

Publications

International Journals

1. R. Srivastava and V. K. Patel, 2025, “Effect of Preheated Swirling Multi-Annular Jets on Mixing and Flow Characteristics in Various Expanded Confinements”, *International Journal of Turbo and Jet Engines*, De Gruyter, Vol. 42, No. 3, pp. 707-720.
2. Y. K. Baghel and V. K. Patel, 2025, “CFD Analysis of the Erosion Wear through 90° Bend of Different Area Ratio at High Slurry Concentration”, *Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, Sage Journals. (In Press)
3. R. Srivastava, R. Baliyan and V. K. Patel, 2025, “Effect of Various Angular Outlets on Mixing of Swirling Multi-Annular Jets in Different Expanded Confinement”, *Aerospace Systems*, Springer Nature journal *Aerospace Systems*, Springer Nature journal, Vol. 8, pp. 325–348.
4. L. Ananya and V. K. Patel, 2025, “Computational Analysis of Erosion Wear on Unbounded Flexible Pipe of Different Curvature Angles”, *Journal of Process Mechanical Engineering*, SAGE. (In Press)
5. A. K. Raipilli and V. K. Patel, 2025, “Review on Nanofluid Preparation, Stability Analysis, and Heat Enhancement by Nanofluids in Pipe with Passive Elements”, *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, Sage Journals, Vol. 239, No.6, pp. 3847–3864.
6. L. Ananya and V. K. Patel, 2025, “Numerical study on 90-degree elbow of different configurations for slurry erosion wear minimization and cost efficiency”, *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, Springer, Vol. 47, Article No.115, pp. 1-19.
7. Y. K. Baghel and V. K. Patel, 2024 “Influence of Hardness and Grain Size of the SS431 Material on the Slurry Erosion Wear through the Pot Tester at Higher Slurry Concentrations”, *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, Springer, Vol. 46, Article No.520, pp. 1-16.
8. L. Ananya and V. K. Patel, 2024, “A Comprehensive Review on the Flow Characteristics and Erosion Wear of the Various Multi-phase Flow Handling Equipment”, *Particulate Science and Technology*, Taylor & Francis, Vol. 42, No.7, pp. 1266-1281.
9. R. Srivastava and V. K. Patel, 2024, “Numerical Investigation on Mixing of Heated Confined Swirling Coaxial Jets with Blockage”, *International Journal of Turbo and Jet Engines*, De Gruyter, Vol. 41, No. 4, 2024, pp. 777-790.

