



सरदार वल्लभभाई राष्ट्रीय प्रौद्योगिकी संस्थान, सूरत
Sardar Vallabhbhai National Institute of Technology



Dr. Rupesh Dineshbhai Shah



Designation	: Associate Professor
Contact Address	: Mechanical Engineering Department, S.V. National Institute of Technology, Ichchhanath, Surat, Gujarat, India -395007.
Date of birth	: 16 th April, 1976.
Nationality	: Indian
E-mail	: rds@med.svnit.ac.in , rdshah_2000@yahoo.com
Contact No	: 0261-2201978 (O), M: 91-98 241 72452

**Educational
Qualification**

Experience

**Sponsored
Research Project**

**Testing and
Consultancy**

**Research
Publications**

**Seminar/Conferences
Organised**

**Expert Lecture
Delivered**

**Ph.D./M. Tech.
Thesis Guided**

Department of Mechanical Engineering, SVNIT Surat



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Educational Qualification:

Sr. No.	Year	Title	School/University	Result	
				Percentage	Grade
1	July 2014	Ph. D.	National Institute of Technology, Surat, Gujarat.		9.67 SGPA In course work
2	2002	M.E.(Mech./Auto mobile) (Sem.-III)	V.J.T.I., Mumbai.	87.33	Distinction
3	2001	M.E.(Mech./Auto mobile) (Sem.-II)	V.J.T.I., Mumbai.	70	Distinction
4	2001	M.E.(Mech./Auto mobile) (Sem.-I)	V.J.T.I., Mumbai.	71	Distinction
5	1997	B.E.(Mech.)	R.E.C., Surat.	72	Distinction
6	1993	H.S.C.	Gujarat secondary Education Board.	70	Distinction
7	1991	S.S.C.	Gujarat Secondary Education Board.	77	Distinction





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Experience:

Sr. No.	Duration	Organization	Designation
1	Since 27/01/2019	S.V.National Institute of Technology, Surat (Gujarat)	Associate Professor
2	1/01/04 to 26/01/2019	S.V.National Institute of Technology, Surat (Gujarat)	Assistant Professor
3	1/08/02 to 31/12/05	S.V.National Institute of Technology, Surat (Gujarat)	Lecturer
4	9/04/02 to 24/07/02	Nirma Institute Of Technology, A'bad.	Lecturer
5	2/8/99 to 30/6/2000	R.E.C., Surat (Gujarat)	Lecturer
6	1/9/98 to 1/8/99	Infoware Computer Technology, Surat.	Faculty
7	14/8/97 to 13/8/98	Citurgia Bio-Chemical. Ltd, Surat.	Trainee Engineer





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Sponsored Research Project Undertaken:

Sr. No.	Title	Sponsoring	Duration	Role	Status
1	Towards development of an upward swirl can type gas turbine combustor	ARDB, New Delhi	Sept. 2010- March 2013	CO PI	Completed
2	Parametric Investigation on Upward Swirl Can Type Gas Turbine Combustor	ARDB, New Delhi	Dec. 2014- Aug. 2017	CO PI	Completed





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Testing and Consultancy:

Sr. No.	Title	Sponsoring	Status	Year
1	TPI of 300 BS IV Diesel Fueled Non AC Midi Buses body building Work	Traffic Cell SMC Surat	Ongoing	2017-2019
2	Third part Fire and safety audit of 49 Midi AC BRTS Buses	BRTS Project & Traffic Cell, SMC, Surat	Completed	2017-2018
3	TPI of 238 Nos. Chassis of BS-IV diesel fuelled Non AC Midi Buses	Traffic Cell SMC Surat	Completed	2017-2019
4	TPI of 50 Buses for Surat BRTS SMC	SMC Surat	Completed	2017-2018
5	Study of Heat Exchanger at Essar Steel, Hazira	Essar Steel, Hazira	Completed	2017-2018





