BIODATA

1. Name and Full correspondence address:

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3. Institution: Sardar Vallabhbhai National Institute of Technology-Surat
4. Date of Birth: 26-11-1977
5. Gender: Female
6. Category: General
7. Whether differently abled: No
8. Academic Qualification:

	Degree	Year	Subject	Institution	% of marks
1.	B.E.	1999	Mechanical Engineering	Faculty of Tech. & Engg., MSU, Vadodara	Dist. (67.9%)
2.	M.E. (Mechanical)	2005	Gas Turbine & Jet propulsion	Faculty of Tech. & Engg., MSU, Vadodara	Dist. (73.5%)
3.	Ph. D	2013	Turbomachines	S.V.N.I.T. , Surat	---

9. Ph. D Thesis details:

Title:	Studies on Volute Design Philosophies of a Centrifugal Blower
Guide's Name:	Dr. S. A. Channiwala,
Institute:	Sardar Vallabhbhai National Institute of Technology-Surat
Year of award:	2013

10.Work Experience:

	Position held	Name of Institution	From	To
1.	Jr. Engineer	M/S Vishav Components Sourcing India Pvt. Ltd.	July'99	Feb'01
2.	Design Engineer	M/S Flexatherm Expanllow Pvt. Ltd.	Nov'02	June'03
3.	Temporary Lecturer	Faculty of Technology & Engineering, Maharaja Sayajirao University of Baroda	Aug'06	15th Oct'07
4.	Asst. Professor	Sardar Vallabhbhai National Institute of Surat	16th Oct'07	27th Jan'19
5.	Asso. Professor	Sardar Vallabhbhai National Institute of Surat	28th Jan'19	Till date

11.Professional Recognition/ Award/ Prize/ Certificate, Fellowship:

Sr. No.	Name of award	Awarding Agency	Year
1	Smt. Sheela Baya National Award	Institute of Engineers	2017

12.Details of Patents:

Sr. No.	Patent Title	Name of Applicants	Patent No.	Award Date	Agency/ Country	Status
01	Modified Angular Momentum Method for Designing a Volute for a C. F. Blowers	Beena Baloni, Prof. S.A. Channiwala	268337	22/12/14	India	Granted
02	Wind turbine blade	Beena Baloni, Neeraj Verma Naresh Kadam S. A. Channiwala	334553-001	27/11/20	India	Granted
03	A Blade for variable speed small horizontal axis wind	Beena Baloni, Neeraj Verma	Application number:	Application date: 22/10/20	India	Compliance to the First Examinatio

turbine.	2020210 46085	n Report submitted in June 2022

13.Research Details:

Research areas: Gas Dynamics, Turbomachines, Jet propulsion
Ph. D. Guided: Completed (02); On-going (02)
M.Tech Dissertations: Completed (33)

14.Publications:

Paper Publications in Journal		
1.	International journal of Applied energy, Elsevier, Vol. 90 (2012) pp. 335–343.	Pressure recovery and Loss coefficient variations in the two different Centrifugal Blower Volutes.
2.	International Journal of Computers & Fluids Elsevier, Vol. 112 (2015) pp. 72-78.	Centrifugal blower volute optimization based on Taguchi method.
3.	ASME digital collection, Vol. 3, 2012 pp. 657-664 ISBN: 978-0-7918-4469-4 DOI: 10.1115/GT2012-68056	Design and analysis of volute casing: a review
4.	ASME digital collection, V001T11A004, GT India 2015, ISBN: 978-0-7918-5713-1 DOI: 10.1115/GTINDIA2015-1329	Enhancement of wind turbine aerodynamic performance using designed airfoils.
5.	International Journal of fluids Engineering, Research India publications. (Accepted and Published – vol.3, pp. 251-260,2011)	Numerical Investigation of flow in centrifugal blower volute.
6.	International Journal of Electronics, Communication & Soft Computing Science and Engineering, ISSN: 2277-9477. (Published -Special Issue pp. 242-247,2012)	Numerical Simulation of C.F. Blower using CFX.
7.	International Journal of Mechanical Engineering Research, ISSN: 2249-0019, Vol. 3, Number 1, pp. 39-43, 2013	Experimental Analysis of Backward Curved Centrifugal Blower
8.	International Journal of Mechanical Engineering Research, ISSN: 2249-0019,	Experimental Analysis of