10. G. Tiwari, J. Kumar, V. Prasad and V. K. Patel, 2024, “Multi-fidelity CFD for Obtaining the Runner Blade Profile Parameters of a Francis Turbine for Optimum Hydrodynamic Performance”, *Ocean Engineering*, Elsevier, Vol. 305, Article No.117994, pp. 1-18.
11. L Ananya, V K Patel, 2024 “Mitigation of Erosion Wear Produced by Fly-ash Slurry on 90° Elbow by Changing the Cross-section Shape and Area Ratio” *Solid State Phenomena Journal*, Trans Tech Publications, Volume 357, pp 93-100.
12. G. Tiwari, J. Kumar, V. Prasad and V. K. Patel, 2022, “CFD Investigation for Surface Roughness Effects on the Hydrodynamics of Cavitating Turbulent Flow through a Low Head Prototype Francis Turbine” *Journal of Applied Fluid Mechanics*, Vol. 15, No.5, pp.1593-1607.
13. Y. K. Baghel and V. K. Patel, 2022, “Computational Investigation of Erosion Wear in the Eco-friendly Disposal of the Fly Ash Through 90° Horizontal Bend of Different Radius Ratios”, *Journal of Chemical Product and Process Modeling*, De Gruyter, Vol. 18, issue 1, pp 1-11.
14. L. Ananya, Y. K. Baghel and V. K. Patel, 2022 “Computational Analysis of Erosion Wear in Various Angle Bent Pipes”, *Materials Today: Proceedings Journal*, Elsevier, Vol. 80, Part 2, pp 1150-1157.
15. R. K. Yadav and V. K. Patel, 2022 “Influence of ALR on SMD in 3D Air-blast Atomization using CFD”, *Materials Today: Proceedings Journal*, Elsevier, Vol. 80, Part 2, pp 952-957.
16. Y. K. Baghel and V. K. Patel, 2022, “CFD Modeling for the Influence of Fly Ash Particle Size on the Different Properties of High Concentrated Slurry Transportation in Horizontal Pipe”, *Walailak Journal of Science and Technology*, Vol. 20, issue 2, pp 6431.
17. Ishu Shukla, Y. K. Baghel and V. K. Patel, 2022, “Effect of V-cut on the Performance of Longitudinal Vortex Generator using CFD”, *Songklanakarin Journal of Science and Technology*, Vol. 44, issue 3, pp 892-898.
18. Y. K. Baghel, J. Kumar and V. K. Patel, 2021, “CFD Analysis of the Flow Characteristics of In-Line Drip Emitter with Different Labyrinth Channels”, *Journal of The Institution of Engineers: Series A*, Springer, Vol. 102, issue 1, pp 111-119.
19. G. Tiwari, J. Kumar, V. Prasad and V. K. Patel, 2020, “Utility of CFD in the Design and Performance Analysis of Hydraulic Turbines”, *Energy Reports Journal*, Elsevier, Vol. 6, issue C, pp 2410-2429.
20. J. Kumar, G. Tiwari, A. Rawat and V. K. Patel, 2020, “Computational Investigation of Erosion Wear on Industrial Centrifugal Pump Handling Solid-Water Flows”, *Journal of Tribology in Industry*, Vol. 42, No. 3, pp 382-399.

21. P. Sharma and V. K. Patel, 2020 “Computational Investigation of the Thermo-Fluidic Effects of Inserting Twisted Tape with Alternating Twists with Notches”, *Materials Today: Proceedings Journal*, Elsevier, Vol. 28, Part 3, pp 1968-1972.
22. A. Pratap, Y. K. Baghel and V. K. Patel, 2020 “Effect of Impingement Height on the Enhancement of Heat Transfer with Circular Confined Jet Impingement using Nanofluids”, *Materials Today: Proceedings Journal*, Elsevier Vol. 28, Part 3, pp 1656-1661.
23. J. Kumar, G. Tiwari, A. Rawat and V. K. Patel, 2020, “Effect of Swirl Vanes Angle on Erosion Behavior of AISI 316 Pipe Bend”, *Materials Today: Proceedings Journal*, Elsevier, Vol. 26, Part 2, pp 781-786.
24. G. Tiwari, J. Kumar, V. Prasad and V. K. Patel, 2020, “Derivation of Cavitation Characteristics of a 3MW Prototype Francis Turbine through Numerical Hydrodynamic Analysis”, *Materials Today: Proceedings Journal*, Elsevier, Vol. 26, Part 2, pp 1439-1488.
25. Y. K. Baghel, Jitendra Kumar, B. Kishor, A. Rawat and V. K. Patel, 2020 “Effect of Hot Forging on the Slurry Erosion Wear of AISI 316 and AISI 410 Steel”, *Materials Today: Proceedings Journal*, Elsevier, Vol. 26, Part 2, pp 1740-1745.
26. A. Shrivastava and V. K. Patel, 2019 “Effect of Injection Angle of Primary and Secondary Holes on the Mixing and Combustion in a Can Type Combustor using CFD”, *SN Applied Sciences*, Springer Nature journal, Vol. 1, issue 7, 786.
27. G. Tiwari, V. Prasad, S. N. Shukla and V. K. Patel, 2019 “Hydrodynamic Analysis of a Low Head Prototype Francis Turbine for Establishing an Optimum Operating Regime using CFD” *Journal of Mechanical Engineering and Sciences*, Vol.14, issue 2, pp 6625-6641.
28. V. K. Patel, P. Sharma and K. Saxena, 2017 “Computational Study of Turbulent Convective Heat Transfer in Circular Pipe using Trapezoidal Ribs” *IOP Journal of Material Science and Engineering*, Vol. 234, Issue 1, 012003.
29. R. Verma, V. K. Patel and A. Pal, 2016, “Numerical Analysis on Aerodynamic Behaviour of a Hemispherical Structure under Different Wind Loading”, *International Journal of Engineering Research and Application*, Vol. 6, Issue 4 (5), pp 21-25.
30. V. K. Patel, S. N. Singh and V. Seshadri, 2013 “Effect of Blockage and Location on Mixing of Swirling Coaxial Jets in a Nonexpanding Circular Confinement”, *International Journal of Turbo & Jet-Engines*, Vol. 30, Issue 2, pp 153-171.
31. A. R. Paul, P. Ranjan, V. K. Patel and A. Jain, 2012 “Comparative studies on flow control in rectangular S-duct diffuser using submerged-vortex generators” *Aerospace Science and Technology*, Elsevier, Vol.28, Issue 1, pp 332-343.