Research Publication

Journal

Sr. No.	Title of Paper	Name of Journal	Vol.No., Issue No. , Page No. Year
International Journal			
1	Effect of swirl and number of swirler vanes on combustion characteristics of methane inverse diffusion flame	Journal of Mechanical Science and Technology	Vol. 33 (4), pp. 1947-1958, April 2019.
2	Effect of hydrogen addition on combustion and emission characteristics of methane fueled upward swirl CAN combustor	International Journal of Hydrogen Energy (4.06 (2017), 5 years)	Volume 43, Issue 36, September 2018, Pages 17505-1751
3	Experimental investigation on flame appearance and emission characteristics of LPG inverse diffusion flame with swirl	Applied Thermal Engineering (3.9 (2017), 5 years)	Volume 137, June 2018, Pages 377-385
4	Thermal and emission characteristics of reverse air flow CAN combustor	International Journal of Thermal Science (3.7 (2017), 5 years)	Volume 128, June 2018, Pages 175-183
5	Influence of Fuel Injection Method on performance of Upward swirl can-type combustor	Applied Thermal Engineering (3.9 (2017), 5 years)	Volume 130, February 2018, Pages 319-330
6	Experimental and Numerical Investigation of LPG Fuelled Inverse Diffusion Flame in a Coaxial Burner	Journal of Advanced Thermo fluid Research	Vol. 3(1), pp. 16-29, July 2017.
7	A relative assessment of sub grid scale models for large eddy simulation of co-axial combustor	Journal of Mechanical Science and Technology, Springer (1.2 (2017), 5 years)	Vol.26(6), pp. 1753-1763, 2012.
8	Thermal and Emission Characteristics of a CAN Combustor	Journal of Heat and Mass Transfer, Springer (1.5 (2017), 5 years)	Vol. 52, pp. 499–509, 2016, DOI 10.1007/s00231-015-1572-9
National Journal			
1	An Isothermal Investigation on the Effect of Swirl Intensity on Combustor Flow Regime	The IUP Journal of Mechanical Engineering , The ICFAI University Press	Vol. IV, No.3,pp 7-21, August 2011
2	Isothermal Analysis of CAN Type Combustor Using Five Hole Probe	The journal of Institute of Engineers(India):Series C	Volume 93(4), pp 313–324, October 2012. (continue on next page)



Conference

Sr. No.	Title of Paper	Name of Conference	Page Nos. Volume, Issue No. & Year
International Conference			
1	Thermal Analysis for Optimization of Shape and Arrangement of Fins in Heat Sink	3 rd International Conference on Fluid Mechanics and Fluid Power December	Paper No: NCFMFP-2006-1725, Year 2006
2	Prediction of Ductile Fracture for simple Upsetting Operation Using Genetic Programming	Recent Advances in Computational Mechanics and Simulations (ICCMS-06)	Volume-I ,page 355-361, 8-10 December 2006
3	CFD analysis of pin-fin heat sinks for radial flow domain	International conference on recent development in mechanical engineering	Page 243 -251 , 23-25 January 2008
4	Effect of radiation on flow regime in CAN Type Combustor.	20 th National and 9 th International ISHMT-ASME Heat and Mass Transfer Conference	January 4-6,2010, Mumbai, India. ISBN:978-981-08-3813-3
5	Relative Assessment of Radiation models for Gray Isotropic Scattering Medium	21 st National and 10 th International, ISHMT-ASME Heat and Mass Transfer Conference	ISHMT_IND_02_022, December 27-30, Madras, India, 2011
6	Combustion and Emission Characteristics in Reverse Airflow CAN Type Gas Turbine Combustor with Different Fuel Injector Configurations	Asian congress on Gas Turbines 2016	IIT Bombay, November 2016.
7.	Combustion Characteristics of a CAN combustor with different fuel injector configurations	24 th National and 2 nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2017)	December 27-30, 2017, BITS Pilani, Hyderabad
8.	Numerical analysis of NACA 0012 airfoil with venturi cavity	6 th International and 43 rd National Conference on Fluid Mechanics and Fluid Power.	December 15-17, 2016, MMNNIT, Alahabad.
National conference			
1	Estimation of Pressure Distribution in Inclined Hydrodynamic Pad	Advances in Mechanical Engineering,ECKAME-2006-02-21	Kota, March 18-19,2006 (continue on next page)



