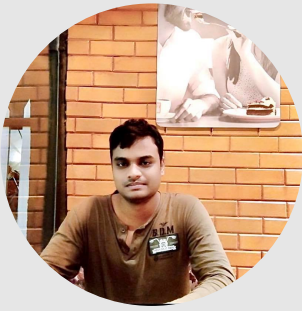


# Dr. Bhamidipati Venkata Surya Vardhan

PhD | Power System Optimization and prediction of its stochasticity (R&D)



## About me

My research interest includes Grid integration issues, Distribution system optimization, feeder analysis, Power scheduling and management, Impact of protection in new and resilient grids, Application of Machine Learning and Deep Learning techniques in Power systems, renewable energy production etc. I have published my work with various reputed Publishers and as of now I Authored, Co-Authored over 20 publications. I have also reviewed manuscripts for Elsevier, Springer and prestigious IEEE conferences.

Besides development of machine learning and deep learning theories dedicated to power systems, I have work experience in power system modelling related to production cost, resource adequacy etc. I have also dealt with issues like integration of DER with distribution system specifically Agri loads, rooftop etc.

## Contact

Born on 06/1/1993, Age 31

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Vasant Kunj, New Delhi, India

suryavardhan

Suryavardhan-google scholar

## Languages

Hindi - Professional Language

English - Professional Language

Telugu - Mother tongue

## EDUCATION

2019-2023	<b>Ph.D</b> <i>Defense: 9<sup>th</sup> March 2024.</i>	VNIT, Nagpur, India
2016-2019	<b>M.Tech</b> <i>Degree: CGPA-7.0</i>	VNIT, Nagpur, India
2010-2014	<b>B.E.</b> <i>Degree: CGPA-7.92</i>	BE, OPJIT Raigarh, India

VNIT (Visvesvaraya National Institute of Technology) also called as NIT Nagpur, is one of the 31 NIT's funded by Indian government and is recognized as Institute of national importance by Government of India

## RESEARCH EXPERIENCE

2019-2023	<b>Ph.D, full time under Ministry of education fellowship</b> Nagpur, India <i>Visvesvaraya National Institute Of Technology</i> <b>Title:</b> Energy Transition strategies using Artificial Intelligence and Machine Learning for optimal operation of Grid Integrated Renewable Sources <b>Description:</b> My work encompasses the study of changes in Power System Management brought about by the modernization of grids (Like integration of different kind of renewables, storage etc.). This includes Power System Optimization, Load Forecasting, Power Scheduling, Modeling of Renewable Components, Pricing, and Trading. Throughout my tenure, I have extensively employed stochastic techniques involving regression analysis, time series analysis, and more. I have utilized various platforms such as MATLAB, Python, and GAMS. Additionally, I have authored several papers based on my projects, which have been published by reputed publishing houses.
2016-2019	<b>M.Tech (Research Assistant), full time under ministry of education fellowship</b> Nagpur, India <i>Visvesvaraya National Institute Of Technology</i> <b>Title:</b> Enhancement of Power Quality by Using Dynamic Voltage Restorer (DVR) and SEN Transformer (ST). <b>Description:</b> The project that I did in this tenure was aimed at study of change in protection settings of Grid connected Photovoltaic systems in transmission side of Katol Power plant associated with Maharashtra state transmission limited.

## PROFESSIONAL EXPERIENCE

Aug 2023-Now	<b>Research Analyst</b> New Delhi, India <i>Council on Energy, Environment and water (CEEW)</i> <b>Job Responsibilities:</b> Working on issues related to Applied Data science in the field of Electric Power system like offshore, power system optimization for optimal energy mix specifically Production Cost Modelling, Resource Adequacy modelling etc. Contributing to the power markets team of CEEW which advises Government of India and various state governments on issues related to Power sector.
Sep 2021- Feb 2022	<b>Power System Modeller</b> Nagpur, India <i>Society of Energy Engineers and Managers (SEEM)</i> <b>Job Responsibilities:</b> Worked On Issues related to Power System Restructuring, Demand Forecasting, Scheduling, and Power System Optimization Techniques etc. using Artificial Intelligence.