32. A. R. Paul, P. Ranjan, V. K. Patel and A. Jain, 2011 “Flow Control in Rectangular S-Duct Diffuser Using Submerged Vortex Generators” *International Review of Aerospace Engineering (IREASE)*, Vol. 4, N. 2, pp 76-86.

National and International Conferences

1. L. Ananya and V.K. Patel, “Computational Investigation of Slurry-Induced Erosion in Gate Valve under Different Operating Conditions” *International Conference on Applied Mathematics and Computational Fluid Dynamics 2026 (ICAMCFD-2026)*, ID: 123, 30January-1 February, 2026, MNNIT Allahabad, Prayagraj, India.
2. A. Maurya, D. Shukla, L. Ananya and V.K. Patel, “Effect of Particle Sphericity and Impingement Angle on Slurry Erosion Wear on Pipeline Material due to Fly Ash–Water Jet Impingement” *6th IEEE International Conference on Recent Trends in Computer Science and Technology (ICRTCST-2026)*, ID: ICRTCE014, 29–30, January, 2026, R.V.S. College of Engineering & Technology, Jamshedpur, Jharkhand, India.
3. R. Srivastava and V. Patel, “Impact of Preheated Central Jet on Intermixing of Confined Multi-Annular Swirling Jets” *9th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2025)*, ID: P035, 15-17, December, 2025, Indian Institute of Technology Kharagpur, India.
4. L. Ananya, D. Shukla and V.K. Patel, “Computational Study of Orifice Plate Designs for Slurry Erosion Wear in Wastewater Pipelines” *5th International Conference on Waste Management (RECYCLE 2025)*, ID: WWTR-046, 5-6, June, 2025, IIT Guwahati, India.
5. D. Shukla, L. Ananya and V. K. Patel, “CFD-Based Analysis of Fly Ash-Induced Erosion and Flow Dynamics in Ball Valves for Improved System Longevity” *5th International Conference on Waste Management (RECYCLE 2025)*, ID: AOIWM-040, 5-6, June, 2025, IIT Guwahati, India.
6. V K Patel, L Ananya and Z. Khatoon “Numerical Optimization of Slurry Erosion Wear in Right-Angle Elbow using Mass Injection Method” *International Conference on Advances in Materials, Manufacturing, and Artificial Intelligence Applications (ICAMMAIA 2025)*, ID: 068, 4-5, April 2025, HBTU Kanpur, India.
7. R. Baliyan, R. Srivastava and V. K. Patel, “Numerical Investigation of Hydrogen-Methane Blending in Can Type Model Gas Turbine Combustor”, *International Conference on Sustainable Research in Energy and Environment (SREE-2024)*, 5-6 April, 2024, Dr B R Ambedkar National Institute of Technology Jalandhar, India.
8. L Ananya and V K Patel, “Mitigation of Erosion Wear Produced by Fly-ash Slurry on 90° Elbow by Changing the Cross-section Shape and Area Ratio” *14th International Conference on Advanced Materials Research (ICAMR 2024)*, ID: M1032, 25-27, January 2024, Phuket, Thailand.