	Bearings using MATLAB with Finite Element Analysis.		
2	Three-Dimensional Near –Field Flow Analysis of a car For Drag Reduction	Advances in Mechanical Engineering AIME-2006	Page No. 246-255, Year 2006
3	Finite Element Analysis of pinfin	Application of Advanced Quality methods in Engineering and Technology – AAQMENT-2006	February 23-24, 2006
4	Experimental and Numerical simulation of flow over a NACA 0018 airfoil	Application of Advanced Quality methods in Engineering and Technology – AAQMENT-2006	February 23-24, 2006
5	A Study of Residual Life Assessment of Boiler	NASA : Fatigue , Fracture and Ageing Structures	Page No. 401-409. January 30-31,2006
6	A Parametric Study on Friction Welding	National Conference on in National Conference on Recent Advances in Manufacturing Technology RAMT-2006	Page No.. 77-81,February 3,2006
7	Analysis of Heat Transfer in Fins Under Steady State	National Conference on Advances in Mechanical Engineering ECKAME-2006	March,18-19,2006
8	CFD Simulation of two dimensional gas turbine combustor geometries	National conference on emerging Trends in mechanical Engineering (ETME-2007)	Paper No. TH21, 4 th -5 th June ,Year 2007
9	Dynamics Effects of Cross-Winds on a car as it Negotiates a Turn	National Conference on Advances in Fluid Flow and Thermal Science	Paper No.:F03, Page No. F17-F26, 22 nd -24 th May 2008
10	Three Dimensional Vortical Flow Analysis of A Can Type Combustion Chamber	38th National Conference Fluid Mechanics and Fluid Power (FMFP-2011)	Paper No. HT-06, MANIT Bhopal, M.P., India, 15-17 December 2011.
11	Three dimensional reactive flow analysis of a CAN type combustor	National Propulsion Conference	21-23 February 2013, IIT Madras, Chennai, India.
12	Relative Assessment of Turbulence Models for Swirl Stabilised Flame.	National conference on thermal fluid science and Tribo Applications	2016, SVNIT Surat.





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Seminar/Workshop Organised:

1. Three-Day Workshop on “Introduction to Computational Fluid Dynamics”, S.V. National Institute of Technology, Surat, 10-12 May 2006.
2. AICTE approved STTP on “Computational Fluid Dynamics: Basics and Applications” from 7th to 11th July 2008 , SVNIT, Surat.
3. AICTE approved STTP on “Computational Fluid Dynamics for Engineers” 1st -5th February 2010, SVNIT, Surat.
4. ISTE approved 2-week workshop on “Computational Fluid Dynamics”, 12-22 June 2012, SVNIT, Surat.
5. TEQIP-II sponsored Continuing Education Program on “Computational Fluid Dynamics: Theory and Practice”, 30th June to 4th July 2014, SVNIT, Surat.
6. TEQIP-II sponsored 2nd Continuing Education Program on “Computational Fluid Dynamics: Theory and Practice”, 15th to 19th June 2015, SVNIT, Surat.
7. TEQIP-II sponsored 3rd Continuing Education Program on “Computational Fluid Dynamics: Theory and Practice”, 6th to 10th June 2016, SVNIT, Surat.
8. TEQIP-II sponsored Continuing Education Program on “Finite Element Method: A Universal Tool for Engineering Analysis”, 2nd to 6th January 2017.

National Conference Organied

1. National conference on “Advances on Fluid Flow and Thermal Sciences”, S. V. National Institute of Technology, Surat, May 22nd -24th 2008, SVNIT, Surat.

