

VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

Name: **Dr. BACHINA HARISH BABU**



Designation: Assistant Professor

Department: Automobile Engineering

Mail I'd: harishbabu_b@vnrvjiet.in bachina.harish@gmail.com

Google scholar link: <https://scholar.google.com/citations?hl=en&user=Y8WulAcAAAAJ>

Orcid ID: <https://orcid.org/0000-0002-8520-842X>

Experience (in years): Teaching: 11 years Research: Others (if any, specify):

1. Educational / Technical qualifications:

| S.No | Level (UG / PG / Ph.D) | Year of passing | Specialization |
|------|------------------------|-----------------|------------------------|
| 1 | Diploma | 2007 | Automobile Engineering |
| 2 | B.Tech | 2010 | Automobile Engineering |
| 3 | MS | 2012 | Automotive Engineering |
| 4 | Ph.D | 2022 | Mechanical Engineering |

Academic Achievements and Roles:

- Established labs for the automobile engineering undergraduate stream At Vignan's University
- Received star performer award 2017 from VFSTRU.
- **Dy.HoD Applied Engineering (Automobile & Agriculture Engineering) – VFSTRU.**
- **Assistant Dean - Dean - Student Affairs, Alumni Linkages, Gender Sensitization and Discipline - VFSTRU**
- **BOE Member (VFSTRU)**
 1. Supervise the office staff of COE's office and manage the assistants and casual laborers posted to assist the office works, involving physical exertion as and when needed.
 2. Preparation of Dept. examination schedules and examination calendar, in consultation with the Controller of Examinations.
 3. Communications at various levels of examination planning, preparation, execution, valuation, tabulation and mark list printing and distribution.
 4. Preparation and printing of answer booklets for various dept. examinations.
 5. Make sure that the question papers are ready before the examinations are scheduled
 6. Helping COE in all his/her activities (finding question paper setters, examiners, actual organization and implementation of examination system)
 7. Make sure that the forms relating to Dept. examinations are ready in time (Seating Plan, hall tickets etc.)

8. All other tasks required for the conduct of evaluation process.
 9. Faculty member from the department shall give instructions to the Staff members of the departments regarding the following activities
 - Preparation of the question papers
 - Fortnight attendance
 - Marks submission
 - Marks uploading in University and College Portal.
- **BOA Member:** (VFSTRU)
 1. Arranging teaching requirements for successful completion of academic programs of the Department and supervising the same periodically.
 2. Facilitating Controller of Examinations for making arrangements for conducting examinations, as per the norms of University.
 3. Recommending the Governing Body for providing the necessary infrastructural, human resources and other requirements for progressing towards achievement of the vision of the college.
 4. Encouraging collaboration with other academic institutes and industry.
 5. Ensuring discipline among students.
 6. Facilitating and supervising the co-curricular activities of the students.
 7. Inspiring students to be creative and innovative and recommending management to encourage them with financial support towards the same.
 8. Arranging BOS committees from amongst the college teaching faculty and experts from outside, in order to sort out and advise on specific academic issues and consequently acting on the recommendations of such committees after due consideration.
 9. Planning and executing the overall academic growth of the Department by making recommendations to the Governing Body, wherever necessary.

Research initiatives:

- Fabricated Electric vehicle called Viranch at Vignan's University for Internal transportation purpose.

2. Teaching and Learning:

2.1. Teaching Interests:

2.2. Novel Teaching & Learning Techniques adopted:

- WIT & WIL
- Power Point Presentation,
- Learning by Doing.
- Involvement in curriculum updating
- VNR Lab Protocol
- NPTEL videos,

2.3. Involvement in curriculum updating / Design:

- Arranging BOS committees from amongst the college teaching faculty and experts from outside, in order to sort out and advise on specific academic issues and consequently acting on the recommendations of such committees after due consideration.

- Planning and executing the overall academic growth of the Department by making recommendations to the Governing Body, wherever necessary.

3. Co-curricular and Extra-Curricular Activities

- 3.1. Interests and Hobbies:
- 3.2. CCA/ECA Organized:
- 3.3. CCA/ECA participated:
- 3.4. Counseling and Mentoring Activity:
- 3.5. Committees involved in:
 - Department level: UG - Admissions
 - Institute Level: NAAC, NBA & NIRF

4. Conference / Workshop / Seminar / Guest Lectures :

4.1 Conducted: 5

4.2 Attended: 10

5. Academic Contribution and Research & Consultancy:

5.1. Invited Lectures: 2

5.2. Articles / Chapters published in Books: 2

5.3. Books published as single author or as editor:

5.4. Projects Guided :

a) UG : 20 b) PG : 3

5.5. Research Interests : Electric & Hybrid vehicles, Manufacturing Micro Machining, Tool condition monitoring

5.6. Ph.D students :

a) Enrolled : b) Submitted : c) Awarded :

