

Curriculum Vitae

Dr. Dhumale Rakesh Babu.

M. Tech. Ph. D. (E & TC Engg.)
Associate Professor,
Artificial Intelligence & Data Science
Department,
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Date of Birth: 01/06/1984
Experience: 12 Years, 2 Months
Citations: 271
H-index: 08
I-10 index: 07
IEEE Membership: 93344436
LMISTE: LM131680

Education

Sr.	Examination	University / Institute / Board	Subjects / Specialization	Year of Passing	% Marks	Class / Division
1	Ph.D.	Savitribai Phule Pune University, Pune	Electronics and Telecomm. Engg.	2017	---	---
2	Post-Graduation	Shivaji university, Kolhapur	Electronics Technology	2010	77.05 %	Distinction
3	Graduation	TKIET, Warananagar, Kolhapur	Electronics Engineering	2006	70.50 %	Distinction
4	12 th	Maha. State Board Sec. & Hig. Sec. Edu. ,Pune	Science	2002	61.50%	First Class
5	10 th	Maha. State Board Sec. & Hig. Sec. Edu. ,Pune	---	2000	76.50 %	Distinction

Employment

Sr. No.	Name of Organization	Year
1	AISSMS Institute of Information Technology, Pune	21/09/2020 to Till Working
2	Sinhgad College of Engineering, Pune.	20/07/2010 to 20/09/2020
3	Dnyanganga College of Engineering and Research, Pune.	01/07/2008 to 19/07/2010

Publications

Sr. No.	Activities	Total
1	Patents (Published)	03
2	International Journals	36
3	International, National and Regional Conferences	30
4	Books	03

Funds Received

Sr. No.	Agency	Details
1	2022 IEEE HAC/SIGHT Projects: HAM Radio Set Up for Flood Prone Area.	US \$5,000
2	RPS, BCUD, SPPU, Pune: Fault Detection and Diagnosis of Three Phase VSI using Discrete Wavelet Transform and Adaptive Neuro-Fuzzy Interface System.	Rs. 3,00,000/-
3	RPS, BCUD, SPPU, Pune: Life cycle monitoring of DC link Electrolytic Capacitor in Power Converter.	Rs. 1,30,000/-
4	QIP, BCUD, SPPU, Pune: National Conference on Latest Trends in Electronics-(NCLTE 2013)	Rs. 50,000/-

Consultancy

1	Fevino Industries LPP, Pune “ System and Method for Condition based Maintenance ”	RS. 95,808/-
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Training

Sr. No.	Activities	Total
1	Refresher Courses/Seminars/Workshops etc. Attended	59
2	Refresher Courses/Seminars/Workshops/Conferences, etc organized	10
3	Industrial Training	04
4	Online Courses: National Program on Technology Enhanced Learning (NPTEL)	05
5	Online Courses: AICTE Training And Learning (ATAL)	05

Activities

	Guest Lectures/ Session Chair, etc.	37
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Awards

1	Honorable Mention Award - Apac Region IEEE Communications Society 2021 “ Internet For All Competition ”. (Prize Money US \$500)
2	Best Paper Award in “ 2nd International Conference on Ideas, Innovation & Impact in Science & Technology ”, Organized by SKNCoE, Pune, 19 th March, 2019.
3	Winner of ‘ Avishkar-2013 ’ University Level Research Competition.

Objectives

Short Term: To encourage excellence research and commence research projects keeping in view their significance to requirements and necessities of skill in Indian society.

Long Term: Develop laboratory for condition based maintenance engineering involving interdisciplinary work.

