

Dr. SHWETANK AVIKAL



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CURRICULUM VITAE

Experience (12+ Years) (Teaching + Research + Industry)

Associate Professor, Graphic Era Hill University, Dehradun,
India (since August 2013, 9Y & 7M)

Total Google Scholar citations – 800+, h-index-14, i-10 index-20

<https://scholar.google.co.in/citations?user=fHWDgIAAAAJ&hl=en>

https://www.researchgate.net/profile/Shwetank_Avikal

Technical Qualifications

Under Graduation: -

Examination Passed	Name of the Institute	Year of	% Marks/CGPS
B.Tech Mechanical Engineering	B.S.A.C.E.T. Mathura, U.P.T.U. Lucknow	2007	68.64

Post-Graduation: - Studies in Assembly Line Balancing (M.Tech)

Examination Passed	Name of the Institute	Year of	% Marks/CGPS
M.Tech Production Engineering	M.N.N.I.T. Allahabad	2009	8.00
MBA (ODL)	Graphic Era Deemed to be University, Dehradun	2022	8.47

Doctorate: Assembly and Disassembly Line Balancing Using Heuristic Approaches

Examination Passed	Name of the Institute	Year of	% Marks/CGPS
Ph.D Operations Management	M.N.N.I.T. Allahabad	2016	8.00

Areas of Interest

Assembly and Disassembly lines balancing, Industrial Engineering, Operation Research, Project Management, Supply Chain Management, Product Design and Development, Inventory and Logistic Management, Renewal Energy

Industrial Training

1. Radico Khaitan Limited, Rampur (U.P.) (Production Dept.)
2. Radico Khaitan Limited, Rampur (U.P.) (Co-Gen Dept.)
3. Motorman Industrial Robot Training (one week) at MNNIT-Allahabad
4. Motosim Industrial Robot Interfacing Software Training (one week) at MNNIT-Allahabad

Research Achievements

Personal Data:

Name : Shwetank Avikal

Date of Birth : 01 July 1986

Father's Name : Anand Prakash

Category : General

Gender : Male

Marital Status : Single

Languages Known: English, Hindi

Nationality : Indian

Interests : Teaching and Research

Strengths : Team player, Optimistic,
Good decision making
Capabilities.

- **20 (5-SCI/10ABDC/20 SCOPUS)** Paper Published in International Journals and **5** more (SCI/ABDC) are Under Revision/Review, **6** in process
- Twenty Papers Published in International & One in National Conferences
- **Guest Editor** for Special Issue on Renewal Energy Management in International Journal of Energy Optimization and Engineering, IGI Global Publication, **ESCI**
- Reviewer of **IEEE** Transaction on Engineering Management, **SCI**
- Reviewer of Applied Soft Computing, Elsevier, **SCI, ABDC-C**
- Reviewer of Journal of Intelligent Manufacturing, Springer, **SCI**
- Reviewer of International Journal of Advance Manufacturing Technology (IJAMT), Springer, **SCI**
- Reviewer of International Journal of Production Research (IJPR), Taylor and Francis, **SCI, ABDC-A**
- Reviewer of Journal of Engineering Manufacturer, Sage, **SCI**
- Reviewer of Engineering Optimization, Taylor and Francis, **SCI**
- Reviewer of Journal of Intelligent Manufacturing, **SCI/ABDC-B**
- Reviewer of Computer & Industrial Engineering, **SCI/ABDC-C**
- Reviewer of many other **SCI** and **SCOPUS** Indexed Research Journals
- GATE-2006 Exam Qualified with **AIR-1765**.