Book/Proceeding Edited

1. Proceeding of National conference on “Advances on Fluid Flow and Thermal Sciences”, S.V. National Institute of technology ,Surat , May 22nd -24th 2008.
2. Book of abstracts for 39th National Conference on “Fluid Mechanics and Fluid Power”, S.V. National Institute of Technology, Surat, 13-15 December 2012.





Expert Lecture Delivered:

1. **Modeling computational domain and creating the meshes** in Three Day Workshop on “Introduction to Computational Fluid Dynamics”, S.V. National Institute of Technology, Surat, 10-12 May 2006.
2. **Setting up the CFD problem, Execution, Monitoring and Interpretation of Results** in Three Day Workshop on “ Introduction to Computational Fluid Dynamics ”, S.V. National Institute of Technology, Surat, 10-12 May 2006
3. **About Computational Fluid Dynamics**, at N. G. Polytechnic, Isroli, Afwa, Bardoli, Surat. On 20th July 2006.
4. **Theoretical Aspects of Finite Element Method** in AICTE approved STTP on “Recent Trends in CAE”, 30th June to 4th July 2008, SVNIT, Surat.
5. **Finite Element Method** in AICTE approved STTP on “Computational Fluid Dynamics: Basics and Applications” 7th to 11th July 2008, SVNIT, Surat.
6. **Two Dimensional Modeling and Meshing** in AICTE approved STTP on “Computational Fluid Dynamics: Basics and Applications” 7th to 11th July 2008, SVNIT, Surat.
7. **Three Dimensional Modeling and Meshing** in AICTE approved STTP on “Computational Fluid Dynamics: Basics and Applications” 7th to 11th July 2008, SVNIT, Surat
8. **Solution and Post Processing** in AICTE approved STTP on “Computational Fluid Dynamics: Basics and Applications” 7th to 11th July 2008, SVNIT, Surat
9. **Fundamentals of Combustion and Numerical Simulation of Combustion** in AICTE approved STTP on “Advances in Heat Transfer” 25th to 29th November 2009, Parul Institute of Engineering and Technology, Vadodra.
10. **Basics of Finite Element Method** in AICTE approved STTP on “Training Program on Hypermesh and Hyperform” 5th to 9th January 2009, SVNIT, Surat.
11. **Fundamentals of Numerical Methods** in AICTE approved STTP on “Advanced application of FEM” 18th to 22nd January 2010, SVNIT, SURAT.
12. **Basics of FEM** in AICTE approved STTP on “Advanced application of FEM” 18th to 22nd January 2010, SVNIT, SURAT.
13. **Discretisation Method: FEM** AICTE approved STTP on “CFD for Engineers” 1st to 5th February 2010, SVNIT, SURAT.

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14. **CFD Using Finite Element Methods** in AICTE approved STTP on “Application of Computational Fluid Dynamics in Mechanical Engineering”, 10th -14th May, 2010.
15. **Fundamentals of Dynamic Analysis of Mechanical System using ANSYS** in Training Program on Finite Element Analysis, Anchor Institute Cell, 9th to 13th June 2010.
16. **Application of Finite Element Analysis to Thermal Problems** at in AICTE approved one week STTP at R K. University, Rajkot, December 26, 2011.
17. **Solution of Transient and moving load problem using FEM** in Training Program in Advanced Finite Element Analysis, SVNIT, Surat, 12-13 May 2012.
18. **FEM –A Universal Tool for Engineering Analysis** on 26th March 2015 at Shroff S. R. Rotary Institute of Chemical Technology, Valia, Bharuch.
19. **Keynote Speech on “Sirl Flow in Combustor”** at National Conference on Recent Advances in Engineering for Sustainability, 29-30 May 2015, UkaTarsadia University, Bardoli, Surat, Gujarat, India.
20. **Numerical Methods for Research** at STTP on Tools and Techniques for Effective Teaching and Research organized by Department of Mechanical Engineering, SVNIT, Surat during 26th to 30th October 2015.
21. **Finite Difference Method using EXCEL** at two days workshop on Computer Aided Thermal Fluid System Analysis, 3rd-4th October, 2016, CGPIT, Bardoli, UKA Tarsadiya University.
22. **Swirl flow in combustor** at QIP Short Term Training Program on "Advances in Theory and Design of Turbomachines" during 7-12 November 2016 at SVNIT, Surat.
23. **FEA Application to Heat Transfer and Fluid Flow** at five days short term training program (STTP) on "Finite Element Methods: Theory and Practices" during June 27 to July 1, 2016, Indus University Baroda.
24. **Virtual Wind Tunnel** at Software Application for Design and Analysis in Mechanical Engineering", 3rd-7th, April 2017, CGPIT, Bardoli, UKA Tarsadiya University.