Publications	
International Journals	
1.	R. B. Dhumale, S. D. Lokhande, “Neural Network Fault Diagnosis of Voltage Source Inverter under Variable Load Conditions at Different Frequencies”, <i>Measurement</i> , vol. 91, pp- 565–575, Sept. 2016. [IF-1.742, <i>Publisher: Elsevier, Netherland</i> , ISSN:0263-224, DoP: 26/04/2016]
2.	R. B. Dhumale, S. D. Lokhande, “Diagnosis of multiple open switch faults in three phase voltage source inverter”, <i>Journal of Intelligent and Fuzzy Systems</i> , vol. 30, iss. 4, pp- 2055-2065, 3/10/2016. [IF-1.812, ISSN (print): 1064-1246, ISSN (Online): 1875-8967 ,Publisher: <i>IOS Press, Netherland</i> , DOP: 10 March 2016]
3.	R. B. Dhumale, S. D. Lokhande, “Comparative Study of Fault Diagnostic Methods in Voltage Source Inverter Fed Three Phase Induction Motor Drive”, IOP Conf. Series: <i>Materials Science and Engineering</i> , vol. 197, pp. 1-14, June, 2017. [ISSN: 1757-899x]
4.	R. B. Dhumale , N. R. Dhumale , P. M. Bangare, “Fuzzy based Water Irrigation System”, <i>International Journal of Advanced Science and Technology</i> , Vol. 28, No. 13, (2019), pp. 130-137 ISSN: 2005-4238.
5.	A. M. Umbrajkaar, A. Krishnamoorthy, R. B. Dhumale, “Vibration Analysis of Shaft Misalignment Using Machine Learning Approach under Variable Load Conditions”, <i>Shock and Vibration</i> , vol. 2020. [Publisher: <i>Hindawi</i> , Article ID 1650270, ISSN: 1070-9622 (Print) ISSN: 1875-9203 (Online)]
6.	R. B. Dhumale, Anshuman Namdeo, Sanket Narharshettiwar, Rushikesh Nagare, “Hardware Implementation of Artificial Neural Network for Buck Boost Converter”, <i>Jour of Adv Research in Dynamical & Control Systems</i> , Vol. 11, No. 9, 2019. Pp. 32-39, ISSN 1943-023X.
7.	R. B. Dhumale, N. D. Thombare, “Leaf Disease Classification using Machine Learning”, <i>Journal of Emerging Technologies and Innovative Research</i> , vol. 6, iss. 4, April 2019, pp 425-435. [Impact Factor: 5.87, ISSN: 2349-5162, Publisher: IJPUBLICATION, <i>UGC approved journal</i>]
8.	R. B. Dhumale, “Support Vector Machine for Leaf Disease Classification”, <i>Journal of Emerging Technologies and Innovative Research</i> , vol. 6, iss. 5, May 2019, pp 315-320. [Impact Factor: 5.87, ISSN: 2349-5162, Publisher: IJPUBLICATION, <i>UGC approved journal</i>]
9.	R. B. Dhumale, “Condition Monitoring of Renewable Energy Resources”, <i>Journal of Emerging Technologies and Innovative Research</i> , vol. 6, iss. 5, May 2019, pp 563-567.[Impact Factor: 5.87, ISSN: 2349-5162, Publisher: IJPUBLICATION, <i>UGC approved journal</i>]
10.	R. B. Dhumale, “Wireless Sensor Network based Fault Diagnosis of Solar based Street Light”, <i>Journal of Emerging Technologies and Innovative Research</i> , vol. 6, iss. 5, May 2019, pp 558-562. [Impact Factor: 5.87, ISSN: 2349-5162, Publisher: IJPUBLICATION, <i>UGC approved journal</i>]
11.	M. P. Gaikwad, R. B. Dhumale. “Tumor Diagnosis using Gray Level Cooccurrence Matrix and Artificial Neural Network”. <i>International Journal of Advanced Science and Technology</i> , vol. 29, iss. 05, pp 4255 – 4264. [ISSN: 2005-4238.]
12.	Sadegaonkar, P. Dhumale, R.B., “Pulsar Search using Supervised Machine Learning: An Application of Astronomy”, <i>Test Engineering & Management</i> , March- April 2020, Page No. 2095-2101.
13.	Dhumale, R. B., Sadegaonkar, P., Dhumale, N. R., “K-Nearest Neighbor for Identification of Pulsars in Astronomy”, <i>Test Engineering & Management</i> , March-April 2020, Page No. 2239 – 2244.
14.	A. R Khandebharad, R. B. Dhumale, S. S. Lokhande, “Electrolytic Capacitor Online Failure Detection and Life Prediction Methodology”, <i>Int. J. Research in Engg. And Techn.</i> , vol. 4, iss. 2, pp.636-641, Feb. 2015. [Impact Factor: 2.375, ISSN: 2319-1163, 2321-7308, Publisher: eSAT]
15.	A. R Khandebharad, R. B. Dhumale, S. S. Lokhande, “Online Failure Prediction of the Aluminum Electrolytic Capacitor”, <i>Int. J. Science and Research</i> , vol.4, iss. 6, pp.2099-2102, June. 2015. [Impact Factor: 5.611 ISSN:2319-7064]
16.	R. B. Dhumale, S. D. Lokhande, N. D. Thombare, M. P. Ghatule, “Fault Detection and Diagnosis of High-Speed Switching Devices in Power Converter”, <i>Int. J. Research in Engg. And Techn.</i> , Vol.4, iss. 2, pp.636-641, Dec. 2013. [Impact Factor: 2.375,ISSN:2319-1163, 2321-7308,Publisher: eSAT]
17.	M. R Ubale, R. B. Dhumale, S. D. Lokhande, “Method of Open Switch Fault Detection in Three

	Phase Inverter using Artificial Neural Network”, <i>Int. J. Research in Science and Advance Technology</i> , Vol. 3, iss. 3, PP 78-82, June 2014. [Impact Factor: 2.17, ISSN: 2320-1126]
18.	L. P. Patil, R. B. Dhumale, S. D. Lokhande, “Fault Detection and Diagnosis Technique for Power Inverter using Discrete Wavelet Transform”, <i>Int. J. Electronics Circuits and systems</i> , Vol. 3, iss. 2, pp 174-178, June 2014. [Impact Factor 3.19, ISSN:2277-5870, Publisher: International forum of researchers Students and Academician]
19.	C. Ugale , R. B. Dhumale , V. V. Dixit, “ DC-DC Converter for Solar Energy Harvesting using PID Controller”, <i>Int. J. Engineering Applications and Technology</i> , Vol. 1, iss. 13, pp 132-136, July 2105. [Impact Factor 2.117, ISSN: 2321-8134]
20.	C. Ugale , R. B. Dhumale , V. V. Dixit, “DC-DC Converter using Fuzzy Logic Controller”, <i>Int. Research J. in Engg. And Techn.</i> , vol.4, iss.07, pp.490-696, July. 2015. [Impact Factor: 2.375, ISSN: 2319-1163, 2321-7308, Publisher: eSAT]
21.	Gaurav Kate, Kaustubh Dave, Saprem Kulkarni, R. B. Dhumale, “Android Application for S-Park System”, <i>Int. J. Research in Engg. And Techn.</i> , vol. 4, iss. 2, pp.636-641, Oct. 2015. [Impact Factor: 2.375, ISSN: 2319-1163, 2321-7308, Publisher: eSAT]
22.	Mala RatanUbale, RB Dhumale, S.D. Lokhande , “Open switch fault diagnosis in three phase inverter using diagnostic variable method”, <i>International Journal of Research in Engineering and Technology</i> , Vol. 2, iss. 3, pp. 636-640, Nov. 2013.[Impact Factor: 2.375, ISSN: 2319-1163, 2321-7308, Publisher: eSAT]
23.	P. S. Wankhede, R. B. Dhumale & S. D. Lokhande, “Dual Band Fractal Antenna”, <i>International Journal of Electrical and Electronics Engineering Research (IJEEER)</i> ,vol. 5, iss. 6; pp 11-18, Dec. 2015. [ISSN (Online): 2278-943x; ISSN (Print): 2250-155x; Impact Factor(JCC) (2015): 6.2879; Index Copernicus Value (ICV) – (2015): 3.0; Naas Rating: 2.40]
24.	R. B. Dhumale, Gaurav Kate, Saprem Kulkarni, N. D. Thombare, “Reservation based S-Park System using Embedded Server and Android Application”, <i>International Journal of Research in Engineering and Technology</i> , vol. 5, iss. 8, pp. 115-119, Aug. 2016.[Impact Factor: 2.375, ISSN: 2319-1163, 2321-7308, Publisher: eSAT]
25.	R. B. Dhumale, N. D. Thombare, “Wireless Controlled SPY ROBOT”, <i>International Research Journal of in Engineering and Technology</i> , vol. 3, iss.8, pp. Aug, 2016.[Impact Factor:4.5, ISSN: 2395 -0056, 2395-0072]
26.	Chetan Vinayak Gawali, R. B. Dhumale, “Web Based Irrigation System using Wireless Sensor Networks”, <i>CiiT International Journal of Artificial Intelligent Systems and Machine Learning</i> , Vol. 10. Iss. 06. April 2018, pp 145-148. [ISSN: 0974 – 9543]
27.	R. B. Dhumale, N. D. Thombare, P. M. Bangare, Chetan Gawali, “Internet of Things for Smart City”, <i>International Research Journal of in Engineering and Technology</i> , vol. 04, iss. 06, pp. 792-797, Jun, 2017.[Impact Factor:5.181, ISSN: 2395 -0056, 2395-0072]
28.	R. B. Dhumale, N. D. Thombare, P. M. Bangare, “Supply Chain Management using Internet of Things ”, <i>International Research Journal of in Engineering and Technology</i> , vol. 04, iss. 06, pp. 787-791, Jun, 2017.[Impact Factor:5.181, ISSN: 2395 -0056, 2395-0072]
29.	R. B. Dhumale, N. D. Thombare, P. M. Bangare, “Supply Chain Management using Internet of Things ”, <i>International Research Journal of in Engineering and Technology</i> , vol. 04, iss. 06, pp. 787-791, Jun, 2017.[Impact Factor:5.181, ISSN: 2395 -0056, 2395-0072]
30.	R. B. Dhumale, M. P. Ghatule, N. D. Thombare, P. M. Bangare, “An Overview of Artificial Neural Networks: Part 1”, <i>CiiT International Journal of Artificial Intelligent Systems and Machine Learning</i> , vol. 10, iss. 08, pp. 47-52, Feb, 2018. [ISSN: 0974 – 9543]
31.	R. B. Dhumale, N. D. Thombare, P. M. Bangare, M. L. Bangare “An Overview of Artificial Neural Networks: Part 2 McCulloch-Pitts Model”, <i>CiiT International Journal of Artificial Intelligent Systems and Machine Learning</i> , Vol . 10. Iss. 3. April 2018, pp 66-71. [ISSN: 0974 – 9543]
32.	R. B. Dhumale, “An Overview of Artificial Neural Networks: Part 3 Activation Functions”, <i>CiiT International Journal of Artificial Intelligent Systems and Machine Learning</i> , Vol. 10. Iss.