9. R. Baliyan, L. Ananya and V. K. Patel, “Numerical Study on Heat Transfer Enhancement using Vane Swirlers in Tube Heat Exchangers”, *International Conference on Green Energy and Sustainable Technology (ICGEST-2023)* ID-110, 5-7, January 2024, National Institute of Technology, Kurukshetra, India.
10. A. K. Raipilli, L. Ananya and V. K. Patel, “Numerical Investigation of Fluid Flow and Heat Transfer in Microchannel Heat Sink with Rectangular Grooves and Sine Wavy Channels”, *1stInternational Conference on Mechanical Engineering: Researches and Evolutionary Challenges (ICMECH-REC-2023)* ID-36, 23-25, June 2023, National Institute of Technology, Warangal, India (**Best Paper Award**).
11. Z. Khatoon, R. Srivastava and V. K. Patel, “Numerical Analysis of Thermal Properties in Ground Coupled Heat Exchanger”, *1stInternational Conference on Mechanical Engineering: Researches and Evolutionary Challenges (ICMECH-REC-2023)* ID-187, 23-25, June 2023, National Institute of Technology, Warangal, India.
12. L. Ananya, Y. K. Baghel and V. K. Patel, “Computational Analysis of Erosion Wear in Various Angle Bent Pipes”, *2022 Second Global Conference on Recent Advances in Sustainable Materials (GC-RASM 2022)* ID-RASM 4056, 28-29, July 2022, A.J. Institute of Engineering & Technology, Karnataka, India.
13. R. K. Yadav and V. K. Patel, “Influence of ALR on SMD in 3D Air-blast Atomization using CFD”, *2022 Second Global Conference on Recent Advances in Sustainable Materials (GC-RASM 2022)* ID-RASM 2051, 28-29, July 2022, A.J. Institute of Engineering & Technology, Karnataka, India.
14. Y. K. Baghel and V. K. Patel, “Computational Investigation of Erosion Wear in Eco-friendly Disposal of the Fly Ash Through 90⁰ Horizontal Bend at Different Radius Ratios” *International conference on technological interventions for sustainability (Chem-conflux²²)*, ID-142, 14–16 April 2022, MNNIT Allahabad and Universiti Sains, Malaysia.
15. S. Prajapati, Y. K. Baghel, and V. K. Patel “Influence of Nanofluids on the Heat Transfer Enhancement by Axisymmetric Jet Impingement using CFD”, *2022 Fourth International Conference on Materials Science and Manufacturing Technology*, ID- MS4053, 08–09, April 2022, Akshaya College of Engineering & Technology, Coimbatore, and Diligentec Solutions, Coimbatore, India.
16. K. Saxena, N. Bhadauria and V. K. Patel “Computational Analysis on the Flow Behaviour and Performance Evaluation of Single and Double Offset Butterfly Valves”, *International Conference on Futuristic Advancements in Materials, Manufacturing and Thermal Sciences (ICFAMMT-22)*, ID-179, 20-22 January 2022, IITRAM, Ahmedabad & SAC, ISRO, Ahmedabad, India (**Best Paper Award**).
17. I. Shukla, Y. K. Baghel, and V. K. Patel “Computational Analysis of Heat Transfer Enhancement in a Circular Tube with Longitudinal Vortex Generator”, *48th National*

Conference on Fluid Mechanics & Fluid Power (FMFP-2021), ID-03/266, 27-29 December 2021, BITS Pilani, Rajasthan, India.

