

Dr. Prasun Dutta Post-Doc (J.U.), Ph.D. (Engineering-IIEST, Shibpur)

Assistant Professor, Dept. of Mechanical Engineering,
School of Engineering & Technology, Adamas University.

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P.O. Nabapally, District-24 Parganas (North), Kolkata-700 126, West Bengal, India
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EXPERIENCE (Total 13 years +)

- **Assistant Professor** (February 2022 – till date, 2 years +)
Dept. of Mechanical Engineering, Adamas University
- **Adjunct Faculty** (November 2021 – January 2022, 3 months)
Dept. of Mechanical Engineering, Adamas University
- **Post-Doctoral Fellow** (March 2019 – October 2021, 2 years 8 months)
Dept. of Mechanical Engineering, Jadavpur University
- **Assistant Professor (Visiting faculty)**, (September 2018 – February 2019, 5 months)
Dr. Sudhir Chandra Sur Degree Engineering College, 540 Dum Dum Road, Kolkata – 700074
- **Research Scholar** (July 2013 – September 2018, 5 years 2 months)
Dept. of Aerospace Engineering & Applied Mechanics, I.I.E.S.T., Shibpur
- **Lecturer and Officer in charge** (July 2010 – July 2011, 1 year 1 month)
Santiniketan Institute of Polytechnic, Bolpur, W. B.
- **Graduate Engineer Trainee**, (August 2009 – June 2010, 1 year 1 month)
Sova Ispat Ltd
- **Management Trainee**, July 2008 – July 2009 (1 year)
Powermax India Pvt. Ltd.

FIELDS OF RESEARCH INTEREST

Computational Fluid Dynamics, Numerical simulations, Heat & Mass transfer, Turbulent flow through complex geometries, Renewable energy, Thermal Engineering.

PUBLICATIONS

- International & National journals: 25
- International & National conference proceedings: 34
- Citations: 670+, H-index – 13; i10-index – 16
- Google Scholar: https://scholar.google.com/citations?user=_JQEJPAAAAAJ&hl=en

PATENTS

Design patent: -

- Stirrer for Reinforcement mixing in Stir Casting, Patent no: 143853, Design no: 388388-001, 15/06/2023.
- Compression Testing machine, Patent no: 135147, Design no: 369992-001, 27/08/2022.
- Multiple Die Manufacturing Unit, Patent no: 126024, Design no: 370740-001, 12/09/2022.

PROJECT/ CONSULTANCY

- “Development of three-dimensional numerical models to investigate the enhancement of heat transfer due to annular jet impingement on moving surface”; Principal Investigator; Adamas University R & D SEED fund: 2022- 2023; 2 years. Sanctioned Grant – Rs. 2,00,000/- (Completed)
- “Development of silencer for reduction of noise due to flow of blast furnace gases to flare stack”; Co-Investigator; Danieli Corus: 2023-2024; 3 months, Sanctioned Grant – Rs. 60,000/- (Completed)
- “Numerical study and analyses on enhancement of heat transfer due to annular jet impingement over moving surface for industrial applications.” ANRE PM Early Career Research Grant, 2024. 3 years, Rs – 60 Laks, (Submitted)

RESEARCH COLLABORATION

- IIT Kharagpur, IIT Kanpur, MNIT Allahabad, Jadavpur University, I.I.E.S.T. Shibpur
- SRM University-Chennai, BITS Pilani, Vel Tech-Chennai, VIT-Bhopal, SVKM'S N. M. I. M. S., Shirpur, Sikkim Manipal University, Pandit Deendayal Energy University
- Institute of Information Science and Technologies, National Research Council, Pisa, Italy,
- ENSTA Paris, Institut Polytechnique de Paris, France.