	3. April 2018, pp 66-71. [ISSN: 0974 – 9543]
33.	R. B. Dhumale, “An Overview of Artificial Neural Networks: Part 4 Learning Mechanism”, CiiT International Journal of Artificial Intelligent Systems and Machine Learning. Vol. 10. Iss. 4. March 2018, pp 77-82. [ISSN: 0974 – 9543]
34.	R. B. Dhumale, N. D. Thombare, P. M. Bangare, M. L. Bangare “Genetic Algorithm: A Search based Optimization Technique”, CiiT International Journal of Artificial Intelligent Systems and Machine Learning, Vol. 10. Iss. 5. May 2018, pp 77-82. [ISSN: 0974 – 9543]
35.	Pravin Ashok Mane , Seema Pravin Mane, R. B. Dhumale , N. R. Dhumale, “Manufacturing and Analysis of Cost-Effective Scalp Cooling System”, GIS Science Journal, Vol. 7, Iss. 12, 2020, pp 1069-1078. [ISSN: 1869-9391].
36.	Pravin Ashok Mane , Seema Pravin Mane, R. B. Dhumale , N. R. Dhumale, “ Thermal Analysis of Battery Used in E-bicycle”, GIS Science Journal, Vol. 7, Iss. 12, 2020, pp 1061-1068. [ISSN: 1869-9391].
37.	R. B. Dhumale, N. R. Dhumale, A. Umbrajkaar, S. S. Nikam, P. B. Mane, and N. Sarwade, “Fuzzy Internet of Things-based water irrigation system,” vol. 25, no. 2, pp. 1–10, 2023.
38.	K. U. Kadam, R. B. Dhumale, N. R. Dhumale, S. S. Nikam, and P. B. Mane, “Image segmentation in Diagnosing the Ground Bud Necrosis Virus in Tomatoes using K-Means Clustering,” Int. J. Electr. Electron. Res., vol. 11, no. 3, pp. 675–681, 2023, doi: 10.37391/ijeer.110306.
39.	M. P. Gaikwad, R. B. Dhumale, N. R. Dhumale, P. B. Mane, A. M. Umbrajkaar, and A. N. Sarwade, “Feed Forward Neural Network based Brain Tumor Diagnosis in Magnetic Resonance Images,” Int. J. Electr. Electron. Res., vol. 10, no. 4, pp. 915–920, 2022, doi: 10.37391/IJEER.100427.
40.	K. U. Kadam, R. B. Dhumale, N. R. Dhumale, P. B. Mane, A. M. Umbrajkaar, and A. N. Sarwade, “Linear Vector Quantization for the Diagnosis of Ground Bud Necrosis Virus in Tomato,” Int. J. Electr. Electron. Res., vol. 10, no. 4, pp. 906–914, 2022, doi: 10.37391/IJEER.100426.
41.	Vanmore, S. V. ., Nikam, S. S. ., Dhumale, R. B. ., Dhumale, N. R. ., Mane, P. B., & Sarwade, A. N. (2023). Automatic Segmentation Using U-Net for Accurate Liver Segmentation of CT Images. International Journal of Intelligent Systems and Applications in Engineering, 11(4), 446–452. Retrieved from https://ijisae.org/index.php/IJISAE/article/view/3542
42.	Sudhir Bale, A. ., Dhumale, R. B. ., Beri, N. ., Lourens, M. ., Varma, R. A. ., Kumar, V. . ., Sanamdikar, S. ., & Savadatti, M. B. . (2023). The Impact of Generative Content on Individuals Privacy and Ethical Concerns. International Journal of Intelligent Systems and Applications in Engineering, 12(1s), 697–703. Retrieved from https://ijisae.org/index.php/IJISAE/article/view/3503
International Conferences	
1	A. R. Khandebharad, R. B. Dhumale, S. S. Lokhande, S. D. Lokhande, “ Real Time Remaining Useful Life Prediction of the Electrolytic Capacitor”, <i>Proc. In IEEE International Conference on Information Processing (ICIP), Vishwakarma Institute of Technology, Pune</i> , pp. 631-636, 16-19 December, 2015.
2	R. B. Dhumale, S. D. Lokhande, “Condition Monitoring of Voltage Source Inverter” <i>2nd International Conference on Research Trends in Electronics and Telecommunication (IRTET, IRET, Anakapalli, Visakhapatnam, Andhra Pradesh, India, Oct. -2015.</i>
3	P. S. Wankhade, R. B. Dhumale, S. D. Lokhande, “ Compact Fractal Antenna”, <i>First international conference on Recent Trends in Computing, Communication and Science (ICRTCCS), International Institute of Information Technology, Rajiv Gandhi InfoTech Park, Phase-I, Hinjawadi, Pune</i> , pp,23, Jan 08-09 2016.
4	R. B. Dhumale, S. D. Lokhande, “Comparative Study of Fault Diagnostic Methods in Voltage Source Inverter Fed Three Phase Induction Motor Drive”, <i>Proc. In International Conference on Frontiers In Mechanical And Automobile Engineering FAME-2016</i> , pp.19,7 th -9 th July 2016.
5	R. B. Dhumale, N. D. Thombare, S. D. Lokhande, “Modeling and Diagnosis of Open Switch Fault in Three Phase VSI”, <i>Proc. In IEEE International Conference on Recent Trends In Electronics Information Communication Technology (RTEICT), Shri Venkateshwara College of Engineering,</i>

