May 2023.
14. Dhawan Singh and Abinash Singh, “Role of Building Automation Technology in Creating a Smart and Sustainable Built Environment,” EVERGREEN Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy, Vol. 10, Issue 01, pp. 412-420, March 2023.  
<https://doi.org/10.5109/6781101>.
15. Neeru Kashyap, Geetanjali, **Dhawan singh\***, “A Novel Circularly Polarized Annular Slotted Multiband Rectenna for Low Power Sensor Applications,” Progress in Electromagnetic research, Progress in Electromagnetics Research B, Vol. 99, pp. 103–119, March 2023. doi:10.2528/PIERB22122606
16. Neeru Kashyap, Geetanjali and **Dhawan Singh**, “Design Considerations for Compact Dual-band Slotted Patch Antenna with Defected Ground Plane”, International Journal of Microwave and Optical Technology (IJMOT),17(6), pp. 622–629, 2022, IJMOT-2022-7-252398.
17. Aditi Thakur, **Dhawan Singh**, and Satinderjit Gill, “Numerical Simulations of 26.11% Efficient Planar CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> Perovskite n-i-p Solar Cell,” Material Today: Proceedings, Vol. 71, No. 2, 2022, pp. 195-201. <https://doi.org/10.1016/j.matpr.2022.08.423>.
18. **Dhawan Singh**, Aditi Thakur, Maninder Singh, and Amanpreet Sandhu “IoT Implementation Strategies amid COVID-19 Pandemic,” International Journal of Computer Applications in Technology, 2021 Vol.65 No.4, pp.389–398. 10.1504/IJCAT.2021.117303,
19. **Dhawan Singh** and Viranjay M. Srivastava, “Design Implementation of Concentric Loops with Stubs Metamaterial Absorber,” Wireless Personal Communications, Springer, vol. 104, no. 1, pp 1-20, January 2019, **DOI.org/10.1007/s11277-018-6012-y**. **Citation Per Document-1.37**
20. **Dhawan Singh**, Aditi Thakur, and Viranjay M. Srivastava, “Miniaturization and Gain Enhancement of Microstrip Patch Antenna with Defected Ground and EBG,” Journal of Communication (JOCM), vol. 13, no. 12, pp. 730-736, December 2018, **Doi:10.12720/jcm.13.12.730-736**. **Citation Per Document -0.59**
21. **Dhawan Singh** and Viranjay M. Srivastava, “RCS Reduction of Patch Array using Shorted Stubs Metamaterial Absorber,” Journal of Communication (JOCM), vol. 13, no. 12, pp. 702-711, December 2018. **Doi:10.12720/jcm.13.12.702-711**. **Citation Per Document -0.59**
22. **Dhawan Singh** and Viranjay M. Srivastava, “Comparative Analyses for RCS of Patch Antenna using Shorted Stubs Metamaterial Absorber,” Journal of Engineering Science and Technology (JESTEC), vol. 13, no. 11, pp. 3532-3546, November 2018. **Citation Per Document -0.64**

23. **Dhawan Singh** and Viran Jay M. Srivastava, "An Analysis of RCS for Dual-Band Slotted Patch antenna with a thin dielectric using Shorted Stubs Metamaterial Absorber," AUE- International Journal of Electronics and Communication, vol. 90, pp. 53-62, June 2018, [DOI.org/10.1016/j.aeue.2018.03.039](https://doi.org/10.1016/j.aeue.2018.03.039) **Citation Per Document - 2.45**
24. **Dhawan Singh** and Viran Jay M. Srivastava, "Low Radar Cross Section of Patch Antenna using Shorted Stubs Metamaterial Absorber," International Journal of Microwave and Optical Technology (IJMOT), vol. 13, no. 3, pp. 194-202, May 2018. **Citation Per Document – 0.7**
25. **Dhawan Singh** and Viran Jay M. Srivastava, "Dual Resonances Shorted Stub Circular Rings Metamaterial Absorber," AUE-International Journal of Electronics and Communication, vol. 83, pp. 58-66, January 2018, [DOI.org/10.1016/j.aeue.2017.08.034](https://doi.org/10.1016/j.aeue.2017.08.034). **(Most downloaded Article 2018).**  
**Citation Per Document - 2.45**