5.7. Papers published in reviewed journals :

| S. No | Title of the Paper | Journal Name Vol.No. PP | ISBN/ISSN No. | Impact Factor/ Citation Index | National/ Internati onal |
|-------|--|--|------------------|--|--------------------------------|
| 1 | Improving the Mechanical and Corrosion Behaviour of Friction Surfaced Aluminium Deposition by Forced Convection Nitrogen Shielding Technique | J. Inst. Eng. India Ser. D | 2250-2130 | 0.527 | Internati onal |
| 2 | Impact of metal mould vibration on the mechanical properties of aluminium 6082 t6 alloy | Advances in Materials and Processing | 2374-068X | 2.37 | Internati onal |

| | | Technologies | | | |
|----|---|---|--------------------------------|------|------------------------------|
| 3 | Optimization of dead metal zone to reduce cutting forces in micro milling of Inconel 718 using RSM | Materials Today: Proceedings | 2214-7853 | 1 | International |
| 4 | The consequences of hot deformation and control cooling on the microstructure of medium carbon microalloyed steel _ 38MnSiVS5 grade | Materials Today: Proceedings | 2214-7853 | 1 | International |
| 5 | Hydroponics, Aeroponics, and Aquaponics Technologies in Modern Agricultural Cultivation | IGI Global- Trends, Paradigms, and Advances in Mechatronics Engineering | 10.4018/978-1-6684-5887-7.ch01 | 1 | International – Book chapter |
| 6 | Machine Learning Model for the Prediction of an EVehicle's Battery Life Cycle | Proceedings of the International Conference on Edge Computing and Applications (ICECAA 2022) | 978-1-6654-8231-8 | 1 | International |
| 7 | Fabrication And Testing Of Al7075 With Hard Ceramic Particles And Solid Lubricant Particles (Sic-Gr) Using Stir Casting Process | YMER :: VOLUME 21 : ISSUE 10 (Oct) - 2022 | 0044-0477 | 0.5 | International |
| 8 | Development Of Steering Control System For Autonomous Vehicle | YMER :: VOLUME 21 : ISSUE 11 (Nov) - 202251 | 0044-0477 | 0.5 | International |
| 9 | Solar-Based Mosquito Trap for Household Purposes | International Journal of Social Ecology and Sustainable Development (IJESD)(2022) 13:1,pages1-10, Scopus | 1947-8402 | 0.49 | International |
| 10 | Modeling and optimization of dead metal zone to reduce cutting forces in micro-milling of hardened AISI D2 steel. | Journal of the Brazilian Society of Mechanical Sciences and Engineering (2021) 43:142 (SCI-SPRINGER). Impact Factor 2.12. | 1806-3691 | 2.3 | International |
| 11 | Experimental Investigation on the Effect Due to Mould | International Journal of Surface | 2166-7225 | 1 | International |

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|----|--|--|------------|------|---------------|
| | Vibrations on Mechanical and Metallurgical Properties of Aluminum Alloy (A-1050) | Engineering and Interdisciplinary Materials Science Volume 9 • Issue 1 • January-June 2021- Scopus Indexed | | | |
| 12 | Environmental effects on the mechanical properties of E-glass and S-glass fiber epoxy composite ring specimens used in aircraft fuel pipes | INCAS BULLETIN, Volume 13, Issue 4/ 2021, pp. 17 – 24 (P) ISSN 2066-8201, (E) ISSN 2247-4528. Scopus Indexed. | 2066-8201 | 2.24 | International |
| 13 | Investigation on the lubricating behaviour of cashew nut shell liquid oil as a renewable and reliable petrochemical product | Materials Today: Proceedings 44 (2021) 3583– 3588Scopus Indexed. | 2214-7853. | 3.2 | International |
| 14 | Modeling yield and backscatter using satellite derived biophysical variables of rice crop based on Artificial Neural Networks | Journal of Agrometeorology 22 (1) : 41-47 (March 2020) – SCI -E | 0972-1665 | 1 | International |
| 15 | Study Of Tribological And Thermal Properties Of Engine Lubricant By Dispersion Of Aluminium Nano Additives | Revue des Composi tes et des Matériau x AvancésJournal o f Composite and Ad vanced Materials (RCMA)- Vol.30 No.2, April 2020, PP 103-107. ESCI & Scopus | 1169-7954 | 0.94 | International |
| 16 | Evaluation of VIC, ANN and Empirical Models for Estimating Daily Reference Evapotranspiration | Indian Journal of Ecology (2020) 47 Special Issue (11): 29-36 Scopus Indexed | 0304-5250 | 0.44 | International |
| 17 | Hydrological Appraisal of nariganipalli watershed (india)using spatial | Indian Journal of Ecology (2020) 47 (2): 281- | 0304-5250 | 0.44 | national |