	<i>Bengaluru, pp. 1901-1910, 19-20May,2017.</i>
6	Chetan Gavali, R. B. Dhumale, “Intelligent Irrigation System based on Wireless Sensor Networks”, <i>In Proc. IEEE Int. Conf. on Inventive Communication and Computational Technologies-2018 (ICICCT 2018), 20-21 April 2018 .</i>
7	R. B. Dhumale, N. D. Thombare, “Leaf Disease Classification using Machine Learning”, <i>Proc. In International Conference of Ideas, Innovation and Impacts in Science and Technology (ICIIST-2019), Smt. Kashibai Navale College of Engineering, Pune, pp. 121, 19 March,2019.</i>
8	R. B. Dhumale, N. D. Thombare, P. M. Bangare, “Machine Learning: A Way of dealing with Artificial Intelligence”, <i>In Proc. IEEE Int. Conf. on Innovation in Information and Communication Technology-2019 (ICIICT 2019), St. Peter College of Engineering and Technology, Chennai.</i>
9	Dhumale, R.B., Sadegaonkar, P., Dhumale, N.R., “K-nearest neighbor for identification of pulsars in astronomy”, <i>International Conference on Pervasive Computing-2020</i> , organized by SCOE, Pune, on 13-14 Feb. 2018.
10	Sadegaonkar, P. Dhumale, R.B., “Pulsar Search using Supervised Machine Learning: An Application of Astronomy”, <i>International Conference on Pervasive Computing-2020</i> , organized by SCOE, Pune, on 13-14 Feb. 2018.
11	Vaishali sonwane, Sanjay B Patil, R. B. Dhumale, “fault diagnosis of voltage source inverter using machine learning”, <i>International Conference on Communications and Cyber-Physical Engineering (ICCCE2 021), CMR Engineering College, April 9-10, 2021 in Hyderabad, India.</i>
National Conferences	
1	S. S. Jojare, R. B. Dhumale, S. D. Lokhande, “Life Cycle Monitoring of DC Link Electrolytic Capacitor in Power Converter: A Review”, <i>in Proc. National Conference in Emerging Technology, Shivaji University, Kolhapur, Dec. 2012,pp. 108.</i>
2	R. B. Dhumale, N. D. Thombare, S. D. Lokhande, “ Fault Diagnosis of MOSFET in Three Phase Voltage Source Inverter using Discrete Wavelet Transform and Fuzzy Logic”, <i>in Proc. National Conference in Emerging Technology, Shivaji University, Kolhapur, Dec. 2012, pp. 92.</i>
3	R. B. Dhumale, S. D. Lokhande, R. R. Mudholkar, “Fault Diagnosis of MOSFET in Three Phase Voltage Source Inverter using Discrete Wavelet Transform and Fuzzy Logic”, <i>in Proc.National Conference in Emerging Technology, Shivaji University, Kolhapur, Dec. 2012, pp. 109.</i>
4	S. A. Jojare, R. B. Dhumale, S. D. Lokhande, “Prognosis of DC Link Electrolytic Capacitor”, <i>in Proc. A National Symposium on Pervasive Computing, Sinhgad College of Engineering, Pune, March 2013. Pp-32.</i>
5	R. B. Dhumale, S. D. Lokhande, “A Simulation Study of AOVD Protocol for Mobile Ad Hoc Network ”, <i>in Proc. National Conference on Pervasive Computing, Sinhgad College of Engineering, Pune, Apr. 2010, pp-56.</i>
6	N. D. Thombare, R. B. Dhumale, R. K. Kamat., “RFID and ZEEG BEE based System Assist Visually Impaired”, <i>in Proc. National Conference on Pervasive Computing, Sinhgad College of engineering, Pune, Apr. 2010, pp-18.</i>
7	R. B. Dhumale, N. D. Thombare, “ USB and GSM based Inverter Parameter monitoring and controlling System ”, <i>in Proc. National Conference on Latest Trends in Electronics and Telecommunication, Sinhgad College of Engineering, Pune, Oct. 2013, pp-12.</i>
8	M. R. Ubale, R. B. Dhumale, V. V. Dixit, S. D. Lokhande,“ Open Switch Fault Diagnosis Method in Three Phase Inverter”, <i>in Proc. National Conference on Latest Trends in Electronics and Telecommunication, Sinhgad College of Engineering, Pune, Oct. 2013, pp-28.</i>
9	V. K. Shinde, R. B. Dhumale, V. V. Dixit, S. D. Lokhande, “Text Detection and Audio Translation using Android based Smart Phone”, <i>in Proc. National Conference on Latest Trends in Electronics and Telecommunication, Sinhgad College of Engineering, Pune, Oct. 2013, pp-39.</i>
10	M. P. Ghatule, R. B. Dhumale, N. D. Thombare, R. R. Mudholkar, “PID based DC-DC Buck Boost Converter for Solar Energy” <i>in Proc. National Conference on Advances and Challenges in Green Technology, 13th -14th Feb., 2015, pp 203.</i>