Ph.D. Guidance (Ongoing):

1. Parag Rajpara, “Parametric Investigation on Upward Swirl CAN Combustor”, 2015-2019.
2. Vipul Patel, “ Investigation on Inverse Diffusion Flame”, 2015-2019.
3. Mayank Shah, “Heat Augmentation with fin using dimple surface”, 2018.
4. Ankit Dekhtawala, “ Investigation on porous media combustor”, 2019.

M. Tech Dissertation Guided

1	FEM Analysis of PAD Bearing
2	Thermal Analysis of Heat-Sink
3	CFD Simulation of Turbine Blade Cooling
4	CFD Simulation of Can Type Gas Turbine Combustor
5	Tube Sheet Analysis
6	Flow Visualization in 2-D Can Type Combustor and Non-Premixed Combustion Analysis of 3-D Can-Type Combustor.
7	Numerical Investigation of Combustion of Methane-Hydrogen Fuel Mixtures in CAN Type Combustor
8	Isothermal Analysis and Development of CAN Type Combustor for Flow Visualization
9	Numerical Simulation of Shell and Tube Type of H.E.
10	Numerical Simulation of Flow Boiling and Experimental Analysis to Visualise Flow Pattern
11	Acoustic Analysis of Heat Exchanger Using CFD.
12	Numerical and Experimental Investigation on CAN Type Combustion Chamber
13	Large Eddy Simulation of Gas Turbine Combustion Chamber.
14	Shape Design Optimisation of Connecting Rod Using ANSYS
15	Numerical Analysis of Solid Oxide Fuel Cell
16	Simulation of Gas Turbine Combustion Chamber
17	Numerical and Experimental Investigation of CAN type Combustion Chambers
18	Effect of Radiation on combustor flow regime
19	Large Eddy Simulation of Gas Turbine Combustion Chamber
20	Numerical and Experimental Investigation of CAN type combustion chamber.
21	Flow induced vibration analysis
22	Experimental and numerical investigation centrifugal pump performance in reverse mode
23	Experimental study of pump performance characteristics in reverse and pump mode
24	Numerical Investigation of CAN Type Combustor
25	Numerical Simulation of Moving Heat Source
26	Loss Models and Performance Evaluation of Centrifugal Pump
27	Experimental and Numerical Investigation of Centrifugal Pump Performance
28	Numerical and Experimental Analysis of Open Non-Premixed Swirl Stabilised Flame
29	Numerical Simulation of Direct Injection Engine
30	Numerical Simulation of Moving Heat Source (continue on next page)



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31	Experimental and Numerical Investigation on Open Non-Premixed Swirl Stabilised Flame.
32	Integration of Alternate Energy
33	CFD Analysis of Multi Jet Air Impingement cooling of Flat Plate
34	Numerical Analysis of Inverse Diffusion Flame
35	Numerical Investigation of squealer Tip Treatment on Aerodynamic losses in Downstream of Turbine Rotor Blade

