

# Dr. Patel Badari Narayana

## Associate Professor



**Education Qualifications:** P.hD  
**Specialization:** Energy Systems – Mechanical

### ADDRESS:

- B – Block -Room No 108

### JNTUH ID:

0344-200303-101003

### EMAIL:

pbadarinarayana\_mct@mgit.ac.in

### DATE OF JOINING:

01-07-2022

### EXPERIENCE - 17 Years

- Teaching – 4Y 9 M
- Research -2
- Industry - 13

### SUMMARY:

- Publications - 5
- Conferences - 3
- Patents – 2
- Books – 1
- Honors/Awards - 1

### EVENTS:

- Organized - 4
- Attended - 12

### LET'S MEET ON SOCIAL:

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### Membership of Professional Bodies:

- MIE – Member, Institute of Engineers India (Membership No.M1619815)
- Life Member - Solar Energy Society of India (1783/LM/2012)
- Member - ISHRAE – 21849
- Life Member – Bamboo Society of India

### Responsibilities Held at Institution Level:

- UGC Quality Initiative committee member SATAT Section
- Member – National Innovation and Startup Policy Cell

### Responsibilities Held at Department Level:

- Member, Professional Membership Committee.
- Member – Innovation Cell

### Research Guidance:

- None

### Honors/Awards Received:

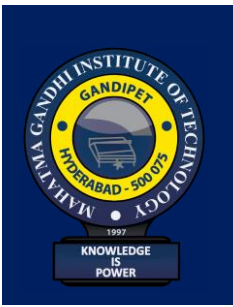
- Best Paper Award received in ICORE (International Congress on Renewable Energy) 2021, An International Conference Organized by Reva University and Solar Energy Society of India – Online Mode Dates: 27<sup>th</sup> – 28<sup>th</sup> Nov, 2021.

### Courses Handled at Under Graduate /Post Graduate Level:

- UG: Thermal Science ( Theory & Lab), Renewable Energy Sources, Non-Conventional Energy Sources, Power Plant Engineering
- PG: Instrumentation & Sensor Technology for Mechatronics

### Publications:

1. Dr. P. Badari Narayana, Fahad Masqati, Roopesh Kumar Boyini, Aravind Kota, Pages : 18-27, Solar thermal energy conversion system with thermocline storage for process steam generation in milk dairies, VOLUME 17 ISSUE 4 - OCTOBER 2020, International Journal of latest trends in engineering and technology
2. Dr. P. Badari Narayana, Dr. R. Manjunatha, U. Jagadeesh Reddy, Performance and emissions modelling bioethanol operated spark-ignition engine using adaptive neuro-fuzzy inference system, International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349-5162, Vol.7, Issue 4, page no.491-501, April-2020, <http://www.jetir.org/papers/JETIR2004270.pdf>
3. P. Badari Narayana, Dr. R.Manjunatha, Dr. K. Hemachandra Reddy, Wind energy forecasting using time series neural networks- A wind power plant case study, International Journal of Wind and

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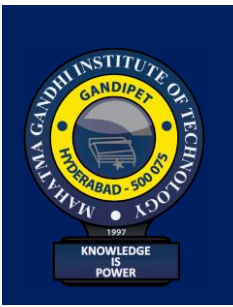
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Renewable Energy, Vol 5- Issue 1, ISSN:2277-3975.