11	Chetan Gawali, R. B. Dhumale, "Web based Irrigation System", in <i>Proc. National Conference on Pervasive Computing, Sinhgad College of engineering, Pune</i> , Feb. 2018, pp-18.
Regional Conferences	
1	S. D. Lokhande, R. B. Dhumale, "Fault Detection and Diagnosis of Three Phase VSI using DWT and ANFIS", in <i>Proc. University of Pune, BCUD, Regional Research Conference Innovation-2013, March 2013</i> , pp-45.
2	S. D. Lokhande, R. B. Dhumale, "Fault Detection and Diagnosis of Three Phase VSI using DWT and ANFIS", in <i>Proc. University of Pune, BCUD, Regional Research Conference Innovation-2014, May 2014</i> , pp-64.
3	R. B. Dhumale, S. D. Lokhande, "Life Cycle Monitoring of Electrolytic Capacitor in Power Converter using Fuzzy Neural Network", in <i>Proc. University of Pune, BCUD, Regional Research Conference Innovation-2014, May 2014</i> , pp-56.
4	V. K. Shinde, R. B. Dhumale, V. V. Dixit, "Text Detection using Android based Smart Phone", <i>Regional e-PGCON (Signal processing)</i> , Oct. 2014.
5	P. S. Wankhede, R. B. Dhumale, S. D. Lokhande, "Design and Analysis of Compact Multiband Fractal Antenna", <i>Regional e-PGCON (Digital System)</i> , Oct. 2014.
6	M. R. Ubale, R. B. Dhumale, V. V. Dixit, "Detection Methods of Open switch Faults in Three Phase PWM Inverter", <i>Regional e-PGCON (Signal processing)</i> , Oct. 2014.
7	M. A. Bhamare, R. B. Dhumale, S. D. Lokhande, "Fault Diagnosis in Three Phase Converter", <i>Regional e-PGCON (Digital System)</i> , Oct. 2014.
8	R. B. Dhumale, S. D. Lokhande, "Life Cycle Monitoring of Electrolytic Capacitor in Power converter using Fuzzy Neural Network", in <i>Proc. Savitribai Phule Pune University, BCUD, Regional Research Conference for University and College Teachers Innovation-2015, 1st July 2015</i> , pp-20.
Patents Published	
1	System and Method for Condition based Maintenance (CBM).
2	Hardware based Open Circuit Fault Diagnosis of Switching Devices Utilizing Artificial Intelligence.
3	Smart Water Irrigation System and Thereof.

Funds Received					
Sr. No	Title	Funding Agency	Funding Details	Amount	
				Received	Expenditure
1	Fault Detection and Diagnosis of Three Phase VSI using Discrete Wavelet Transform and Adaptive Neuro-Fuzzy Interface System	RPS, BCUD, SPPU, Pune.	OSD/BCUD/230/149 Dated 14/05/2012	3,00,000/-	2,31,696/-
2	Life Cycle Monitoring of DC Electrolytic Capacitor in Power Converter by using Fuzzy Neural Network	RPS, BCUD, SPPU, Pune.	OSD/BCUD/360/164 Dated 27/11/2013	1,30,000/-	1,28,226/-
3	National Conference on Latest Trends in Electronics and Telecommunication (NCLTE-2013)	QIP, BCUD, SPPU, Pune.	Sr. No 950 Dated 02/08/2013	50,000/-	1,05,168/-
Online Courses: National Programme on Technology Enhanced Learning (NPTEL)					
1	NPTEL-AICTE Faculty Development Programme on ' Introduction to Machine Learning ' organized by IIT, Kharagpur during Jul-Sep 2019 (08-weeks course).				
2	NPTEL-AICTE Faculty Development Programme on ' Fundamental of Artificial Intelligence ' organized by IIT, Guwahati during Jul-Oct 2019 (12-weeks course).				

3	NPTTEL-AICTE Faculty Development Programme on ‘ Advanced Power Electronics & Control ’ organized by IIT Roorkee during Jan-2020 –March-2020 (08-weeks course).
4	NPTTEL-AICTE Faculty Development Programme on ‘ Digital Electronic Circuits ’ organized by IIT, Kharagpur during Nov-2019 –Feb-2020 (12-weeks course).
5	NPTTEL-AICTE Faculty Development Programme on ‘ Python for Data Science ’ organized by IIT, Kharagpur during Nov-2019 –Feb-2020 (12-weeks course).
Online Courses: AICTE Training and Learning (ATAL)	
1	ATAL Academy, “ Robotics ”, 14-18 December 2020, Ramrao Adik Institute of Technology.
2	ATAL Academy, " Machine Learning and Pattern Recognition " from 18/01/2021 to 22/01/2021 at MET's Institute of Engineering.
3	ATAL Academy, " Computer Science & Biology " from 2021-1-10 to 2021-1-14 at Sandip Institute of Technology and Research Centre, Nashik.