	Vol. 3, Number 5, pp. 325-329, 2013	Convergent- Divergent Nozzle
9.	National ADIT Journal of Engineering, ISSN: 09733663, Vol. 11, Number 1, pp. 42-50, 2014	2-D Analysis of SV Series blades for Wind Turbine
10.	National ADIT Journal of Engineering, ISSN: 09733663, Vol. 11, Number 1, pp. 51-54, 2014	Centrifugal Fans/ Blowers Performance testing as per IS: 4894-1987.
11.	International Journal of Scientific & Engineering Research, ISSN 2229-5518, Volume 6, Issue 2, February-2015, pp. 596-601	Structural analysis of load compressor blade of aircraft auxiliary power unit
12.	2015, Paper No. GTINDIA2015-1329, pp. V001T11A004; 9 pages, doi:10.1115/GTINDIA2015-1329	Enhancement of wind turbine aerodynamic performance using designed airfoils.
13.	Journal of The Institute of Engineers (India) Series C; Online: May- 2017, DOI 10.1007/s40032-017-0356-z	Design, development & analysis of C.F. Blower
14.	Journal of the Brazilian Society of Mechanical Sciences and Engineering, Springer publication, December 2019	Design optimization of a compressor transition S-shaped duct using a Teaching-Learning Based Optimization algorithm
15.	Journal of the SN Applied Sciences, Springer publication, 1, 1384. https://doi.org/10.1007/s42452-019-1422-3, October 2019	Numerical and experimental investigation of flow in an open-type subsonic wind tunnel
16.	Journal of the SN Applied Sciences, Springer publication, January 2020	Design optimization of compressor transition S-shaped duct using particle Swarm Optimization Algorithm
17.	Journal of Mechanical Engineering and Sciences, UMP publication, December 2020	Review on Aerodynamics of Intermediate Compressor Duct
18.	Journal of Clean Technologies and Environmental policy, https://doi.org/10.1007/s10098-021-02059-2,	Artificial neural network- based meta-models for predicting the aerodynamic characteristics of two-dimensional airfoils for small

	March 2021	horizontal axis wind turbine
19.	International Journal of Green Energy, DOI:10.1080/15435075.2021.1960356, July 2021	Influence on Reynolds number consideration for aerodynamic characteristics of airfoil on the blade design of small horizontal axis wind turbine
20.	Advances in Technology Innovation (AITI), vol. 7, no.3, pp. 216-227, Feb. 2022. (Scopus Indexed). ISSN 2415-0436 https://doi.org/10.46604/aiti.2021.8509	Optimization of Centrifugal Pump Based on Impeller-Volute Interactions
21.	International Journal of Engineering and Technology Innovation, ESCI, Scopus Indexed, Vol 12 No 4, pp. 347-363, October 2022). ISSN 2223-5329 https://doi.org/10.46604/ijeti.2022.9741	Effect of Volute Diffuser on the Performance of Centrifugal Pump based on Entropy Generation Analysis
22.	Journal of Mechanical science and Technology (JMST), Special Issue linked to ACGT 2022, October 2022	Effect of Axial Extension on Parameterized Endwall Contour with Incidence change for LP Turbine Linear Cascade
23.	Journal of Turbomachinery, ASME, Volume 144, Issue 12, December 2022. https://doi.org/10.1115/1.4056093	Numerical Investigations on Effect of Inflow Parameters on Development of Secondary Flow Field for Linear LP Turbine Cascade

Paper Publications in Conferences

1.	AIM – 2005, Vasavi College of Engineering, Hydrabad (National Conference)	Experimental Investigation of the flow in a Centrifugal Blower Volute.
2.	NCME – 2007, SRCEM, Banmore (National Conference)	Experimental Investigation of the flow in a Centrifugal Blower Volute.
3.	ETME – 2007, SVNIT, Surat (National Conference)	Comparison of Volute Casing designs based on Experimental Investigation of the flow in a Centrifugal Blower.
4.	AFFTS – 2008, SVNIT, Surat (National Conference)	Experimental Investigation of the flow based on local flow direction in Centrifugal Blower.

5.	ICAME – 2008, SVNIT, Surat (International Conference)	Multi Attribute Decision Method approach to select Solid propellant based on theoretical performance.
6.	ICAE-2010, NUS, Singapore (International Conference)	Pressure recovery and Loss coefficient variations in the two different Centrifugal Blower Volutes.
7.	ICAME – 2011, SVNIT, Surat (International Conference)	Numerical (CFD) analysis of three dimensional air flows in Centrifugal Fan.
8.	ICAMAME – 2012, Dubai, (International Conference)	Numerical Simulation study for concentric tube heat exchanger using Augmentation device
9.	ASME, TURBOEXPO-2012, Copenhagen, Denmark (International Conference)	Design and analysis of volute casing: a review
10.	ICRTET-2012, Maharashtra, India (International Conference)	Numerical simulation of C.F. blower using CFX.
11.	ICMIE-2012, I.I.M.T-Bhubaneswar, India. (International Conference)	Effect of impeller parameters on the flow inside the centrifugal blower.
12.	WCFMAAE-2013, IIT- Delhi (International Conference) 2-3 February, ISSN: 2249-0019	Experimental analysis of backward curved centrifugal blower
13.	WCFMAAE-2013, IIT- Delhi (International Conference) 2-3 February, ISSN: 2249-0019	Experimental analysis of convergent divergent nozzle
14.	ICMPE-2013, Delhi, India (International Conference) ISBN: 978-93-82702-07-8	Experimental and analytical analysis of slip factor for backward curved centrifugal blower
15.	ICMAAE- 2013, Malaysia (International Conference)	Analytical & numerical investigation of thick airfoils
16.	ICMAME-2013, Singapore (International Conference) (Awarded as Best Session Paper)	Numerical investigation of the flow pattern within the impeller of a centrifugal blower