Achievements in Extra Curricular Activities

- Bharat Scout & Guide, President Award
- Bharat Scout & Guide, National Jamburee Award
- U. P. Scout & Guide, Governor Award

Best Publications (Journals)

Topic & Role	Journal Name
“A Kano Model, AHP and M-TOPSIS method based technique for disassembly line balancing under Fuzzy environment”	Applied soft computing, Elsevier publications, 2014, vol. (25) SCI, ABDC-C, I.F.-4.873
“A Heuristic Approach for U-shaped Assembly Line Balancing to Improve Labour Productivity” Main author	Computer and Industrial Engineering, Elsevier publications, 2013 vol. 64 (4) SCI, ABDC-A I.F. 3.518
“A Fuzzy AHP and PROMETHEE Method based heuristic for disassembly line balancing problems” Main author	International Journal of Production Research, T & F publications, 2013 2013, vol 55 (5), SCI, ABDC-A
A Kano Model, AHP and TOPSIS based Approach for Selecting Best Mobile Phone under Fuzzy Environment	International Journal of Quality and Reliability Management, Vol. 37 No. 6/7, pp. 837-851 2021, ESCI, ABDC-B
“QFD and Fuzzy Kano model-based approach for classification of aesthetic attributes of SUV car profile” Main author	Journal of Intelligent Manufacturing I.F. 3.667, Springer publications, 2020, SCI, ABDC-B,

Details of Research Paper Publications, Conferences, Short Term Courses Attended, Other Awards & Research Achievements



Book Authored/Edited with International Publisher

1. **Shwetank Avikal & Amit Raj Singh**, “**Sustainability in Industry 4.0**”, CRC Press, **Taylor & Francis Publication**, 2021 (ISSN No. 9781003102304)



International Journals (SCI/ECIE/ESCI/ABDC indexed)

1. **Shwetank Avikal**, “A Kano Model and Quality Function Deployment based Approach for Designing User-Friendly Website”, **International Journal of Quality and Reliability Management**, Accepted, (ESCI, ABDC-B, Scopus).
2. **Shwetank Avikal**, “Factors implementing sustainable circular economy in agro-produce supply chain: DEMATEL-DANP-based approach”, **Management of Environmental Quality: An International Journal**, <https://doi.org/10.1108/MEQ-03-2022-0088> (ESCI, ABDC-C, Scopus).
3. GK Badhotiya, **Shwetank Avikal**, “Analyzing barriers for the adoption of circular economy in the manufacturing sector” **International Journal of Productivity and Performance Management**, 2022, 71(3), pp. 912–931 (ABDC-B, ESCI, SCOPUS).
4. Mukesh Nigam, **Shwetank Avikal**, “Risk Assessment in ERP Project by COPRAS Method Under Fuzzy Environment”, **International Journal of Reliability, Quality and Safety Engineering**, 2021, 28(6) (ESCI, SCOPUS).
5. **Shwetank Avikal**, Mukesh Nigam “A hybrid multi criteria decision making approach for consultant selection problem in ERP project”, **International Journal of Systems Assurance Engineering and Management**, 2021, (ESCI, SCOPUS).
6. **Shwetank Avikal**. Rashmi Rashmi, “A Kano Model, AHP and TOPSIS based Approach for Selecting Best Mobile Phone under Fuzzy Environment”, **International Journal of Quality and Reliability Management**, Vol. 37 No. 6/7, pp. 837-851 (ESCI, ABDC-B, Scopus).