Refresher Courses/Seminars/Workshops etc. Attended	
1.	Condition Monitoring of Electrical Apparatus-Trends and Techniques organized by Department of Electrical Engineering, Nirma University, Ahmadabad, dated 2011-12-26 To 2011-12-31.
2.	Wavelets organized by Sinhgad Institute of Technology and Science, Narhe, Pune, dated 2012-12-13 To 2012-12-18.
3.	SCILAB organized by Department of Computer, Sinhgad College of Engineering, Pune, dated 2011-01-03 To 2011-01-07.
4.	Embedded System Design organized by Sinhgad Academy of Engineering, Pune, dated 2010-02-08 To 2010-02-12
5.	Advanced Digital Signal Processing organized by GHRIT, Wagholi, Pune, dated 2010-07-17 To 2010-07-19.
6.	Recent Trends in Advanced Image Processing organized by GHRIT, Pune, dated 2009-08-20 To 2009-08-20.
7.	Cambridge ESOL Entry Level Certificate in ESOL International (Business English) (Entry 2), University of Cambridge ESOL Examinations, May-2012.
8.	Wren & Pecker certificate course Teacher Advance Program-Level 1 & 2 conducted on 5-7 Dec2012 at Sinhgad Education of Technical Society, Pune.
9.	Short Time Training Program on Machine Learning and Computational Intelligence (STTP-MLCI) organized by Sinhgad College of Engineering, Pune, dated 25 th March, 2015 to 29 th May 2015.
10.	Image Processing-Advances and Research Challenges, organized by Sinhgad College of Engineering, Pune, dated on December 11-15, 2017.
11.	IoT & Big Data organized by CoE, Amravati on 18 th June to 27 th June 2018.
12.	A MHRD Government of India Initiative Pandit Madan Mohan Malaviya National Mission on Teachers and Training Faculty Development Program on Cyber Security PCCoE, Ravet, Pune, dated 30 th April-05 th April 2019.
13.	Seminar on Mathematical modeling, Smt. Kashibainavale College of Engineering, Pune, organized by dated 21.01.2015.
14.	Two Days state level workshop on “ <i>Advances in Embedded Computing Systems</i> ” organized by the Computer Science Department, Sinhgad College of Science, Pune, under the <i>Quality Improvement Program of SPPU</i> , Pune on 24 th and 25 th February, 2016.
15.	Soft Computing, Two week SDP organized by SCOE, Pune, Sponsored by AICTE, New Delhi, dated 01-12 June, 2015.
16.	Troubleshooting and Maintenance of electronic instrument week SDP organized by SCOE, Pune, under TEQIP-II, dated December 3-7, 2012.
17.	Microcontroller and VLSI Design organized by G H Raisonni Institute of Engineering and Technology, Pune dated 2010-03-08 To 2010-03-13.
18.	Hands-on PIC Microcontroller, organized by Smt. Kashibai Navale College of Engineering, Pune

	dated 2010-02-12 To 2010-02-13.
19.	Programmable System on Chip organized by CYPRESS and IRF dated 2010-02-06 To 2010-02-07.
20.	Train The Teachers Program on Digital electronics organized by Sinhgad College of Engineering, Pune (India), From 5 th to 6 th June, 2017.
21.	TEQIP II sponsored Faculty Development Program on Embedded System Design organized by Bharati Vidyapith Deemed University, Pune (India) in association with Engineering staff college of India (ESCI), Hyderabad. 20-22 October 2016.
22.	Two Week STTP on Model based Design in Application of Engineering and Science using MATLAB & Simulink, organized by Smt. Kashibai Navale College of Engineering, Pune , dated 15/12/2017.
23.	Neural Network Design two week SDP organized by SCOE, Pune, Sponsored by AICTE, New Delhi, dated 13-25 June, 2011.
24.	Two Day State Level Workshop on “Optimization Techniques for Engineering Applications”, organized by Sinhgad College of Engineering, Pune, dated on January 8-9, 2018.
25.	Two Day State Level Workshop on “Embedded Control for Power Electronics Applications”, organized by Sinhgad College of Engineering, Pune, dated on January 8-9, 2018.
26.	Apex Forum on “Recent Trends in Artificial Intelligence – 2018” (RTAI – 2018), Institution of Electronics Telecommunication Engineers (IETE), Pune Center In association with JSPM’S BSIOTR, Wagholi, Pune. Dated on 28/02/2018.
27.	TEQIP II sponsored Faculty Development Program on Networking and Switching organized by Bharati Vidyapith Deemed University, Pune (India) ,7 th to 11 th February, 2017.
28.	<i>Faculty Orientation Program S.E. (E & TC/Elex.) Revised Syllabus 2015 Course Subject Digital Electronics</i> , under the aegis of Board of Studies Electronics engineering, Savitribai Phule Pune University, Pune organized by E &Tc Department, Bhivarabai Sawant College of Engineering and Research, Pune. From 9 th to 11 th June, 2016.
29.	Advanced Telecommunication Symposium organized by Sinhgad COE, Pune, dated 27 th Feb, 2017.
30.	A MHRD Government of India Initiative Pandit Madan Mohan Malaviya National Mission on Teachers and Training Faculty Development Program on Cyber Security Smt. SKNCoE, Pune, dated 10 th June -16 th June 2019.
31.	Train The Teachers Program on Power Electronics organized by Sinhgad Academy of Engineering, Pune (India), From 11 th to 13 th December, 2017.
32.	Image Processing-Advances and Research Challenges” organized by Sinhgad College of Engineering, Pune, dated on December 11-15, 2017.
33.	Introduction to Innovation and Enterprenrship, Organized by GHRITE, Pune, dated 201-03-02.
34.	A MHRD Government of India Initiative Pandit Madan Mohan Malaviya National Mission on Teachers and Training Faculty Development Program on Cyber Security PCETS’S PCCOER, Ravet, Pune, dated 30 th April -05 th May 2019.
35.	AICTE–ISTE Sponsored Two-week STTP on Practical Based Designing and System Modelling with MATLAB & Simulink”, Smt. Kashibai navale College of Engineering, Pune, organized by dated 2 nd to 13 th Dec. 2019.
36.	AICTE–ISTE Sponsored One-week STTP on Best Practice for “Outcome based Learning”, Smt. Kashibai navale College of Engineering, Pune, organized by dated 19 th to 24 th Dec. 2019.
37.	Discussion on conduction of Processor Interfacing Laboratory for SE-IT 2008 course, organized by MIT, Pune, dated 2010-01-15 To 2010-01-15.
38.	1 st International E-Summit 2020 Artificial Intelligence and Machine Learning, 26th -28th Sept. 2020, Nagpur Institute of Technology, Nagpur.
39.	Scilab training organized at Sinhgad College of Engineering, Vadgaon in January 2020 semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.
40.	1 st International E-Summit 2020, Artificial Intelligence and Machine Learning, 26-28 Sept. 2020. Nagpur Institute of Technology, Nagpur.
41.	AICTE Sponsored Online STTP on Digital Twin Technology for Industrial Automation Process, 5-10