## Academic recognition

- MHRD (Ministry of Human Resource and Development) Govt. of India Scholarship (2016- 2019)
- Ministry of Education Govt. of India Fellowship (2019-2023)
- International Grant for Young Scientists of India Issued by Science and Engineering Research Board (Statutory Body Established Through an Act of Parliament : SERB Act 2008) Department of Science and Technology, Government of India. Oct 2022
- Elected as Life associate Member of SEEM (Society of Energy Engineers and Managers)
- Reviewer of reputed journals and conferences like Elsevier , IEEE , NPSC etc.
- Given talk in IEEE Green energy conference.
- Conference chair in 7th International Conference on Recent Trends in Image Processing Pattern Recognition (RTIP2R).
- Qualified Gate 2016,2017 and 2018
- Secured 93.6 percentile in AICTE CMAT
- AMCAT Scores
  - Quantitative Aptitude - 98.7 Percentile
  - Electrical Engineering - 98.8 Percentile
  - Electronics Engineering - 87.9 Percentile
  - Logical Ability - 82.7 Percentile
  - English - 80.2 Percentile

## Soft Skills and Strengths

- Creativity Curiosity Flexibility Patience  
 Self Confidence Ability to Plan and Organize  
 Autonomy Adaptability Eye for Details  
 Problem Solving Team Working  
 Love Learning New Things Leadership  
 Good Communication Managing Information  
 Diplomacy Good Listener Pragmatic

## Other Interests

- Classical Music
- cricket
- Piano
- Books
- Badminton
- Lawn Tennis

## References

- Dr. Mohan Khedkar, Professor, EED, VNIT, Nagpur.  
Email:mohankhedkar@eee.vnit.ac.in
- Dr. Nita Patne, Professor, EED, VNIT, Nagpur.  
Email: nitapatne71@gmail.com
- Dr. Siba Kumar Patro, Assistant Professor, EED, IIT, Roorkee.  
Email:sibakumarpatro@gmail.com
- Dr. K. Raghavendra Naik, Assistant Professor, EED, NIT, Jamshedpur.  
Email:227raghavendra@gmail.com

## INFORMATION TECHNOLOGY SKILLS

### Modeling and Simulation

**MATLAB** : Specialized. **PYTHON** : Specialized. **C++,C** : Specialized. **SIMULINK** : Specialized. **SAM (System advisory Model)** : Specialized. **MS OFFICE** : Specialized. **Homer pro** : Intermediate.


### Machine Learning

**Matlab**: Specialised. **Python**: Specialised.


## MAJOR PUBLICATIONS

### Total Publications-21:


#### Journal Article 2022

**Effective energy management and cost effective day ahead scheduling for distribution system with dynamic market participants**, „ in *Sustainable Energy, Grids and Networks, Elsevier Journal.*,  DOI: <https://doi.org/10.1016/j.segan.2022.100706>

#### Journal Article 2021

**Cost Effective Day -Ahead Scheduling with Stochastic Load and Intermittency Forecasting for Distribution System Considering Distributed Energy Resources**, „ in *Energy sources Part A, Taylor and Francis.*,  DOI: [10.1080/15567036.2021.1983669](https://doi.org/10.1080/15567036.2021.1983669)

#### Journal Article 2021

**A Comparative Analysis of Hyper-parameter Tuned Stochastic Short Term Load Forecasting for Power System Operator**, „ in *Energies.*,  DOI: <https://doi.org/10.3390/en16031243>

**Remaining publications can be accessed from my Google scholar or Linked-in id given in my contact section:**

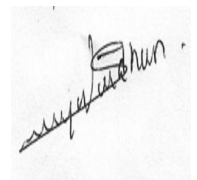
## Collaborations

- Collaborated with Wroclaw University Poland in Load Forecasting
- Collaborated with CEA (Central Electricity Authority) in Load forecasting
- Collaborated with Aarhus university Denmark on various publications

## PERSONAL DECLARATION

I hereby declare that the information furnished above is true to the best of my knowledge and belief. I am looking forward to receiving your early reply.

Thanking you in anticipation.



**Date** : 18/ 07/ 2024

**Place** : Nagpur

(B V Surya Vardhan)