7. Rohit Singh & **Shwetank Avikal**, "Prevention of Covid-19: Developing a Hierarchy of effective activities for policy decision-makers", **International Journal of Healthcare Management**, Vol. 30 (3), 2020 (**ESCI, ABDC-C**, Taylor & Francis)
8. **Shwetank Avikal**, Rohit Singh, Rashmi, "QFD and Fuzzy Kano model-based approach for classification of aesthetic attributes of SUV car profile" **Journal of Intelligent Manufacturing**, Vol 31, 271-284, 2020 (Springer publications, **SCI, ABDC-B, I.F.-7.136**)
9. **Shwetank Avikal**, P. K. Mishra, Rajeev Jain and H. C. Yadav, "A Kano Model, AHP and M-TOPSIS method-based technique for disassembly line balancing under Fuzzy environment," **Applied soft computing**, Vol. 25, 519-529, 2014 (**SCI, ABDC-C, I.F.-8.263**, Elsevier publication).
10. **Shwetank Avikal**, Rajeev Jain, P. K. Mishra and H. C. Yadav "A heuristic for U-shaped assembly line balancing to improve labor productivity", **Computer and Industrial Engineering**, Vol. 64, No. 4, 895-901, 2013 (Elsevier publications, **SCI, ABDC-A, I.F.- 7.18**).
11. **Shwetank Avikal**, Rajeev Jain, and P. K. Mishra, "A Fuzzy AHP and PROMETHEE Method based heuristic for disassembly line balancing problems", **International Journal of Production Research**, Vol. 52, No. 5, 1306-1317, 2014 (Taylor & Francis publications, **SCI, ABDC-A, I.F.-9.018**).
12. H. C. Yadav, Rajeev Jain, Sandarbh Shukla, **Shwetank Avikal** and P. K. Mishra, "Prioritization of aesthetic attributes of car profile", **International Journal of Industrial Ergonomics**, Vol. 43, No. 1, 296-303, 2013 (Elsevier publications, **SCI, I.F.-2.884**).
13. **Shwetank Avikal**, P. K. Mishra and Rajeev Jain, "An AHP and PROMETHEE Method based environment friendly heuristic for disassembly line balancing problems", **Interdisciplinary Environmental Review**, Vol. 14, No. 4, 69-85, 2013 (Inderscience publications, **ABDC-C**).
14. **Shwetank Avikal**, Rajeev Jain, Harish Yadav and P. K. Mishra, "A PROMOTHEE Method based heuristic for disassembly line balancing problem", **Industrial**

Engineering & Management Systems, Vol. 12, No. 3, 254-263., 2014 (ESCI/Scopus Indexed).

15. **Shwetank Avikal**, Rahul Singhal, Rohit Singh, “Selection of Best Power Supply Source for Telecom Towers in Remote Areas”, **International Journal of Mathematical, Mechanical and Management Science**, published online (ESCI, SCOPUS Indexed Cite score: 2.58).
16. Mukesh Nigam & **Shwetank Avikal**, “Identification and Prioritization of Preventive Resilient strategy in Urea fertilizer supply chain during and after COVID-19 in Indian perspective through Best –Worst Method”, Sustainable Production and Consumption, Under Review (SCI, ABDC-B, Elsevier Publications)



International Journals (SCOPUS indexed)

17. Kuber Singh Mehra, Shwetank Avikal, “Performance, energy, emission and cost analysis of Jatropha (Jatropha Curcas) oil as a biofuel for compression ignition engine” Material Today: Proceeding, Vol 43(1), 348-354, 2021 (Elsevier Publication, SCOPUS Indexed, Cite score: 1.09).
18. A. K. Singh, **Shwetank Avikal** “Selection of suitable metal matrix composite for design application using MCDM approach”, Material Today: Proceeding, Accepted, (Elsevier Publication, SCOPUS Indexed, Cite score: 1.09).
19. **Shwetank Avikal**, A. R. Singh, “A fuzzy-AHP and TOPSIS based approach for selection of metal matrix composite used in design and structural applications”, Material Today: Proceeding, Accepted, (Elsevier Publication, SCOPUS Indexed, Cite score: 1.09).
20. **Shwetank Avikal**, A. R. Singh, “A decision-making approach for installation of telecom tower”, Material Today: Proceeding, Accepted, (Elsevier Publication, SCOPUS Indexed, Cite score: 1.09).
21. Amit Kumar Singh, **Shwetank Avikal**, “A Fuzzy-AHP and M-TOPSIS based approach for selection of composite materials used in structural applications”, **Material Today: Proceeding**, Vol 26(2), 3119-3123 (Elsevier Publication, SCOPUS Indexed, Cite score: 1.09).



International Journals (UGC/OTHER indexed)

22. **Shwetank Avikal**, Ferhaz Ahmed, P. K. Mishra, A. R Singh. “A heuristic for cost-oriented assembly line balancing problems, **International Proceeding of Economics Development and Research**, Vol. 75, pp 180-183.
23. **Shwetank Avikal**, P. K. Mishra and Rajeev **Jain**, “A heuristic for U-shaped Disassembly Line Balancing Problems”, **MIT Journal of Mechanical Engineering**, Vol. 3, No. 1, 51-56, 2013 (MIT Publications).
24. **Shwetank Avikal** and P. K. Mishra, “A new U-shaped heuristic for disassembly line balancing problems” **IJSSBT**, Vol. 1, No. 1, pp. 21-27, 2012.