	Oct, 2020 (Phase-I), Department of Mechanical Engineering, School of Mechanical Engineering, Sathyabhama Institute of Science and Technology, Chennai, Tamilnadu.
42.	Finland Labs in Association with National Social Summit, Python with COVID-19 Data Web Scraping and MySQL, 10-11, Oct,2020, IIT Roorkee.
43.	Finland Labs in Association with National Social Summit, Deep Learning using Medical Data, 12-16, Oct,2020, IIT Roorkee.
44.	5-day National Workshop on “Data Science and Advanced Computing”, School of Advanced Sciences (SAS), VIT-AP University.19/03/20221to21/03/2021
45.	International Online Workshop on Data Science (DSsci2021), Department of Computing Muscat College, 01/04/2021
46.	STTP-Digital Skill Development for Professional, 22/02/2021-27/02/201, JSPM BSIOTR,Wagholi
47.	STTP Data Analysis with Python, 24/05/2021- 28/05/2021, Sandep Inst. of Engg. and Management, Nashik.
48.	Faculty Orientation Processor Architecture,02/02/2021-04/02/2021, AIT, Pune.
49.	International Online Workshop on Data Science (DSsci2021), 1 st April 2021 organized by Department of Computing Muscat College.
50.	5-day National Workshop on “Data Science and Advanced Computing”, 13 th – 14 th March Level-I and 19 th – 21 st March 2021 organized by the School of Advanced Science (SAS), VIT-AP University.
51.	NAAC Related Quality Enhancement for Facing Peer Team, 26 th May 2021, organized by AISSMS institute of Information Technology, Pune.
52.	AICTE Funded Online Short-Term Training Program (STTP) on “ Digital Skill Development for Professional (Phase II) ”, Department of E&TC Engineering, Bhivarabai Sawant Institute of Technology and Research, Wagholi Pune-412207 dated on 22/02/2021 to 27/02/2021.
53.	
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Refresher Courses/Seminars/Workshops/Conferences, etc organized	
1.	Innovation-2010, Organized by University of Pune & SCOE, Pune dated 2010-10-26 - 2010-10-27.
2.	Neural Network Design two week SDP organized by SCOE, Pune, Sponsored by AICTE, New Delhi, dated 13-25 June, 2011.
3.	IEEE- International Conference on Pervasive Computing-2015, Sinhgad College of Engineering, Pune. Date: 10 th Jan, 2015.
4.	National Conference on Latest Trends in Electronics and Telecommunication-2013, Sinhgad College of Engineering, Pune and Quality Improvement Program, BCUD, UoP, Pune. Date: 10 th Jan, 2015.
5.	Avishkar-2011, Sinhgad College of Engineering, Pune BCUD, UoP, Pune.
6.	<i>Faculty Orientation Program</i> B.E. (E & TC/Elex.) Revised Course 2012 Course Subject <i>VLSI Design & Technology/ VLSI Design</i> , under the aegis of Board of Studies Electronics engineering, Savitribai Phule Pune University, Pune organized by E &TC Department, Bhivarabai Sawant College of Engineering and Research, Pune. From 11 th to 13 th June, 2016.
7.	Advances in Wireless and Mobile Technologies, Faculty Development Programme organized by Sinhgad College of Engineering, in association with Tektronix-Keithley, Pune dated Jun. 07-11, 2016.
8.	Soft Computing, Two week SDP organized by SCOE, Pune, Sponsored by AICTE, New Delhi, dated 01-12 June, 2015.
9.	Technical Discussion on new Products, Cyronics, Pune, 23 April,2015.
10.	Train The Teachers Program on Digital electronics organized by Sinhgad College of Engineering, Pune (India), From 5 th to 6 th June, 2017.
Industrial Training	
1	Training in INVERTER and UPS Manufacturing, Testing and Installation, at Dual Tech, Sangli, dated

	2004-12-07 To 2013-01-04.
2	Programming and designing controller based system, at Logsun System, Pune, dated 2007-06-05 To 2007-08-05.
3	Industrial Training on Buck Boost Converter, Powercon, Pune. 27 th Dec, 2014.
4	Three Phase VSI, Powercon, Pune. 07 th Dec, 20143.
Consultancy	
1	Nichrome India Ltd. Shrimal, Gat no. 769b, At Post Wing, Tal. Khandala, Dist. Satara “problem on three phase servos”, on 20/01/2016, Vishwanath Joshi General Manager-Engg,Elect.&Controls.

Activities	
Presentations (Guest Lectures)/Examiner/Judge	
1	Guest lecture, Suman Ramesh Tulsiani Campus, Faculty of Engineering, Pune. Subject: Assembly Language Programming dated 12/10/2013.
2	Guest lecture, Sinhgad College of Science, Pune. Subject: Soft Computing Dated 20/10/2014.
3	Guest lecture, Smt. Kashibai Navale College of Engineering, Pune, Workshop on MATLAB and Simulink, Dated 19/01/2015.
4	Guest lecture, Nichrome, Packaging Solutions, Shirawal, Pune, Subject: Basic Electronics Engineering, dated 10th March, 2015.
5	Guest lecture, UGC sponsored NET workshop organized by Electronics Department, Shivaji University, Kolhapur. Subject: Network Analysis dated 20/02/2009.
6	Guest lecture, UGC sponsored NET workshop organized by Electronics Department, Shivaji University, Kolhapur. Subject: Microprocessor and Microcontroller dated 24/01/2010.
7	Guest lecture, UGC sponsored NET workshop organized by Electronics Department, Shivaji University, Kolhapur. Subject: Power Electronics II dated 11/01/2012.
8	Guest lecture, UGC sponsored NET workshop organized by Electronics Department, Shivaji University, Kolhapur. Subject: Power electronics dated 14/04/2013.
9	Guest lecture, Sinhgad College of Science, Pune, Subject Genetic Algorithm, Dated 06/10/2012.
10	Judge at “Poster Competition” in PROELEX-13, Sinhgad College of Science, Pune, Dated 24/01/2013.
11	External Examiner at Shivaji University, Kolhapur. Subject: Power electronics dated 06/05/2013 for M.Sc. Part I.
12	External Examiner at Vishwakarma Institute of Technology, Pune. (Autonomous Institute) Subject: Mini Project dated 30/04/2015 for Second Engineering.
13	University of Pune, BCUD, Zonal Level Research Competition, AVISHKAR-2014, Date: 22 nd Sep. 2014.
14	University of Pune, BCUD, University Level Research Competition, AVISHKAR-2014, Date: 1 st Jan. 2014.
15	University of Pune, BCUD, Zonal Level Research Competition, AVISHKAR-2014, Date: 23 rd Dec. 2013.
16	Guest lecture, Sinhgad College of Science, Pune, Subject Advanced Soft Computing, Dated 31/10/2015.
17	University of Pune, BCUD, Zonal Level Research Competition, AVISHKAR-2015, Date: 17 th Sept, 2016.
18	Session chair at “National Conference on Research, Design and Development in Engineering, Management and Sciences” organized by Rajgad Dnyanpeeth Technical Campus, Dhangawadi, Pune, on 20th March, 2016.
19	Paper Assessment at Shivaji University, Kolhapur, dated 02/05/2016 for M.Sc. (Electronics) Part II.
20	Guest lecture, Sinhgad College of Engineering, Pune, Subject Digital electronics, and Dated 26/05/2019.