18. J. Kumar, M. Singh, G. Tiwari, and V. K. Patel “Numerical Analysis for Deriving Erosion Characteristics of Pipe Bend Materials AISI 316 and AISI 431”, *48th National Conference on Fluid Mechanics & Fluid Power (FMFP-2021)*, ID-13/127, 27-29 December 2021, BITS Pilani, Rajasthan, India.
19. G. Tiwari, J. Kumar, S. N. Shukla, V. Prasad, and V. K. Patel “Multi-Fidelity CFD Approach for Hydrodynamic Performance Analysis of a Prototype Francis Turbine- A Comparative Study”, *48th National Conference on Fluid Mechanics & Fluid Power (FMFP-2021)*, ID-10/125, 27-29 December 2021, BITS Pilani, Rajasthan, India.
20. P. Sharma and V. K. Patel, “Computational Investigation of the Thermo-Fluidic Effects of Inserting Twisted Tape with Alternating Twists with Notches”, *International Conference on Aspects of Materials Science and Engineering (ICAMSE 2020)*, Panjab University, Chandigarh, May 29-30, 2020.
21. A. Pratap, Y. K. Baghel and V. K. Patel, “Effect of impingement height on the enhancement of heat transfer with circular confined jet impingement using nanofluids”, *International Conference on Aspects of Materials Science and Engineering (ICAMSE 2020)*, Panjab University, Chandigarh, May 29-30, 2020.
22. Jitendra Kumar, G. Tiwari, A. Rawat and V. K. Patel, “Effect of Swirl Vanes Angle on Erosion Behavior of AISI 316 Pipe Bend”, *10th International Conference on Materials Processing and Characterization (ICMPC-2020)*, GLA University, Mathura, 21-23 February 2020.
23. G. Tiwari, J. Kumar, V. Prasad and V. K. Patel, “Derivation of Cavitation Characteristics of a 3MW Prototype Francis Turbine through Numerical Hydrodynamic Analysis”, *10th International Conference on Materials Processing and Characterization (ICMPC-2020)*, GLA University, Mathura, 21-23 February 2020.
24. Y. K. Baghel, J. Kumar, B. Kishor, A. Rawat and V. K. Patel, Effect of Hot Forging on the Slurry Erosion Wear of AISI 316 and AISI 410 Steel, *10th International Conference on Materials Processing and Characterization (ICMPC-2020)*, GLA University, Mathura, 21-23 February 2020.
25. J. Kumar, Y. K. Baghel, R. Shrivastava and V. K. Patel, “Effect of Additives on Erosion Behaviour of Slurry Pumps Material”, *2nd International Conference on Mechanical Materials and Renewable Energy (ICMMRE-2019)*, ID-58, 6-7 December 2019, SMU Sikkim.
26. Y. K. Baghel, J. Kumar and V. K. Patel, “Effect of Surface Hardness of the Material on the Slurry Erosion Wear of AISI 420”, *2nd International Conference on Mechanical Materials and Renewable Energy (ICMMRE-2019)*, ID-65, 6-7 December 2019, SMU Sikkim.