### **Non-Scopus Journal**

26. Amanpreet Sandhu, **Dhawan Singh**, and Rakesh K. Sindhu, "Energy Dissipation Analysis of Sequential Circuits in QCA," NVEO – Natural Volatiles & Essential Oils, Vol. 8, No. 3, 2021, pp. 1421-1431.
27. Amanpreet Sandhu, **Dhawan Singh**, Kanika Aggarwal, Vaishali, Shweta Duvuri, "Frequency Scaling Based Power Efficient Flip-Flop Design in 28nm FPGA," International Journal on Emerging Technologies, IJET-RT-3080-ECE.
28. **Dhawan Singh**, Amanpreet Sandhu, Aditi Thakur, and Nikhil Priyank, "An Overview of IoT Hardware Development Platforms," International Journal on Emerging Technologies, vol. 11, no. 5, pp. 155-163, Aug 2020.
29. Maninder Singh, **Dhawan Singh**, Gurpreet Kumar, and Rajeev Kumar, "A Miniaturized and Circularly Polarized L-Shaped Slot Antenna for Ultra-wideband Applications," International Journal of Recent Technology and Engineering (IJRTE), vol. 8, no.4, November 2019. pp. 2133-2139, [Doi:10.35940/ijrte.D7707.118419](https://doi.org/10.35940/ijrte.D7707.118419)
30. Harmandeep Kaur, Aditi Sharma, and **Dhawan Singh**, "Design analysis of patch antenna using EBG structure," International Journal of Emerging Technologies and Innovative Research (JETIR), vol. 5, no. 4, pp. 916-921, April 2018. [DOI.one/10.1729/IJCRT.17507](https://doi.org/10.1729/IJCRT.17507)
31. Aditi Thakur and **Dhawan Singh**, "Reliable and Fast Future Communications with Millimeter Waves: A Review," International Journal for Research in Applied Science and Engineering Technology (IJRASET), vol. 6, no. 3, pp. 2320-2326, March 2018.
32. **Dhawan S. Thakur** and Aditi Sharma, "Voice Recognition Wireless Home Automation System Based on Zigbee," Journal of Electronics and Communication Engineering (IOSR-JECE), vol. 6, no. 1, pp. 65-75, June 2013.
33. **Dhawan S. Thakur**, Aditi Sharma, and Dileep Kumar Sharma, "A Low-Cost Design & Monitoring of Automatic Irrigation System Based on ZigBee Technology," International Journal of Engineering Research and Technology, vol. 2, no.5, pp. 1112-1121, May 2013.

### **Communicated Scopus/SCI Journals/Conferences**

34. Neeru Kashyap and Dhawan Singh, Development of RF Energy Harvesting Wideband Microstrip Patch Antenna with 3-Hexagonal Ring Slots for 5G Applications, *Progress in Electromagnetic research, Progress in Electromagnetics Research B*, Under Review.
35. Akshay Sharma and **Dhawan singh**, Implementing Google Kubernetes Engine Cluster Using Terraform and Jenkins in Two Environments, International Conference ICSADL 2025, 18-20 Feb 2025, **Presented**.