RESEARCH GUIDANCE

- PhD: 2 (ongoing)
- Masters: 2 (completed), 1 (ongoing)
- UG: 8 (completed), 2 (ongoing)

EDITORIAL ACTIVITIES

- **Associate Editor:** REST Journal on Emerging Trends in Modelling and Manufacturing
- **Board member of Reviewing Editors:** DISCOVERY [ISSN No: 2278-5469]
- **Reviewer of International Journals:** Chemical Engineering Science; Cogent Engineering; Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering; International Journal of Technology; Journal of The Institution of Engineers (India): Series C; Journal of the Brazilian Society of Mechanical Sciences and Engineering; Journal of Mechanical Science and Technology; Journal of Fluids Engineering (ASME); Renewable Energy; Thermal Science.
- **Reviewer of International Conferences:** ICEMEM- 2015; ICMRE 2017; The 16th International Heat Transfer Conference 2018; ICESD 2020; ICAMEI 2021; FMFP 2021

AFFILIATIONS

- Associate Member of the Institution of Engineers, India (IEI, Kolkata)

EDUCATION

- **PhD in Engineering: September 2018.**

Dept. of Aerospace Engineering & Applied Mechanics

Indian Institute of Engineering Science and Technology, Shibpur - India

Dissertation: "Study of flow characteristics for single phase flow through 90° pipe bends under high Reynolds number conditions"

Advisor: Dr. Nityananda Nandi

- **M. E. (Master of Engineering): 2013 (67.5 %)**

School of Water Resource Engineering, Jadavpur University, Kolkata – India;

Specialization in Water Resources and Hydraulic Engineering.

Thesis: "Design and analysis of 0.127-meter (5") parshall flume and long - throat flume" Advisor:

Prof (Dr.) Asis Mazumder, Dr. Rajib Das, Dr. Subhasish Das

- **B. Tech. (Bachelor of Technology): 2008 (7.14 DGPA)**

Dept. of Mechanical Engineering, Birbhum Institute of Engineering and Technology,

West Bengal University of Technology – India

Major projects: (a) Design of a Battery driven Electric Vehicle,

(b) Design and performance analysis of a Parabolic Solar Cooker

SCHOLARSHIP

Doctoral Fellowship: TEQIP II, August 2013 – May 2015; MHRD India, June 2015 – July 2018

Post-Doctoral Fellowship: RUSA-2.0, MHRD India, March 2019 – March 2020.

EVENT PARTICIPATED/ ORGANIZED

- Received best paper award in 2nd ICFTES 2024, India.
- Received best paper award in 7th ICO 2023, Cambodia.

- Organising Secretary, International Student Symposium, STAIR 2023, Adamas University, Kolkata, 2023.
- Convenor, 2 Days Intensive Short-Term Course on Basic of 3D Printing Technology, Adamas University, Kolkata, 2022.
- Convenor, International Lecture Series on Latest Trends in Mechanical Engineering, Adamas University, Kolkata, 2022.
- Convenor, Get Geared with Robotics & 3D Printing, Adamas University, Kolkata, 2022.
- Convenor, Design and Fabrication of Service Robotics, Adamas University, Kolkata, 2022.
- Convenor, Design Week in association with MELT (Industry Partner), Adamas University, Kolkata, 2022.
- Resource Person, Hands-on Training on 3D Modelling and Simulation, Adamas University, Kolkata, 2022.
- Participant and donor, Blood Donation Camp 2022, Adamas University, Kolkata.
- Technical session chaired in FMFP 2021.
- Received best paper award in FMFP 2021.
- Lecture delivered in FDP course on Numerical Methods in Engineering Applications, scheduled from March 01, 2020 to March 03, 2020 at JIST, Jorhat, Assam.
- Technical support in the establishment of web-based plagiarism checking platform (iThenticate) of Mechanical Engineering Department, Jadavpur University, 2019.
- Worked as a member of secretarial support team of international conference (ICESD 2020) held at Jadavpur University, 14 - 15 February 2020

SUBJECT EXPERT:

- Fluid Mechanics; Fluid Machinery; Engineering Thermodynamics; Applied Thermodynamics; Heat Transfer Engineering; Internal Combustion Engines; Power Plant Engineering; Renewable Energy; Computational Fluid Dynamics; Numerical Simulation; Turbulent Flow; Aerodynamics.