4. P. Badari Narayana, Dr. R. Manjunatha, Dr. K. Hemachandra Reddy, Wind energy forecasting using radial basis function neural networks, International Journal of Research in Engineering and Technology, eISSN: 2319-1163 | pISSN: 2321- 7308 Volume: 04 Issue: 12 | Dec-2015.
5. Shivrath Y, Narayana PB, Thirumalasetty S, Narsaiah EL (2012), Design & integration of wind-solar hybrid energy system for drip irrigation pumping application. Int J Mod Eng Res 2(4):2947–2950
6. P. Badari Narayana, Prof. S. Srinivasa Rao, Prof. K. Hemachandra Reddy, Development of distributed topographical forecasting model for wind resource assessment using artificial neural networks, Journal of Sustainable Manufacturing and Renewable Energy, ISSN: 2153-6821, Volume 2, Number ½. (2013)
7. R.Manjunatha, P. Badari Narayana, K. Hemachandra Reddy, Journal of Modern Applied Science, Mar2010, Vol. 4 Issue 3, p77, Application of Artificial Neural Networks for Emission Modelling of Biodiesels for a C.I Engine under Varying Operating Conditions – ISSN (Online): 1913-1852.
8. Sumathi, P., Prasanthi, G., P. Badari Narayana (2016). Design and Modelling of wind–solar–diesel (Bio) hybrid energy system. Int. J. Engg. Res. & Sci. & Tech, 5(1).ISSN 2319-5991 www.ijerst.com, Vol. 5, No. 1, February 2016
9. U. Jagadeesh Reddy, K. Hemachandra Reddy, P. Badari Narayana, Predictions of performance and emission parameters of a bioethanol blended VCRSI engine using artificial neural networks. International Journal of Technical Innovation in Modern Engineering & Science (IJTIMES), Volume 4, Issue 9, September-2018, e-ISSN: 2455-2585, Impact Factor: 5.22 (SJIF-2017).
10. R. Manjunatha, P. Badari Narayana, K. Hema Chandra Reddy, K. Vijaya Kumar Reddy, Radial basis function neural networks in prediction and modeling of diesel engine emissions operated for biodiesel blends under varying operating conditions, Indian Journal of Science and Technology Vol. 5 No.3 (Mar 2012, ISSN: 0974-6846 DOI:10.17485/ijst/2012/v5i3/30382 Corpus ID: 128367695

**Conferences:**

1. Modelling, simulation and analysis of 5 MWe Linear Fresnel Collector based solar thermal energy conversion cycle with energy storage, ICORE (International Congress on renewable Energy) 2021, An International Conference Organized by Reva University and Solar Energy Society of India – Online Mode Date:27th – 28Th Nov, 2021.
2. P. Narasimha Siva Teja, P. Badari Narayana, K. Hemachandra Reddy, Solar Thermal Energy Storage Using Sensible and Latent Heat a Future Generation Energy Utilization Technology, International Conference on Advances in Material Science & Mechanical Engineering (ICAMSME)-2020, Feb 2020.
3. Dr. P Badari Narayana, P Narasimha Siva Teja, Dr. K. Hemachandra Reddy, Design and analysis of latent heat storage based solar thermal energy conversion cycle, Proceedings of the



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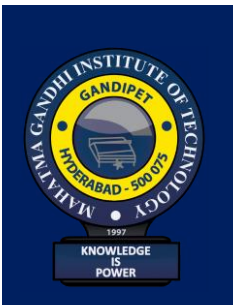
International Conference on Advances in Renowned Renewable Energy Technologies (ICARRET) , V R Siddhartha Engineering College, Vijayawada, A.P., India, 23rd& 24th October, 2019. (Scopus Index Journal Proceedings DOI: 10.24247/ijmperdjun2020166)

a. [10.24247/ijmperdjun2020166](https://doi.org/10.24247/ijmperdjun2020166)

4. P. Badari Narayana, Prof. K. Hemachandra Reddy, L. Karunakara Reddy, Passive Cooling Techniques for Thermal Comfort based designs in Low-Cost Housing, Asian Conference on Indoor Environment Quality (ACIAQ) Feb' 2019.
5. P. Badari Narayana, P. Sai Kiran, Dr. K. Hemachandra Reddy, Energy efficient solar water pumping solution for sustainable agriculture, International Conference on Environment and Energy, ICEE 2014, JNTU Hyderabad, ISBN: 978-93-81212-96-7.
6. P. Badari Narayana, R.Manjunatha, Dr. K. Hemachandra Reddy, International Conference – IEEE International Conference on Energy and Environment ( ICEE 2014) , Held in JNTU- Hyderabad, on “Wind energy resource assessment & forecasting using radial basis function neural networks”, ISBN: 978-93-81212-96-7.
7. Dr.R.Manjunatha, P. Badari Narayana, Dr. T. Venkateswara Rao, Prof. K. Hemachandra Reddy, International Conference – IEEE International Conference on Energy and Environment ( ICEE 2014) , Held in JNTU- Hyderabad, on “Application of genetic algorithm based hybrid neural network for biodiesel emission modeling”. ISBN: 978-93-81212-96-7.
8. P. Badari Narayana, Motepalli Prasad, B. R. Sanjeeva Reddy, Dubey, S. (2013, April). Design & simulation of solar DC pump in simulink. In 2013 International Conference on Energy Efficient Technologies for Sustainability (pp. 429-431). IEEE. DOI: 10.1109/ICEETS.2013.6533421
9. B. Sanjeeva Reddy, P. Badari Narayana, Praveen Jambholkar, K. Srinivasa Reddy, (2011, December). MPPT algorithm implementation for solar photovoltaic module using microcontroller. In 2011 Annual IEEE India Conference (pp. 1-3). IEEE. 2011 Annual IEEE India Conference, DOI: 10.1109/INDCON.2011.6139614
10. P. Badari Narayana, Performance and Emission Analysis of C.I Engine Using Palm Biodiesel Methyl Esters, National Conference in advanced trends of Mechanical engineering (2009), SNIST, Hyderabad