27. G. Tiwari, S. N. Shukla, V. Prasad and V. K. Patel “Numerical Investigation of Hydrodynamics of the Cavitating Turbulent Flow in a Low Head Prototype Francis Turbine” *ICMMRE 2019*, ID- 21, 6-7 December 2019, SMU Sikkim.
28. G. Tiwari, V. Prasad, S. N. Shukla and V. K. Patel “Hydrodynamic Analysis of a Low Head Prototype Francis Turbine for Establishing an Optimum Operating Regime using CFD”, *International conference on advances in mechanical engineering and nanotechnology (ICAMEN 2019)*, ID-DE3332, 8- 9 March, 2019, Manipal University Jaipur.
29. G. Tiwari, V. Prasad, S. N. Shukla and V. K. Patel “Derivation of Complete Performance Characteristics of a Low Head Prototype Francis Turbine Using CFD”, *International Conference on Recent Innovations and Developments in Mechanical Engineering (IC-RIDME 2018)*, ID-201, 8- 10 November, 2018, NIT Meghalaya, Shillong, India.
30. Y. K. Baghel and V. K. Patel “Experimental and Computational Analysis of Heat Transfer by a Turbulent Air Jet Impingement on a Flat Surface”, *International Conference on Recent Innovations and Developments in Mechanical Engineering (IC-RIDME 2018)*, ID-234, 8- 10 November, 2018, NIT Meghalaya, Shillong, India.
31. G. Tiwari, V. Prasad and V. K. Patel “Computational Analysis of a Low Head Francis Turbine Draft Tube for Varying Load Conditions”, *Proc. of Symposium and Workshop for Analytical Youth in Applied Mechanics (SWAYAM) 2018*, ID-17, 4-6 July, 2018, BITS Pilani, K. K. Birla Goa Campus, India.
32. Y. Yadaw, J. Kumar and V. K. Patel “Effect of Twisted Tape on Bend Erosion”, *Proc. of Symposium and Workshop for Analytical Youth in Applied Mechanics (SWAYAM) 2018*, ID-26, 4-6 July, 2018, BITS Pilani, K. K. Birla Goa Campus, India.
33. V. K. Patel, P. Sharma and K. Saxena “Computational Study of Turbulent Convective Heat Transfer in Circular Pipe using Trapezoidal Ribs” *2017 International Conference on Advanced Technologies in Design, Mechanical and Aeronautical Engineering (ATDMAE2017)*, ID-T007, 12-14 July 2017, NTU Singapore, Singapore.
34. Y. K. Baghel and V. K. Patel “Analysis of Heat Transfer Characteristic of a Solar Air Heater with Artificial Roughness on Absorber Plate Using CFD”, *Proc. of 3rd Indian Conference on Applied Mechanics (INCAM) 2017*, ID-63, 05-07 July 2017, MNNIT Allahabad, India.
35. A. Shrivastava, M. Singh and V. K. Patel “Effect of Increase in Expansion Ratio on CRZ in a Swirling Coaxial Jets”, *Proc. of 3rd Indian Conference on Applied Mechanics (INCAM) 2017*, ID-69, 05-07 July 2017, MNNIT Allahabad, India.
36. S. K. Shah and V. K. Patel “Computational Study on Effect of Upstream Swirl Induction on Erosion in Pneumatic Conveying Pipeline Bend”, *Proc. of 3rd Indian Conference on Applied Mechanics (INCAM) 2017*, ID-103, 05-07 July 2017, MNNIT Allahabad, India.

37. P. Kumar and V. K. Patel “Design and Performance of Modified Cone Flowmeter”, *Proc. of 3rd Indian Conference on Applied Mechanics (INCAM) 2017*, ID-158, 05-07 July 2017, MNNIT Allahabad, India.
38. G. Tiwari, V. K. Patel and V. Prasad “CFD Approach for Analyzing the Effects of Rotor Stator Interaction in a 3MW Mixed Flow Prototype Francis Turbine”, *Proc. of 3rd Indian Conference on Applied Mechanics (INCAM) 2017*, ID-184, 05-07 July 2017, MNNIT Allahabad, India.
39. P. Sharma, V.C. Joshi, U. Kumar and V. K. Patel “CFD Analysis of the Swirl Decay in Circular Pipe with Twisted Tape Inserts”, *Proc. of 3rd Indian Conference on Applied Mechanics (INCAM) 2017*, ID-239, 05-07 July 2017, MNNIT Allahabad, India.
40. A. Shrivastava and V. K. Patel “CFD Analysis of Turbulent Mixing Characteristics of Passive Scalar Inside a Micro Gas Combustor”, *Proc. of IEEE International conference on AMIAMS2017*, ID-47, 03-05 February 2017, MNNIT Allahabad, India.
41. V. K. Patel, A. Shrivastava and A. Negi “Enhancing Heat Transfer in Plate Fin and Tube Heat Exchangers using Vortex Generator Behind the Tube”, *Proc. 6th International and 43rd National Conference on Fluid Mechanics & Fluid Power*, ID-521, 15-17 December 2016, MNNIT Allahabad, India.
42. V. K. Patel, Y. K. Baghel and S. Kumar “Effect of Air Inlet Velocity and Turbulent Intensity on Breakage of Fuel Jet in Air Blast Atomizer using Population Balance Model”, *Proc. 6th International and 43rd National Conference on Fluid Mechanics & Fluid Power*, ID-518, 15-17 December 2016, MNNIT Allahabad, India.
43. V. K. Patel, P. Sharma and A. Negi “Augmentation of Heat Transfer in Plate Fin and Tube Heat Exchangers with Vortex Generators”, *Proc. 6th International and 43rd National Conference on Fluid Mechanics & Fluid Power*, ID-493, 15-17 December 2016, MNNIT Allahabad, India.
44. V. K. Patel, J. Kumar and R. C. Srivastava “Experimental Analysis on the Effect of Blade Angle on the Performance Characteristics of Tangential Turbine Flow Meter”, *Proc. 6th International and 43rd National Conference on Fluid Mechanics & Fluid Power*, ID-487, 15-17 December 2016, MNNIT Allahabad, India.
45. A. Kulkarni and V. K. Patel “Effect of Pre-Heating on the Atomization of Liquid Fuel in Air Blast Atomizer using Eulerian- Lagrangian Approach”, *Proc. 6th International and 43rd National Conference on Fluid Mechanics & Fluid Power*, ID-300, 15-17 December 2016, MNNIT Allahabad, India.
46. V. K. Patel, S. N. Singh and V. Seshadri, “Effect of Preheating on the Flow Characteristics of Swirling Multicoaxial Jets in an Expanded Confinement”, *11th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics (HEFAT2015)*, pp. 303-308, 20-23 July 2015, Kruger National Park, South Africa.