ADMINISTRATIVE SUPPORT

- PhD Convenor, School of Engineering & Technology, Adamas University, Kolkata.
- Departmental NAAC 1 and 3 coordinators, Adamas University, Kolkata.
- Exam cell member and Departmental representative, Adamas University, Kolkata.
- Departmental representative, Purchase and requisition, Adamas University, Kolkata.
- 2nd year and 3rd year student mentor, ME-SOET, Adamas University, Kolkata.

LANGUAGES

- Bengali, English, Hindi

HOBBIES

- *Photography*: Obtained 1st prize in Photography competition held in Jadavpur University.
- *Bike riding & backpack travelling*.

REFERENCES

Dr. Himadri Chattopadhyay, Professor
 Dept. of Mechanical Engineering
 Jadavpur University, Kolkata – 700032, India
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Dr. Nityananda Nandi, Associate Professor
 Dept. of Aerospace Engineering and Applied
 Mechanics: Indian institute of Engineering Science
 and Technology, Shibpur, Howrah – 711103, India
 Email: nityananda_nandi@yahoo.co.in;
 Ph. No. : 9830354744

Dr. Amit Roy Chowdhury, Professor
 Dept. of Aerospace Engineering and Applied Mechanics
 Indian institute of Engineering Science and Technology,
 Shibpur, Howrah - 711103, India
 Email: arc_98@rediffmail.com; Ph. No. : 9830465710

Dr. Asis Mazumder, Director and Professor
 School of Water Recourses Engineering
 Jadavpur University, Kolkata - 700032, India
 Email: asismazumdar@yahoo.com;
 Ph. No. : 9433069631