21	Guest lecture, Zeal College of Engineering and Research, Pune, Subject Digital electronics, dated 7th Oct. 2017.
22	Resource Person, Sinhgad Academy of Engineering, Pune. Subject Power Electronics, Dated on 07/12/2017.
23	Session Expert, SKN College of Engineering, Pune. Two Week STTP on “Model based Design in Application of Engineering and Science using MATLAB & Simulink”, Dated 15/12/2017.
24	Guest lecture, Sinhgad College of Science, Pune, Subject “Basics of Artificial Neural Network”, Dated on 25/01/2018.
25	Discussion on conduction of “SPPU BE IT Revision Workshop (2015 course)”, organized by MMCOE, Pune, dated on 03/02/2018.
26	Resource Person, IT Olympiad 2017, 21st January, 2017.
27	Resource Person, “Two day workshop on MATLAB”, organized by Sinhgad College of Science, Pune, Subject “Basics of Artificial Neural Network”, Dated on 25/02/2016.
28	Session Expert, Finolex Academy of Management and Technology, Ratnagiri, Maharashtra. One Week STTP on “Digital Image Processing – Issues, Challenges and Research Avenues”, Dated 05/06/2018.
29	Session Expert, SKN College of Engineering, Pune. Two Week STTP on “MATLAB & Simulink”, Dated 18/12/2018.
30	Guest lecture, CoE, Malegaon, Subject Machine Learning, dated 1 st March, 2019.
31	M. Tech. Examination, Evaluation of thesis, Bharati Vidyapith Deemed University, Pune (India). 18/07/2019.
32	Judge at “Poster Competition”, RMD Sinhgad School of Science, Pune, Dated 18/04/2018.
33	Guest lecture, Zeal College of Engineering and Research, Pune, Subject Digital electronics, dated 7th Oct. 2018.
34	Session chair at “4 th International Conference on Computing, Communication, Control and Automation-2018” organized by PCCOE, Pune, on 16-18 August 2018.
35	Session chair at “International Conference on Pervasive Computing-2020” organized by SCOE, Pune, on 13-14 Feb. 2018.
36	Technical Paper Writing, Workshop, IOIT, Pune.
37	Webinar on Artificial Intelligence, Arihant College, Pune. 18/01/2021.
Service Activities	
Department Level	
	Autonomy Coordinator
	Research and Development Coordinator
	Training & Placement Coordinator
	Academic Monitoring Committee
	Student Attendance Record
	Worked on NBA report preparation
	Worked on NAAC report preparation
	Worked on TEQIP
	Teacher Guardian
	U.G. Guide
	P.G. Guide
	Test Coordinator
	ME Admission Process
	LIC Committee Data preparation for E & TC Department (UG and PG)
	Departmental Purchase
	Exhibition and Display Committee
	Worked as a organizing committee member in the following SDPs

	<ol style="list-style-type: none"> 1. AICTE Sponsored Staff Development Program on “Neural Network Design 13-25 June, 2011, Soft Computing”, 01-12 June, 2015. 2. TEQIP II sponsored Faculty Development Program on “Troubleshooting and Maintenance of Electronic Equipments”, December 3-7, 2012 3. Faculty Development Program on RF Systems & Design 7-11 Dec. 2015. 4. National Conference on Latest Trends in Electronics and Telecommunication Engineering (NCLTE)-2013, International Conference on Pervasive Computing (ICPC)-2015 5. University syllabus Discussion
	Coordinator of Faculty Publication Record
	Coordinator of Faculty Students Training and Internships Data
	Student Development Officer
Institute Level/ Society Level	
	Dean Research and Development
	Academic and Research Coordinator
	Technical Program Chair for IEEE International Conference on Emerging Smart Computing and Informatics (ESCI).
	Worked in transportation committee for Innovation 2010.
	Worked in scrutiny, supervision, data entry and paper checking for M.E. entrance test.
	Companying at College of Engineering, Pune and at Gadhinglaj (Kolhapur) organized by “Sakal”.
	Worked in different committees for Avishkar 2011.
	Working as First Year subject (Basic Electronics Engineering) Coordinator since 2012. (Appreciated by Principal and FE Coordinator).
	Worked for Excelsior 2010, 2011, 2012.
	First Year Induction Program-2013, 2014, 2015
	First Year Admission Process-2012, 2013, 2014, 2015
	Teacher Guardian First Year 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16.
	Appreciated for Guardian Teacher first year during academic year 2015-16 semesters I and II.
	Appreciated for first year basic electronics engineering improving result significantly during academic year 2015-16 semesters I and II.
	Appreciated for power electronics good result during academic year 2015-16 Sem. II.
	Subject Expert for FE online (Phase) university examination 2015-16, 1 st Sept, 2016 to 04th Sept., 2016.
	Academic and Research Coordinator
	Worked in transportation committee for ITU and Kaleidoscope.
	Worked in discipline committee for Cultural Event and Dandiya.
	Worked in different committees of UGC staff selection process
	Event head of Techtonics.
	Coordinator of Techtonics.
	Event organizer Japan Education Fair -2015 organized by Sinhgad College of Engineering, Pune.
	Co editor International Journal of Technology Engineering Arts Mathematics Science (IJTEAMS)
	Exhibition and Display Committee
	Co-Technical Program Chair ESCI 2021



Dr. Dhumale Rakesh Babu