47. V. K. Patel, S. N. Singh and V. Seshadri, "Effect of Blockage and its Location on the Flow Characteristics of Heated Swirling Coaxial Jets in a Non-expanding Confinement", *5th International and 41st national Conference on Fluid Mechanics & Fluid Power*, Ref. No. 234, 12-14 December 2014, IIT Kanpur, India.
48. R. Verma, V. K. Patel, A. K. Lall and A. Pal, 2014, "CFD Analysis on the Aerodynamic Behaviour of hemispherical Structures", *5th International and 41st national Conference on Fluid Mechanics & Fluid Power*, Ref. No. 226, 12-14 December 2014, IIT Kanpur, India.
49. V. K. Patel and A. R. Paul, "Experimental Studies on 'Fishtail' Vortex Generators", *Proc. The 11th Asian International Conference on Fluid Machinery & the 3rd Fluid Power Technology Exhibition*, AICFM_FM_012, 21-23 November 2011, IIT Madras, Chennai, India.
50. S. N. Singh, V. Seshadri, V. K. Patel and L. Singh, "Optimization of Nozzle Geometry for the Best Performance of Self Entraining Diffuser Using CFD", *Proc. of 38th NCFMFP 2011-CFD-15*, 15-17 December, 2011, MANIT Bhopal.
51. C. B. Prajapati, V. K. Patel, S. N. Singh and V. Seshadri, "CFD Analysis of Permanent Pressure Loss for Different Types of Flow Meters in Industrial Application", *Proc. 4th International and 37th National Conference on Fluid Mechanics & Fluid Power*, FMFP10-CF-41, 16-18 December 2010, IIT Madras, Chennai, India.
52. S. N. Singh, V. Seshadri, S. Chandel, A. K. Sharma and V. K. Patel "Effect of Position and Orientation of Primary Holes on the Mixing in a Combustor Model with and without Swirl", *Proc. 4th International and 37th National Conference on Fluid Mechanics & Fluid Power*, FMFP10-EM-18, 16-18 December 2010, IIT Madras, Chennai, India.
53. V. K. Patel, A. Dewangan, S. N. Singh and V. Seshadri, "CFD Analysis on the Use of Adjustable Wedge Element for Balancing Flow in the Pulverized Coal Pipelines in Thermal Power Plant", *Proc. 16th ISME Conference*, ISME10-TI-7, 02-04 December, 2010, IIT-Delhi, New Delhi, India.
54. S. Chandel, S. N. Singh, V. Seshadri and V. K. Patel, "Environment Friendly Mode of Disposal of Fly Ash in Thermal Power Plants", *Proc. International Conference on Advances in Renewable Energy (ICARE 2010)*, Vol. II, Ref. No. 191, pp. 228-234, 24-26 June 2010, MANIT, Bhopal.