PEER-REVIEWED JOURNAL ARTICLES

- [1] Das Karmakar, S., Dutta, P. and Chattopadhyay, H., 2024. Free convection in a differentially heated square cavity filled with low-Prandtl-number materials: Numerical studies using transition shear stress transport model. *Physics of Fluids*, 36(3).
- [2] Mujibur Rahman, S., Chattopadhyay, H. and Dutta, P., 2024. Computational fluid dynamics analysis on performance assessment of Darrieus-type vertical axis wind turbine using NACA0016, NACA0019 and NACA0020 airfoil sections. *International Journal of Ambient Energy*, 45(1), p.2315489.
- [3] Dutta, P., Chattopadhyay, H. and Bhattacharyya, S., 2024. Numerical Investigations on Turbulent Transport Phenomena over a Moving Surface Due to Impinging Annular Jets. *Heat Transfer Engineering*, pp.1-17.
- [4] Bhatia, M., Das, N., Dutta, P. and Chattopadhyay, H., 2023. Numerical analysis on the seakeeping performances of a full-scale container ship hull using strip theory. *Physics of Fluids*, 35(11).
- [5] Bhattacharyay, S., Mitra, K., Dutta, P., Chakraborty, S. and Chattopadhyay, H., 2023. Enhancing Heat Transfer Efficiency: A Numerical Investigation of Shell and Tube Heat Exchanger with Variable Angular Baffles for Minimizing Overall Fuel Consumption. *Journal of Mines, Metals & Fuels*, 71(11).
- [6] Dutta, P., Chattopadhyay, H. and Bhattacharyya, S., 2023. Numerical investigations on Turbulent Transport Phenomena Over a Moving Surface Due to Impinging Annular Jets, *Heat transfer engineering*, <https://doi.org/10.1115/1.4054579>.
- [7] Nandi, P., Amin, P., Chakraborty, S., Chakraborty, S., Dutta, P. and Chattopadhyay, H., 2023, June. Thermal performance analysis of a solar air heater with different baffle configuration. In *AIP Conference Proceedings (Vol. 2786, No. 1)*. AIP Publishing.
- [8] Dutta, P. and Chattopadhyay, H., 2022. Transport phenomena due to annular jets impinging on a hot moving surface, *ASME Journal of Heat Transfer*, 144. 8. <https://doi.org/10.1115/1.4054579>.
- [9] Dutta, P., Chattopadhyay, H. and Nandi, N., 2022. Numerical study on turbulent flow characteristics in 90° pipe bend, *ASME-Journal of Fluids Engineering*, 2022, 144.
- [10] Dutta, P., Chattopadhyay, H. and Bhattacharyya, S., 2021, December. Flow and Heat Transfer Over a Moving Surface Due to Impinging Annular Jets. In *Conference on Fluid Mechanics and Fluid Power (pp. 303-308)*. Singapore: Springer Nature Singapore.
- [11] N., G.; Jain, P.; Choudhury, A.; Dutta, P.; Kalita, K.; Barsocchi, P. 2021. Random Forest Regression-Based Machine Learning Model for Accurate Estimation of Fluid Flow in Curved Pipes. *Processes* 2021, 9, 2095. <https://doi.org/10.3390/pr9112095>.
- [12] Dutta, P., and Nandi, N. 2021. Numerical analysis on the development of vortex structure in 90 degree pipe bend. *Progress in Computational Fluid Dynamics, an International Journal*. © Inder Science. 21(5), pp. 261-273.
- [13] Dutta, P. and Chattopadhyay, H. 2021. Computational analysis of heat transfer due to turbulent annular jet impingement. In *IOP Conference Series: Materials Science and Engineering*. 1080(1), pp. 012031). IOP Publishing.
- [14] Dutta, P. and Chattopadhyay, H. 2020. Numerical analysis of transport phenomena under turbulent annular impinging jet. *Computational Thermal Sciences*. 13(1), pp. 1–19.
- [15] Narayanan, G., Dutta, P., Ramachandran, M., Bhoi, A, K., and K Kalita. 2020. Robust metamodels for accurate quantitative estimation of turbulent flow in pipe bends. *Engineering with Computers*, 36, pp. 1041–1058.
- [16] Narayanan, G., Joshi, M., Dutta, P. and Kalita, K. 2020, "PSO-tuned support vector machine metamodels for assessment of turbulent flows in pipe bends", *Engineering Computations*, 37(3), pp. 981-1001.
- [17] Dutta, P., and Nandi, N. 2019. Numerical study on turbulent separation reattachment flow in pipe bends with different small curvature ratio. *Journal of The Institution of Engineers (India): Series C*. 100 (6), pp. 995-1004.
- [18] Das, R., Nayek, M., Das, S., Dutta, P. and Mazumdar, A., 2017. Design and analysis of 0.127 m (5 ") Cutthroat flume. *Ain Shams Engineering Journal*. 8(30), pp. 295-303.

- [19] Nayek, M., Das, R., Das, S., Dutta, P. and Mazumdar, A., 2016. Open Channel Discharge Measurement Using 0.127 Metre (5 Inch) Long-Throat Flume. *Asian Journal of Water, Environment and Pollution*, 13(2), pp.29-38.
- [20] Dutta, P., Saha, S.K., Nandi, N. and Pal, N., 2016. Numerical study on flow separation in 90° pipe bend under high Reynolds number by k-ε modelling. *Engineering Science and Technology, an International Journal*, 19(2), pp.904-910.
- [21] Dutta, P., and Nandi, N., 2015. Effect of Reynolds Number and Curvature Ratio on Single Phase Turbulent Flow in Pipe Bends. *Mechanics and Mechanical Engineering*. 19(1), pp.5-16.
- [22] Dutta, P., and Nandi, N., 2015. Study on pressure drop characteristics of single-phase turbulent flow in pipe bend for high Reynolds number. *ARPN Journal of Engineering and Applied Sciences*. 10(5), pp.2221-2226.
- [23] Dutta, P., and Nandi, N., 2015. Computational study of turbulent flow in pipe bends. *International Journal of Applied Engineering Research*. 10(11), pp.10128-10133.
- [24] Dutta, P., and Nandi, N., 2016. Effect of bend curvature on velocity & pressure distribution from straight to a 90° pipe bend - A Numerical Study. *REST Journal on Emerging trends in Modelling and Manufacturing*. 2(4), pp.103-108.
- [25] Das, S., Nayek, M., Das, S., Dutta, P., Mazumdar, A., 2014. Impact on water quality in Piyali river, Sundarbans due to saline water intrusion. *Indian Journal of Environmental Protection*. 34(12), pp.1010-1019.

CONFERENCE PUBLICATION

- [1] Dutta, P., Chakraborty, S., Murmu, S. C., Chattopadhyay, H. 2024. COMPARATIVE NUMERICAL STUDY OF HEAT TRANSFER ENHANCEMENT VIA CIRCULAR, ANNULAR, AND VECTORED ANNULAR JET IMPINGEMENT CONFIGURATION, 7TH International Conference on Advances in Mechanical Engineering, 7th ICAME-2024, 24th-26th December, 2024 at Yildiz Technical University, Istanbul. Turkey.
- [2] Chakraborty, S., Sanjeev Manjhi, S. K., Sarvoththama Jothi, T. J., Dutta, P., Chattopadhyay, H.; Computational investigation on heat transfer enhancement under vectored annular jet; 2nd International Conference on Fluid, Thermal and Energy Systems, June 6-8, 2024, NIT Calicut, Kerala, India.
- [3] Adhikari, A., Basak, S., Chakraborty, S., Dutta, P., Chattopadhyay, H.; Heat transfer augmentation due to vectored annular jet impingement – a numerical study; 2nd International Conference on Fluid, Thermal and Energy Systems, June 6-8, 2024, NIT Calicut, Kerala, India.
- [4] Chatterjee, A., Chakraborty, S., Zubair, M., Dutta, P., Chattopadhyay, H.; A short review on annular jet heat impinging transfer; 2nd International Conference on Fluid, Thermal and Energy Systems, June 6-8, 2024, NIT Calicut, Kerala, India.
- [5] Sarkar, P. K., Chattopadhyay, H., Dutta, P., 2024. Enhancing Photovoltaic Cell Efficiency through a U-shaped Cooling Channel: A Numerical Study; 2nd International Conference on Mechanical Engineering, January 5 & 6, 2024; Department of Mechanical Engineering, Jadavpur University, Kolkata, India.
- [6] Laha, S., Mondal, N., Dash, S, K., Dutta, P., 2024. FLOW SEPARATION ANALYSIS OF SINGLE-PHASE TURBULENT FLOW THROUGH BEND PIPE: A COMPUTATIONAL APPROACH; 2nd International Conference on Mechanical Engineering, January 5 & 6, 2024; Department of Mechanical Engineering, Jadavpur University, Kolkata, India.
- [7] Karmakar, S. D., Dutta, P., Chattopadhyay. 2023. Natural convection in a square cavity filled with low Pr materials: studies using transition SST model, 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference – IHMTC 2023, December 14-17, 2023, Indian Institute of Technology Patna, India.
- [8] Dutta, P., Chakraborty, S., Murmu, S. C., Chattopadhyay, H. 2023. Numerical study on heat transfer augmentation of vectored annular jet in laminar flow condition, 7th International Conference on Intelligent Computing & Optimization, 7th ICO-2023, 26-27th October, 2023 at Baitong Hotel Resort, Phnom Penh, Cambodia.

