Mr. S.V.B.VIVEKANAND

Designation	**:**	Assistant Professor Dept. of Mech.Engg.
Qualification	**:**	B.Tech.,M.Tech, (Ph.D.)
Experience	**:**	1 Year
Specialization	**:**	Mechanical Engineering (Thermal Engineering)
Date of Joining	**:**	26-06-2019
Ph. No.	**:**	+91–8297655955, +91-8919285442
E Mail Id	**:**	svbvivekanand@cmrcet.org nandu.as.smarty@gmail.com
Scopus ID	**:**	57189501871 Link
Researcher ID	**:**	**U-7026-2019** Link
Orcid Id	**:**	**0000-0001-6028-2060 Link**

Academic Qualifications:

- **Doctor of Philosophy (Ph.D.) in Mechanical-Thermal Engineering (Pursuing)**
  National Institute of Technology, Warangal **(Submitted thesis on 3rd June-2019)**.
  Project Title: Fluid flow and heat transfer studies of two-phase flows inside microchannels.

- **Master of Technology (M.Tech.) in Mechanical-Thermal Engineering**
  National Institute of Technology, Warangal, 2013.
  Project Title: Heat transfer analysis in a helically coiled heat exchanger.
  Percentage/CGPA: 7.56/10 **(First division)**

- **Bachelor of Engineering (B.E.) in Mechanical Engineering**
  Rungta College of Engineering and Technology, Bhilai, 2011
  Project Title: Performance and analysis of shell and tube heat exchanger.
  Percentage: 8.35/10 **(First division with Honours)**

Areas of Interest

- Heat and Mass Transfer
- Micro fluidics
- Computational Fluid Dynamics
- Incompressible and Compressible Flows

Work Experience: 1 Year Teaching Experience

- Presently Working as Assistant Professor in Department of Mechanical Engineering in C M R College of Engineering & Technology, Hyderabad since 26th June 2019.

- Worked as Assistant Professor in Mechanical Engineering in Kalinga Institute of Industrial Technology University, Bhubaneshwar, Odhisa from 17th June 2013 to 14th June 2014.

Achievements/Publications/Workshops/Seminar/Guest Lectures

Journal Publications/Conference Presentations:

International Journal s: 06

1. S.V.B.Vivekanand and V.R.K.Raju, *"Effect of wall temperature modulation on the heat transfer characteristics of droplet-train flow inside a rectangular microchanne"* Chinese Journal of Chemical Engineering, 2019 (Accepted, SCI , IF-1.712, Elsevier). Link

2. S.V.B.Vivekanand and V.R.K.Raju, *"Effect of wall contact angle and carrier phase velocity on the flow physics of gas–liquid Taylor flows inside microchannels"* Chemical Papers, 2018 (Accepted, SCI , IF-0.963, Springer, DOI:10.1007/s11696-018-0668-3). Link

3. S.V.B.Vivekanand and V.R.K.Raju, *"Numerical study of the hydrodynamics and heat transfer characteristics of liquid–liquid Taylor flow in microchannel"*, Heat Transfer-Asian Research, 47:794–805, 2018 (Published, ESCI and Scopus,Wiley, DOI: 10.1002/htj.21341). Link

4. S.V.B.Vivekanand and V.R.K.Raju, *"Numerical study on evaporation heat transfer characteristics of water in inclined microchannels with varying inlet vapor quality"* World Journal of Engineering, 2018 (Accepted, ESCI and Scopus,Emerald). Link

5. S.V.B.Vivekanand and V.R.K.Raju, *"Simulation of evaporation heat transfer in a rectangular microchannel"* Procedia Engineering, 127: 309-316, 2015 (Published, Scopus, Elsevier, DOI : 10.1016/j.proeng.2015.11.374). Link

Conference Presentations:

International Conferences: 02

1. S.V.B.Vivekanand, S Chandrasekhar, Raghavendra Gupta, V.R.K.Raju, *"Effect of homogeneous void fraction, slug anddroplet lengths, and mixture velocity on the heat transfer characteristics of a liquid-liquid Taylor flow inside a circular microcapillary"* 2nd International Conference on New Frontiers in Chemical, Energy and Environmental Engineering(INCEEE 2019) 15-16 Feb, 2019, NIT Warangal, India.