**Patents:**

1. A shoe insole to heal diabetic foot ulcers and method of manufacture thereof, Application No: TEMP/E-1/39725/2021-CHE (202141035407) ( Indian Patent), Applicant Name: MGIT Hyderabad, Inventors: Dr. Patel Badari Narayana, Prof. K. Jayasankar, Prof. Pamidigantham Venkata Ramana, N. Sai Sri, N. Sai Teja, S. Varun Chandra, P. Vennela, D. Swathi. Type: Indian Provisional, Status: **Filed**, Application Filed Date: 05/08/2021
2. Recycle of sea food waste into mobile cases by 3d printing,

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02/07/2021, Inventors: Mr. Joseph A, Dr. S. Bala Krishna, Dr. Nirmala Devi D, Dr. Patel Badari Narayana, Dr. Asheesh Kumar, and others, Application No: 202141028807 A, Type: Normal Indian Patent, Status: **Published**

3. Design and development of two-wheeler mud guard using Glass and Jute, inventors: Dr. A. Raveendra, Dr. P. Badari Narayana, Dr. S. Narasimha Kumar, Mr. B. Govinda Reddy, Patent Appl. No. 202141008703 A, Date of filing of Application :02/03/2021 Publication Date : 12/03/2021 Status: **Published** Type: Ordinary
4. A compact cooling apparatus and a method thereof, An Indian Patent application filed on 07/12/2020, Owner – MGIT, Hyderabad, Inventors Prof. P. Venkata Ramana, Dr. P. Badari Narayana. Status: **Filed**. Application No: 202041053196 Type: Provisional

**Research & Consultancy:**

- Was a Co-Investigator for a DST Sponsored Project under MES-2016 scheme at JNTUACEA
- Successfully executed a project for Borewell Equipment Pvt Ltd, Cherlapally, Hyderabad during 2009-10, by Srinidhi Institute of Science & Technology (SNIST) for implementing an Inventory Control & Management Information System in J2EE for their Assembly Unit.

**No. of Books/Chapter Published with details:**

- Accepted for publication – Book titled – Hydrogen Generation & Storage Technologies by Horizan Books

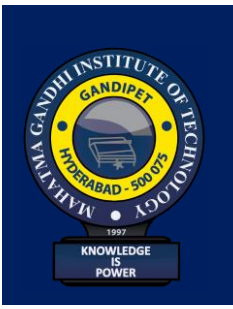
**Events Organized:****Conferences:**

- None

**FDPs/STTPs:**

- Part of the Organizing team for the Four-day online AICTE Sponsored workshop on Recent Advances in Micro Electro Mechanical Systems (MEMS), Mechatronics and Their applications, SLOT – 4, 07<sup>th</sup> December 2020 to 12<sup>th</sup> December 2020.
- As a Convener, organized the Four-day online MGIT Sponsored workshop on “Recent Advances in Renewable Energy and Energy Efficiency Technologies” during 21-25 July,2020.
- Part of the Organizing team “Intellectual property rights and patent filing” held on 11.09.2020 and 12.09.2020, an online workshop conducted by Department of R&D and NISP Cell in MGIT

**Refresher Courses/ Workshops/ Webinars/ Seminars/ Guest**

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**Lecture:**

- Invited Speaker – For Faculty Development Programme in Department of Mechanical Engineering, JNTUACEA on Solar & Wind Energy Future Technologies - 2 Week Programme in Nov 2018.
- Invited Speaker in KL University in 2015 for their National Level Workshop in Energy Trends – Topic – Experiences in Solar Systems Design & Integration

**Events Attended:****FDPs/STTPs:**

- Four

**Refresher Courses/ Workshops/ Webinars/ Seminars/Guest Lecture:**

- Ten

**Online Certifications:**

- None

**Any Other Contribution:**

- Renewable Energy System Integration & Design expertise- actively working in Industry-Institute-Interaction initiatives
- Industry Trainer on Skill development Programmes related to Solar Energy.