17.	ICCSME-2014, Goa (International Conference)	Sensitivity analysis of volute parameters using FDM
18.	FMFP-2014, IIT-Kanpur (International Conference)	Flow analysis of subsonic and supersonic nozzles
19.	ASME, TURBOEXPO-2014, Düsseldorf, Germany (International Conference)	A comparative analysis of slip factor on impellers of centrifugal blower.
20.	AMPD-2015, Surat (International Conference)	Parametric study of centrifugal fan/blower
21.	ASME, GTINDIA-2015, Hyderabad (National Conference)	Enhancement of wind turbine aerodynamic performance using designed airfoils.
22.	ACGT-2016, Mumbai (Asian Congress)	Design and Analysis of load Compressor for Aircraft Auxiliary Power Unit
23.	FFHTM-2017, Toronto, Canada, August 2017, DOI:10.11159/ffhmt17.108 (International Conference)	Study and numerical analysis of compressor transition duct
24.	FFHTM-2017, Toronto, Canada, August 2017, DOI:10.11159/ffhmt17.109 (International Conference)	Numerical analysis of centrifugal compressor stage for APU
25.	FFHTM-2017, Toronto, Canada, August 2017, DOI:10.11159/ffhmt17.110 (International Conference)	Computational analysis of Bell nozzle
26.	4ICMRP-2017, Ahmedabad, December 2017 (978-93-5288-448-2) (International Conference)	Failure analysis of turbocharger
27.	THERMOCOMP-2018, IISC Bangalore, July 2018, ISSN 2305-6924 pp. 484-488 (International Conference)	Numerical investigation of the effect of curvature on the flow in an intermediate compressor duct
28.	THERMOCOMP-2018, IISC	Numerical analysis of flow over an airfoil

	Bangalore, July 2018, ISSN 2305-6924 pp. 539-542 (International Conference)	at low Reynolds number using γ-Re-θ model
29.	ICAMER- 2019, NIT- Warangal, May 2019 (International Conference)	Flow characteristic study of contraction of compressor intermediate S-shaped duct facility
30.	ICAMER- 2019, NIT- Warangal, May 2019 (International Conference)	Calibration of reference velocity and longitudinal static pressure variation in the test section of an open type subsonic wind tunnel
31.	SDEWES-2020, Gold coast, Australia, April 2020 (International Conference)	An ANN based prediction model for predicting the aerodynamic characteristics of 2-D airfoil for wind turbine
32.	SDEWES-2020, Gold coast, Australia, April 2020 (International Conference)	Optimized balloon model for high-altitude airborne wind turbine
33.	PRIME-2021, NIT- Patna, August 2021 (International Conference)	Design of subsonic axial flow compressor rotor blade
34.	PRIME-2021, NIT- Patna, August 2021 (International Conference)	Transient numerical simulation of sphere motion in a horizontal pipe using dynamic mesh technique
35.	PRIME-2021, NIT- Patna, August 2021 (International Conference)	Uncertainty analysis of surface pump as per IS 13538
36.	PRIME-2021, NIT- Patna, August 2021 (International Conference)	Experimental analysis of openwell monoblock centrifugal pump with impeller sizing
37.	PRIME-2021, NIT- Patna, August 2021 (International Conference)	Experimental and numerical study to analyze the pressure loss within the pressure ducts
38.	PRIME-2021, NIT- Patna, August 2021 (International Conference)	Numerical analysis of buoyant balloon for airborne wind turbines
39.	ICAFFTS-2021, NIT- Surat, September 2021 (International Conference)	Analysis of losses in centrifugal pump with two different outlet diameter of impeller
40.	GT- India ASME 2021, December,	Numerical investigations on effect of

	https://doi.org/10.1115/GTINIDA2021-76008 (International Conference)	inflow parameters on development of secondary flow field for linear LP turbine cascade
41.	ACGT 2022, Asian Congress on Gas Turbines, August 2022, Korea (International Conference)	Effect of Axial extension on parameterized endwall contour with incidence change for LP turbine linear cascade
42.	ICMAE-2022, IASTEM Sydney, Australia, October 2022 (International Conference)	Numerical analysis of cone type rocket nozzle