International Conferences

25. **Shwetank Avikal**, A. Sharma, “Selection of Turbine Seal Strip Material by MCDM Approach”, FLAME, 2020, Amity University, Noida.
26. Rashmi and **Shwetank Avikal**, “A MCDM Based Approach for Selection the Best State for Tourism in India”, ICHSA 2018, B.M.L. Munjal University, Gurgaon.
27. **Shwetank Avikal** and Rohit Singh, “A MCDM based approach for selection of a sedan car from Indian Car Market”, ICHSA 2018, B.M.L. Munjal University, Gurgaon.
28. Rahul Singhal and **Shwetank Avikal**, “An AHP based approach for installation of Telecom tower”, ICHSA 2018, Munjal University, Gurgaon (Accepted).
29. Mukesh Kumar and **Shwetank Avikal**, “An approach for Purchasing Indian Car Market under Fuzzy Environment”, SocProS 2016, Thaper University, Patiala, December, 2016.
30. Shalini Singh and **Shwetank Avikal**, “Selection of best state for tourism in India by Fuzzy approach”, ICCCCS, Aryabhata College of Engineering and Research Centre, Ajmer, August, 2016.

31. **Shwetank Avikal**, “A heuristic based on AHP and TOPSIS for disassembly line balancing”, SocProS 2015, IIT Roorkee, December, 2015.
32. **Shwetank Avikal et. al.**, “A Fuzzy-AHP approach for calculating the weights of disassembly line balancing criteria”, SocProS 2015, IIT Roorkee, December, 2015.
33. Mukesh Chand and **Shwetank Avikal**, “An MCDM based approach for purchasing a car from Indian car market”, IEEE SCES2015, held on November 6-8, 2015 at MNNIT Allahabad.
34. **Shwetank Avikal**, Ferhaz Ahmed, P. K. Mishra, A. R Singh. “A heuristic for cost-oriented assembly line balancing problems” International Conference on Quality Management, 2014, March 22-23, N.I.T. Raipur.
35. **Shwetank Avikal**, “An Analytical Hierarchy Process based approach for purchasing lab instruments and machines, International Conference on Soft Computing techniques for Engineering and Technology, 2014, August 7-8.
36. Rafia Gohar and **Shwetank Avikal**, “An approach for improving Corporate Governance with the help of Database Management System, International Conference on Soft Computing techniques for Engineering and Technology, 2014, August 7-8.
37. **Shwetank Avikal**, Rajeev Jain and P. K. Mishra, “Disassembly Line Balancing Under Fuzzy Environment”, 2nd IEEE Student conferences, April 2013, MNNIT Allahabad, India, (Accepted, not presented).
38. **Shwetank Avikal**, Rajeev Jain, Harish Yadav and P. K. Mishra, “A New Heuristic for D Disassembly Line Balancing Problems With AND/OR Precedence Relations”, SocProS 2012, J. K. Lakshmiapat University, Jaipur, India, Dec 28-30, 2012.

39. **Shwetank Avikal**, P. K. Mishra and Rajeev Jain, “A model for assembly line balancing problems”, 1st IEEE Student conferences, 16-18 March 2012, MNNIT Allahabad, India.
40. **Shwetank Avikal** and P. K. Mishra, “Assembly line balancing: Compression of heuristic approaches”, ICSES’10, IEEE, joint, 1-2 April 2010, SESEC, Navalnager, Dhule, Maharashtra, India.



National Conferences

41. **Shwetank Avikal**, P. K. Mishra and Rajeev Jain, “A Technique for Hybridization Of Assembly Line Balancing (ALB) Heuristics”, National Seminar on Applied Science and Engineering, 22-23 March 2013, GEC Jabalpur.