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|----|--|---|-----------|------|---------------|
| | Information technology | 285Scopus Indexed | | | |
| 18 | Spatial Mapping of Rics crop Evapotranspiration in Godavari command area | Indian Journal of Ecology (2020) 47 (2): 361-364Scopus Indexed | 0304-5250 | 0.44 | National |
| 19 | Effect on the Mechanical Properties of Grey Cast Iron with Variation of Molybdenum and AS – Cast Alloying Elements | Universal Journal of Mechanical Engineering 8(6): 298-304, 2020 http://www.hrpub.org DOI: 10.13189/ujme.2020.080602 | 2332-3353 | 0.55 | International |
| 20 | Land Use Land Cover Change Detection Using Remote Sensing and Geographic Information System in Canal Command Area, Karnataka | Indian Journal of Ecology (2019) 46(4): 683-690 Scopus Indexed | 0304-5250 | 0.44 | National |
| 21 | Modelling Dissolved Oxygen Concentration Using Artificial Neural Networks | Indian Journal of Ecology (2019) 46(3): 455-459 Scopus Indexed | 0304-5250 | 0.44 | National |
| 22 | Development of Sensors by 3D Printing Technology-Fused Deposition Modelling | International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume-9 Issue-1, November 2019- Scopus Indexed | 2278-3075 | 2 | International |
| 23 | A study on effect of dead metal zone on tool vibration, cutting and thrust forces in micro milling of Inconel718 | Journal of Alloys and Compounds 793(2019)343-351. journal homepage: www.elsevier.com SCI | 0925-8388 | 6.3 | International |

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|----|--|---|-----------|---|---------------|
| 24 | Design And Analysis Of A Sports Vehicle Chassis Frame | International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) Special Issue, Feb 2019, 143-152 © TJPRC Pvt. Ltd. Scopus Indexed, | 2249-8001 | 1 | International |
| 25 | Development of a Process for Predicting the Overall Heat Transfer Coefficient for Transient Heat Transfer in an Exhaust System by CFD Analysis | International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878 Scopus Indexed | 2277-3878 | 1 | International |
| 26 | Application of Space-Born Remote Sensing To Analyze Forest Cover in Chittoor (India) Area | International Journal for Research in Applied Science & Engineering Technology (IJRASET) ; IC Value: 45.98; SJ Impact Factor :6.887 Volume 6 Issue I, January 2018- Available at www.ijraset.com | 2321-9653 | 6 | International |
| 27 | Socio-Economic Data Acquisition Using Mobile GIS Technology (EPICOLLECT) | IJSART - Volume 4 Issue 1 – JANUARY 2018 | 2395-1052 | 1 | International |
| 28 | Development And Study Of Tribological Properties Of Bio composite For Brake Pad Application | International Journal of Mechanical and Production Engineering Research and Development (IJMPERD) ISSN (P): 2249-6890; Vol. 7, Issue 6, Dec 2017, 263-270 © TJPRC Pvt. Ltd Scopus Indexed, NAAS | 2249-8001 | 1 | International |

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|----|--|--|-------------|-----|---------------|
| | | rated | | | |
| 29 | Robot Arm Control Using Image Processing And Matlab For Simple Writing By Human Gestures | International Journal of Mechanical Engineering and Technology (IJMET) Volume 8, Issue 8, August 2017, pp. 1401–1405 Scopus Indexed | 0976 - 6340 | 0.9 | International |
| 30 | Optimized Water Pumping System Using Arduino For Home Automation | International Journal of Mechanical Engineering and Technology (IJMET) Volume 8, Issue 8, August 2017, pp. 1412–1416 Scopus Indexed | 0976 - 6340 | 0.9 | International |
| 31 | An Experimental Approach Of Environmental Management Plan For Designing Asbestos Cement Pipes- A Model Study | International Journal of Mechanical Engineering and Technology (IJMET) Volume 8, Issue 9, September 2017, pp. 363– 368, Scopus Indexed | 0976 - 6340 | 0.9 | International |
| 32 | Case Study on Performance Evaluation of Drip Irrigation Systems in Selected Villages of Guntur District, Andhra Pradesh, India | International Journal of Current Microbiology and Applied Sciences Volume 6 Number 2 (2017) pp. 437- 445 NAAS rated | 2319-7706 | 4.9 | International |
| | Effect of Spray Drying Conditions on Color Parameters of Pomegranate Juice | Journal of Thermal Energy Systems Volume 2 Issue 1 Page 40-46 © MAT Journals 2017 | 2582-5747 | 0.5 | International |
| 33 | Design and Analysis of Chassis in Electric Commuter Vehicle | <i>VFSTR Journal of STEM Vol. 2, No 2 (2016) 2455-</i> | 2455-2062 | 0.5 | national |