- [9] Dutta, P., Chakraborty, S., Murmu, S. C., Chattopadhyay, H. 2023. Comparative numerical study on heat transfer enhancement due to jet impingement over a heated surface, International Conference on Integrative Science and Engineering (ICISE) 2023., Swami Vivekananda University, Kolkata., 28-30 September, 2023.
- [10] Kumar. V., Nandi. N., Kumar. R. and Dutta. P., NUMERICAL STUDY ON DETECTION OF CAVITATION IN CENTRIFUGAL PUMP, International Conference on Integrative Science and Engineering (ICISE) 2023., Swami Vivekananda University, Kolkata., 28-30 September, 2023.
- [11] Bhattacharyay, S., Mitra, K., Dutta, P., Chakraborty, S., Chattopadhyay, H. 2023, Heat transfer analysis of shell and tube heat exchanger with different angular baffle, International Conference on Engineering Design and Computing (ICEDC)-2023, Swami Vivekananda University, Kolkata., 28-29 January, 2023.
- [12] Nandi, P., Amin, P., Chakraborty, S., Chakraborty, S., Dutta P. and Chattopadhyay H., Thermal Performance Analysis of a Solar Air Heater with Different Baffle Configuration, 3rd International Conference on Mechanical Materials and Renewable Energy (ICMMRE - 2022), Department of Mechanical Engineering, Sikkim Manipal Institute of Technology, Majhitar, Sikkim, 11th – 12th Feb, 2022.
- [13] Dutta, P. Chattopadhyay, H. and Bhattachryya, S. Flow and Heat Transfer Over a Moving Surface Due to Impinging Annular Jets, 48th National Conference on Fluid Mechanics and Fluid Power (FMFP-2021), ITS Pilani, Pilani Campus, RJ, India. 2021.
- [14] Dutta, P. and Chattopadhyay, H. Computational analysis of heat transfer due to turbulent annular jet impingement. 3rd International Conference on Advances in Mechanical Engineering and its Interdisciplinary Areas (ICAMEI-2021), 5 – 7 January 2021, College of Engineering and Management, Kolaghat, West Bengal (INDIA).
- [15] Dutta, P. and Nandi, N. Effect of Reynolds number on turbulent flow characteristics in a 90° pipe bend – A numerical study. International Conference on Energy and Sustainable Development 2020 (ICESD 2020), 14 – 15 February 2020, Jadavpur University, Kolkata, India.
- [16] Rahman, S. M., Chattopadhyay, H., and Dutta, P., Two-Dimensional Computational Fluid Dynamics Study of H-type Darrieus Vertical Axis Wind Turbine with NACA0019 Airfoil. International Conference on Advancements in Mechanical Engineering (ICAME 2020), 16 – 18, January 2020, Aliah University, Kolkata, India.
- [17] Dutta, P. and Chattopadhyay, H. Numerical simulation of heat transfer due to array of laminar annular jets impinging on hot moving surface. 5th International Conference on Advances in Mechanical Engineering (ICAME 2019), 17-19 December 2019, Istanbul.
- [18] Dutta, P. and Chattopadhyay, H. Turbulent Transport Phenomena under Impinging Annular Jet. International Mechanical Engineering Congress & Exposition (IMECE 2019), 11-14 November 2019, USA.
- [19] Rahman, S. M., Dutta, P., and Chattopadhyay, H. ROLE OF TIME STEP SETTING ON THE CFD RESULT OF DARRIEUS TYPE VERTICAL AXIS WIND TURBINE, 5th International Conference on Advances in Mechanical Engineering (ICAME 2019), 17-19 December 2019, Istanbul.
- [20] Dutta, P. and Nandi, N. Numerical analysis of the development of Dean vortices inside 90° pipe bend in turbulent flow condition. RSRI Conference on Recent trends Science and Engineering (RSRI CRSE 2018), Goa, India 2018.
- [21] Mazumdar, A., Dutta, P., Nayek, M., Das, S., and Das, R. Calibration and Discharge Measurement Using 0.127 Metre (5") Parshall Flume, 37th IAHR World Congress 2017, Kuala Lumpur, Malaysia.
- [22] Dutta, P. and Nandi, N. Computational study on the effect of bend curvature on velocity distribution from straight to a 90° pipe bend using $k - \epsilon$ turbulence model. International Conference on Engineering Problems and Application of Mathematics 2016 (EPAM – 2016), 11-12 June, NIT Agartala.
- [23] Dutta, P. and Nandi, N. On some aspects of change in static pressure distribution from straight to curved pipe due to effect of bend curvature by $k - \epsilon$ turbulence modelling. Proceedings of 61st congress of ISTAM 2016, an international conference, December, 11-14, 2016, VITU-Vellore.