Book Chapter

42. Rohit Singh & **Shwetank Avikal**, “An AHP-Based Approach to Determine the Effects of COVID-19 on Industrial Sustainability, Sustainability in Industry 4.0 Challenges and Remedies, 2021, CRC Press (9781003102304)
43. Anuragh Barthwal & **Shwetank Avikal**, “Time Series Analysis of COVID-19 Confirmed Cases in Select Countries , Recent Advantages in Time Series Forecasting, 2021, CRC Press (9781003102281)
44. Rashmi and **Shwetank Avikal**, “A MCDM Based Approach for Selection the Best State for Tourism in India”, Harmony Search and Nature Inspired Optimization Algorithms, 2018, (**Springer publications** ISBN 978-981-13-0761-4).
45. **Shwetank Avikal** and Rohit Singh, “A MCDM based approach for selection of a sedan car from Indian Car Market”, Harmony Search and Nature Inspired Optimization Algorithms, 2018, (**Springer publications** ISBN 978-981-13-0761-4).

46. Shalini Singh and **Shwetank Avikal**, “Selection of best state for tourism in India by Fuzzy approach”, Advances in Intelligent Systems and Computing, 2016, (**Springer publications**, ISBN 978-981-10-3770-2).
47. Mukesh Chand and **Shwetank Avikal**, “An approach for Purchasing Indian Car Market under Fuzzy Environment”, Advances in Intelligent Systems and Computing, 2017, (**Springer publications**, ISBN 978-981-10-3322-3).
48. **Shwetank Avikal**, “A heuristic based on AHP and TOPSIS for disassembly line balancing”, Advances in Intelligent Systems and Computing, 2015, (**Springer publications**, ISBN 978-981-10-0448-3).
49. **Shwetank Avikal** et. al., “A Fuzzy-AHP approach for calculating the weights of disassembly line balancing criteria”, Advances in Intelligent Systems and Computing, 2015, (**Springer publications**, ISBN 978-981-10-0448-3).
50. **Shwetank Avikal**, Rajeev Jain, Harish Yadav and P. K. Mishra, “A New Heuristic for Disassembly Line Balancing Problems With AND/OR Precedence Relations”, Advances in Intelligent Systems and Computing, pp. 519-525, 2014 (**Springer publications**, ISBN 978-81-322-1602-5).



Conference, Workshop Organized and Joined as a Member

1. Advance Material and Manufacturing Processes, Department of Mechanical Engineering, Graphic Era Hill University, Dehradun, **India**, March 30-31, 2016 (Role: Organizing Secretaries)
2. International Conference on Soft Computing and Applications, San Francisco, **USA**, 19-21 October, 2016, (Role: Member, Conference Committee).
3. 2nd International Conference on Control Computing Communication and Materials, United group of institutes, Allahabad, **India**, IEEE conference, October 21-22, 2016 (Role: Member, Program committee).

4. The 1st Annual International Conference of the IEEE Technology and Engineering Management Society, Silicon Valley (Santa Clara), California USA, June 8-10, 2017 (Role: Member Review Board).
5. International Conference on Intelligent Computing and Signal Processing (ICSP 2017), Bangkok, Thailand, March 10-12, 2017 (Role: Member, Technology Program Committee).
6. National Seminar on Fabrication of Advance Materials and Processing: “An Approach Towards Make in India”, Dehradun, India, March 23-24, 2017 (Role: Organizing committee).
7. International Conference on Harmonic Search, Soft Computing and Application, BM Munjal University, Gurgaon, India, Feb-2018 (Role: Member, Technology Program and Advertisement Committee).



Short Term Course, Continuing Education Programmes, Short Term Training Programmes & Conferences Attended

1. Attended Short Term Course on “**Applications of Artificial Intelligence Techniques in Engineering Systems**”, 10-14th June 2013, organized by Department of Mechanical Engineering, Motilal Nehru National Institute of Technology, Allahabad.
2. **SocProS 2015**, Dec 18-20, 2015, IIT Roorkee, Saharanpur Campus, India.
3. **SocProS 2012**, Dec 28-30, 2012, J. K. Lakshmipat University, Jaipur, India.
4. 1st **IEEE Student conferences**, 16-18 March 2012, MNNIT Allahabad, India.
5. **ICSES’10, IEEE joint**, 1-2 April 2010, SESEC, Navalnager, Dhule, India.
6. **Science and Spiritual Quest**, 15-17 January 2010, MNNIT Allahabad, India.