Books/Book chapter Published

1. A. K. Raipilli, L. Ananya and V. K. Patel, 2024 "Numerical Investigation of Fluid Flow and Heat Transfer in Microchannel Heat Sink with Rectangular Grooves and Sine Wavy Channels", Chapter in *Advances in Recent Advances in Mechanical Engineering Book*, Volume 1, pp. 83-96, Springer, ISBN no.: 978-981-97-0917-5.

2. Z. Khatoon, R. Srivastava and V. K. Patel, 2024 “Numerical Analysis of Thermal Properties in Ground Coupled Heat Exchanger”, Chapter in Advances in Recent Advances in Mechanical Engineering Book, Volume 1, pp. 373-386, Springer, ISBN no.: 978-981-97-0917-5.
3. K. Saxena, N. Bhadauria and V. K. Patel, 2022, “Computational Analysis on the Flow Behaviour and Performance Evaluation of Single and Double Offset Butterfly Valves”, Chapter in Advances in Thermal Sciences Book, pp. 173-185, Springer, ISBN no.: 978-981-19-6472-5.
4. Y. K. Baghel, and V. K. Patel, 2020, “Experimental and Computational Analysis of Heat Transfer by a Turbulent Air Jet Impingement on a Flat Surface”, Chapter in Advances in Mechanical Engineering Book, pp. 85-96, Springer.
5. G Tiwari, V. Prasad, S.N. Shukla, V. K. Patel, 2020, “Derivation of Complete Performance Characteristics of a Low Head Prototype Francis Turbine Using CFD”, Chapter in Advances in Mechanical Engineering Book, pp.1581-1591, Springer.
6. K. K. Shukla, A. K. Upadhyay and V. K. Patel, 2017, “Proceedings of 3rd Indian Conference on Applied Mechanics-2017 (INCAM-2017)”.

Poster Presentations/Workshop Attended

1. Workshop on, “*Innovate to Fabricate: A Practical Workshop in MedTech Manufacturing*”, held on 19-20 February, 2026 at IIT Kanpur.
2. Workshop on, “Energy, Environment and Multiphase Flows”, held on 24-26 February, 2020 at IIT Kanpur.
3. Workshop on, “Gender Sensitivity at Work Place” held on 27 March, 2017 at MNNIT Allahabad.
4. Workshop on, “Teaching Learning Assessment: Techniques and Practices” held on 24-25 March, 2017 at MNNIT Allahabad.
5. International Workshop on, "Energy, Propulsion and Environment", held on 08-11 March, 2017 at IIT Kanpur.
6. Workshop on, "Faculty Orientation Programme", held on 12-13 January, 2013, at MNNIT Allahabad.
7. Workshop on, "*Handling and Transportation of Fly Ash*", held on May 19, 2012, at ITMMEC, Committee Room, IIT Delhi.
8. Workshop on, "*Analysis of Manouvering of Underwater Vehicles*", held on May 28th, 2011, at IIT Delhi.

9. Workshop on, "*Advances in small scale heat exchangers and fuel cell thermal management for process, IT and energy industries*", held on Jan 8-9, 2010, at Senate room, IIT Delhi.
10. Poster Presentation on "Basic Experiments in Fluids Mechanics" *I²Tech 2011*, IIT Delhi
11. Poster Presentation on "Studies on Flow Characteristics of Heated Coaxial & Multi-coaxial Jets" *I²Tech 2011*, IIT Delhi
12. Poster Presentation on "Flow Visualization Studies" *I²Tech 2010*, IIT Delhi
13. Poster Presentation on "Experiments in Fluid Mechanics" *I²Tech 2010*, IIT Delhi

(Vivek Kumar Patel)