### Scopus Conferences

36. A. Garg, D. Singh, M. L. Saini, G. Singh, and S. K. Gill, "An efficient retargeting technique to mitigate deformations by integrating seam carving and image stitching," in *Proc. 2025 2nd Int. Conf. Multidisciplinary Research and Innovations in Engineering (MRIE)*, Gurugram, India, Jul. 30–31, 2025, pp. 1–6, doi: [10.1109/MRIE66930.2025.11156341](https://doi.org/10.1109/MRIE66930.2025.11156341).
37. A. Garg, **D. Singh**, N. Chopra, B. Nayyer, and S. Rattan, "A Cardiovascular Disease Early Detection System in Cloud—A Project Based Approach," in *Proc. 2025 2nd Int. Conf. Multidisciplinary Research and Innovations in Engineering (MRIE)*, Gurugram, India, Jul. 30–31, 2025, pp. 1–6, doi: [10.1109/MRIE66930.2025.11156700](https://doi.org/10.1109/MRIE66930.2025.11156700).
38. R. Mishra, **D. Singh**, and A. Thakur, "A Structured Framework for Selecting Cloud or Fog Computing in Application-Specific Contexts," in *Proc. 3rd Int. Conf. Self Sustainable Artificial Intelligence Systems (ICSSAS)*, Erode, India, Jun. 11–13, 2025, pp. 1729–1734, doi: [10.1109/ICSSAS66150.2025.11081303](https://doi.org/10.1109/ICSSAS66150.2025.11081303).
39. **D. Singh**, A. Thakur, A. Garg, and M. L. Saini, "Revolutionizing Software Deployment Through Microservices Containers," in *Proc. 2025 Global Conf. Emerging Technology (GINOTECH)*, Pune, India, May 9–11, 2025, doi: [10.1109/GINOTECH63460.2025.11076748](https://doi.org/10.1109/GINOTECH63460.2025.11076748).
40. G. Singh and **D. Singh**, "Leveraging blockchain technology for enhanced data protection and integrity in cloud security," in *Proc. 2025 12th Int. Conf. Computing for Sustainable Global Development (INDIACom)*, Delhi, India, Apr. 2–4, 2025, pp. 1–6, doi: [10.23919/INDIACom66777.2025.11115419](https://doi.org/10.23919/INDIACom66777.2025.11115419).
41. G. Singh and **D. Singh**, Leveraging Blockchain for Cloud Log Security and Compliance in AWS, *2025 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS)*, Bhopal, India, 18-19 January 2025, pp. 105, doi: <https://doi.org/10.1109/SCEECS64059.2025.10941068>.
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### Personal Information

Father's Name	Mr. Jalam Singh
Mother's Name	Late Mrs. Dinesh Thakur
Date of Birth	02-02-1981
Marital Status	Married
Nationality	Indian
Passport Number	N2272273.
Permanent Address	Mohalla- Sapri, District-Chamba (H.P), India-176310.
Skype ID	dhawan4324

### References

**Prof.(Dr.) Viran Jay M.  
Srivastava (Professor),  
SMIEEE**  
  
Howard College Campus,  
Discipline of Electronic  
Engineering, University of  
KwaZulu-Natal, Durban-4041,  
South Africa.  
  
[srivastava@ukzn.ac.za](mailto:srivastava@ukzn.ac.za);  
[viranjay@ieee.org](mailto:viranjay@ieee.org),  
  
Contact no. +27-846575266,  
+27-312602759

**Dr. Pardeep Kumar**  
(Senior Lecturer)  
  
Howard College Campus,  
Discipline of Electronic  
Engineering, University of  
KwaZulu-Natal, Durban-4041,  
South Africa.  
  
[kumarp@ukzn.ac.za](mailto:kumarp@ukzn.ac.za)  
  
Contact no. +27-629796946,  
+91-8894178994.

**Dr. Ayodele Sunday Oluwole**  
(Senior Lecturer)  
  
Electrical and Electronics  
Engineering Department, Federal  
University, Oye-Ekiti, Nigeria  
[ayodele.oluwole@fuoye.edu.ng](mailto:ayodele.oluwole@fuoye.edu.ng)  
[asoluwole@gmail.com](mailto:asoluwole@gmail.com),  
  
Contact no. +234-8035195899

## Declaration

*I hereby declare that all the information made above is true to the best of my knowledge.*

**PLACE: Punjab (India)**

**(Dr. Dhawan Singh)**