- [24] Saha, S. K., Dutta, P., and Nandi, N. Study on flow separation for single phase flow through 90° pipe bend. Proceedings of International Conference on Current Innovation in Engineering & Technology (ICETER 2015), pp 234-243, October 11, 2015, VRS & YRN college of engineering and technology, Chirala, AP.
- [25] Dutta, P., Saha, S. K., and Nandi, N. Computational study of turbulent flow in pipe bends. International conference emerging trends in manufacturing, engines and modeling (ICEMEM-2015), NMIMS University, Maharashtra, February 2015.
- [26] Dutta, P., Saha, S. K., and Nandi, N. Study on Turbulent Flow Characteristics in Pipe Bends. Proceedings of 2nd International Conference on Advances in Mechanical Engineering and its Interdisciplinary Areas (ICAMEI 2015), College of Engineering and Management, Kolaghat, WB, 2-4 January, 2015, Excel India Publication (ISBN: 978-93- 84869-03-8).pp 58-64.
- [27] Santra, A., Dutta, P., and Nandi, N. Numerical Modelling & Simulation of Cavitation in a Convergent-Divergent Nozzle. Proceedings of 2nd International Conference on Advances in Mechanical Engineering and its Interdisciplinary Areas, (ICAMEI- 2015), College of Engineering and Management, Kolaghat, WB, December 2014, pp 144-150.
- [28] Banerjee, S., Dutta, P. and Nandi N. Numerical Study on Turbulent Swirling Flow Characteristics in a Cylinder. Proceedings of 2nd International Conference on Advances in Mechanical Engineering and its Interdisciplinary Areas, (ICAMEI-2015), College of Engineering and Management, Kolaghat, WB, December 2014, Excel India Publication (ISBN: 978-93-84869-03-8), pp 160- 166.
- [29] Dutta, P., Saha, S. K., and Nandi, N. Numerical Study of curvature effect on turbulent flow in 90° pipe bend. Proceedings of Sixth International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2014), December 29-31, 2014, IIT Kharagpur.
- [30] Dutta, P., Banerjee, S., Santra, A., and Nandi N. Numerical study on pressure drop characteristics of turbulent flow in pipe bend. Aspects of Mechanical Engineering and Technology 2014, NERIST, Arunachal Pradesh, Vol 1, pp 381-386.
- [31] Saha, S. K, Dutta, P. and Nandi, N. Study of pressure contours in radial direction for different bend angles. Proceedings of 58th Congress of ISTAM 2013, an international conference, held at BESU Shibpur; Howrah, W.B. December, 2013.
- [32] Dutta, P., Saha, S. K., and Nandi, N. CFD analysis of single-phase flow through 90° bends. Proceedings of 58th Congress of ISTAM 2013, an international conference, held at BESU, Shibpur; Howrah, W.B. December, 2013.
- [33] Dutta, P., Saha, S. K., and Nandi, N. Numerical Study for Pressure and Velocity Distribution across the Diameter of Pipe Bends. Proceedings of the National conference on Recent Advancements in Mechanical Engineering 2013, held at NERIST, Itanagar. Arunachal Pradesh 2013.
- [34] Saha, S. K. Dutta, P. and Nandi, N. CFD analysis of Total Pressure in Radial Direction of 90° Bend, Proceedings of the National conference on Recent advancements in Mechanical Engineering 2013, held at NERIST, Itanagar. Arunachal Pradesh 2013.

DECLARATION

I, do hereby declare that the information mentioned above is true to the best of my knowledge.

Date:

Place:


(Dr. Prasun Dutta)