2. N.Manoj Kumar, S.V.B.Vivekanand, V.R.K.Raju, *"Stability of two-fluid stratified flow in a concentric cylindrical annulus with inner cylinder rotation"*, International conference on Thermal Analysis and Energy ststems (ICTAES 2018) at Hindustan College of engineering and Technology, Coimbatore, Tamilnadu, India.

National Conferences: 01

1. S.V.B.Vivekanand and V.R.K.Raju, *"Influence of Capillary number on the droplet shape, film thickness, and pressuredrop in a liquid-liquid Taylor flow inside a microcapillary"* , Proceedings of the National Conference on Computational Modeling of Fluid Dynamics Problems (CMFDP-2019) NIT Warangal, India – Jan 18-20, 2019.

Academic Projects

1. Course name: Doctor of Philosophy (Mechanical Engineering)

Project Name:	Fluid flow and heat transfer studies of two-phase flow inside microchannels.
Duration:	4 years and seven months
Environment:	Computational Fluid Dynamics (ANSYS Fluent)
Team Size:	1
Project Description:	This project addressed few problems in the area of two-phase flow and heat transfer of fluids inside microchannel. The flow physics and heat transfer characteristics of two-phase flows with and without phase change have been studied numerically. Gas-liquid, and liquid-liquid Taylors flows represent the studies where phase change does not take place, whereas, flow boiling of water inside microchannel was also studied in which the phase change takes place. The involvement of latent heat in evaporative cooling gives higher heat transfer rates as compared to single phase flows. A wide range of parameters affecting the two-phase fluid flow and heat transfer behavior have been identified. User-defined C-codes were written to interact with the Fluent modules and implement necessary boundary conditions. The outcome of this research could benefit the researchers and manufacturers dealing with the study and design of micro heat transfer equipments.

2. Course name: Master of Technology (Thermal Engineering)

Project Name:	Heat transfer analysis in a helically coiled heat exchanger.
Duration:	I year
Environment:	Computational Fluid Dynamics (ANSYS Fluent)
Team Size:	1
Project Description:	This project addressed the characteristics of a helically coiled heat exchanger by identifying the influence of actual properties of fluid rather than constant values. In addition, the effect of different boundary condition on the heat transfer behavior inside the heat exchanger has also been discussed. The modeling of conjugate heat transfer along with temperature dependent fluid properties was explained in an elaborative manner. User-defined C- codes were written for providing the temperature-dependent fluid properties to the ANSYS Fluent. The findings of this research could give a better idea in the the selection of fluid properties for the heat transfer using helically coiled heat exchanger.

3. Course name: Bachelor of Engineering (Mechanical Engineering)

Project Name:	Heat transfer analysis in a helically coiled heat exchanger.
Duration:	6 months
Environment:	Experimental
Team Size:	1
Project Description:	This project addressed the heat transfer characteristics of a shell and tube heat exchanger in which water and ethylene glycol were used as the coolants. The heat transfer analysis was done in different configurations of fluid flow viz. parallel, counter, and cross flow arrangements. The significance of each of these configurations was highlighted experimentally in the form of effectiveness of the exchanger.

Achievements/Extra-Curricular Activities

- GATE-2011 (Mechanical Engineering) AIR-1418.
- First Prize in Paper presentation awards at Undergraduate level.
- Executive Member, National Institute of Technology, Warangal Alumni, June 2013- till date.
- Delivered presentations on Computational Fluid Dynamics problems using ANSYS Fluent to fresh Research Scholars and Post Graduate students in 2014 – 2018.