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|----|--|--|-------------------|-----|----------------------------|
| | | 2062 | | | |
| 34 | Low cost design Approach of electro Pneumatic Punching Machine | International Journal of Applied Engineering Research, Vol. 10 No.84 (2015) © Research India Publications; http://www.ripublication.com/ij aer.htm | 0973-4562 | 1.3 | International |
| 35 | Nano composites in Food Packaging | International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-2, Issue- 6, January 2014 | 2277-3878 | 1 | International |
| 36 | The Effect of Injection Pressure on Engine Performance While the Engine is Running on Electrolytically Generated Hydrogen Oxygen Mixture | IDAD2014, February 22 24, 2014 | 978-81-322-1871-5 | 2 | International-book chapter |
| 37 | Effect of Using Transesterified Vegetable Oil as Fuel on Performance and Emmission in CI Engine – (Experimental Investigation) | International Journal of Engineering Research & Technology (IJERT) Vol. 3 Issue 1, January - 2014 | 2278-0181 | 1 | International |
| 38 | Design Optimisation of Counter Weight of Front End Loader Through Dynamic Mass Balancing. | International Journal of Engineering Research & Technology (IJERT), Vol. 3 Issue 3, March - 2014 | 2278-0181 | 1 | International |

5.8. Papers presented at National / International Journals :

| S.No | Title of the Paper | Names of the Conference/ Seminars | National/ International | Period |
|------|---|--|-------------------------|--------|
| 1 | Performance and emission characteristics on CI Engine by using Trans esterified chicken fat with Titanium Dioxide as additives. | 3 rd National Conference on “Advances in Modelling, | National | 2022 |

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|---|---|--|---------------|------|
| | | Manufacturing and Materials Engineering” | | |
| 2 | A Study on Effect of Dead Metal Zone on Tool Vibration, Cutting and Thrust Forces in Micro Milling of AISI D2 Steel | Proceedings of the International Conference of Modeling Simulation and Control – 2021, Karpagam College of Engineering, Coimbatore. | International | 2021 |
| 3 | optimization of Dead metal Zone to reduce cutting forces in Micro milling of Inconel 718 by using RSM | 2 nd National conference on NCAMMME-2020, held at VFSTRU. | National | 2020 |
| 4 | Matlab Based 3d Scanning Using Photo Grammetry For Reverse Engineering | Proceedings of the National Conference on Design, Materials & Constructions (NCDMC 2017), Vel Tech Dr. RR & Dr. SR Technical University, Chennai, TN. 5 April 2017 | National | 2017 |
| 5 | Design And Fabrication Of Solar Operated Stirling Engine- A Prototype | Proceedings of the National Conference on Design, Materials & Constructions (NCDMC 2017), Vel TechDr. RR & Dr. SR Technical University, Chennai, TN. 5 April 2017 | National | 2017 |
| 6 | Effect Of Spray Drying Conditions On Color Parameters Of Pomegranate Juice | Sepmwet-March2017 | National | 2017 |
| 7 | Design of Analysis of Chassis in Electric Commuter Vehicle | Proceedings of the National Conference on Design, Materials & Constructions (NCDMC 2014), Vel Tech Dr. RR & Dr. SR Technical University, Chennai, TN. 5 - 6, March 2014. pp.223-226. | National | 2014 |
| 8 | Combustion Characteristics of Rice Bran Oil Derived Biodiesel in a Single Cylinder Diesel Engine | Proceedings of the National Conference on Design, Materials & Constructions (NCDMC 2014), Vel Tech Dr. RR & Dr. SR Technical University, Chennai, TN. 5 - 6, March 2014. pp.251-255. | National | 2014 |

5.9. Sponsored research Projects:

| S.No | Title | Agency | Period | Grant amount | Ongoing / Completed |
|------|-------|--------|--------|--------------|---------------------|
| | | | | | |

5.10 Consultancy Projects:

| S.No | Title | Agency | Period | Sanctioned Amount | Ongoing / Completed |
|------|-------|--------|--------|-------------------|---------------------|
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6. Awards / Honors received:

Received Star performer Award from VFSTRU -2017

7. Motto: