



**Dr.T. Bharath Kumar** Ph.D, MIEEE

tbkumar256@gmail.com

+91 8019250453 (Per)

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**SUMMARY** Research & Development professional with over 4 years of academic research experience and one year of teaching experience. Proven competence across a gamut of domains including Electrical, Power System reliability, Smart Grid & Renewable Energy Recourses and Power Markets. Motivating and talented Professor driven to inspire students to pursue academic and personal excellence. Consistently strive to create a challenging and engaging learning environment in which students become life-long scholars and learners. Exceptional track record of research success with multiple published articles.

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## EXPERIENCE

**Sept 18 – Present INDIAN INSTITUTE OF TECHNOLOGY KANPUR**

**Post Doctoral Fellow**

**Kanpur**

- Research on Electricity Markets – Ancillary Services Market Design and Operations
- Energy Analytics Lab (EAL) – Heading a team to develop power market database, learning & visualization and analytical tools, providing technical content for quarterly EAL newsletter on Electricity Markets, studying draft regulations & discussion papers being released by statutory, regulatory, monitoring bodies of the Indian electricity market and to provide technical opinions

**Jan 18 – Sept 18 KONERU LAKSHMAIAH UNIVERSITY**

*To impart quality higher education and to undertake research and extension with emphasis on application and innovation that cater to the emerging societal needs through all-round development of students of all sections enabling them to be globally competitive and socially responsible citizens with intrinsic values.*

**Associate Professor**

**Vijayawada**

- Board of Studies Member (BOS) for B.Tech and M.Tech Programs
- Member of Academic Council
- Post Graduate Program Coordinator, EEE Department
- Project Coordinator for Under Graduate and Post Graduate Programs, EEE Department
- Member, Post Graduate Program Projects Review committee
- Deliver courses to under graduate and post graduate students on Electro Magnetic fields Electric Circuit Theory, Power System Reliability, Power System Protection, Power System Operation and Control, AC Machines

**Jun 17 – Dec 17 KONERU LAKSHMAIAH UNIVERSITY**

**Assistant Professor**

**Vijayawada**

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## EDUCATION

2014 – 2017	<b>KONERU LAKSHMAIAH UNIVERSITY</b> Doctor of Philosophy (PhD) – Electrical and Electronics Engineering Specialization in Power System Reliability	<b>Vijayawada</b>
2012 – 2014	<b>KONERU LAKSHMAIAH UNIVERSITY</b> Master of Technology (M.Tech by Research) – Electrical and Electronics Engineering Specialization in Power Systems – <b>CGPA 9.41</b>	<b>Vijayawada</b>
2008 – 2012	<b>JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY</b> Bachelor of Technology (B.Tech) – Electrical and Electronics Engineering <b>Percentage 79.2%</b> aggregate	<b>Kakinada</b>
2006 – 2008	<b>BOARD OF INTERMEDIATE EDUCATION, SREE SAI JUNIOR COLLEGE</b> Intermediate (Plus 2) – M P C <b>Percentage 88.4%</b> aggregate	<b>Tenali</b>
2005 – 2006	<b>BOARD OF SECONDARY EDUCATION, Z P H SCHOOL</b> Secondary School Certificate (SSC) – A P Sate Board <b>Percentage 84.8%</b> aggregate	<b>Kolakaluru</b>

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## PROJECT DETAILS

	Thesis Title	Supervisor
Ph.D	Improved Methods for the Evaluation of Composite Power System reliability	Dr.M.Ramamoorthy Dr.O.Chandra Sekhar
M.Tech	Power Quality Enhancement using AI-Techniques based Voltage Control Schemes for SEIG based Wind Farm	Dr.M.Venu Gopala Rao Dr. M. Uma Vani
B.Tech	PC Based HI-TECH Industrial Automation with AUTO/MANUAL Modes of Operation	Prof.M.Radha Krishna Moorthy

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## SPECIALITIES AND ABILITIES

Research Bent of Mind	<ul style="list-style-type: none"><li>• A self-example of sincerity, devotion, hard work and honesty</li><li>• Maintain academic healthy environment and team spirit in the group under control</li><li>• Research mind set up and self-example of continuing education up to Ph.D</li><li>• Published 13 papers in National &amp; International journals &amp; conferences</li><li>• Possesses dynamism and ability to guide team. Guided 02 B.Tech, 01 M.Tech and 04 PhD in-progress</li><li>• <b>Academic Laboratories Establishment -02</b> [Established Power System Protection lab, Electrical Machines Labs and developed Lab manuals]</li></ul>
Technical Skills	<ul style="list-style-type: none"><li>• MATLAB, GAMS, PSCAD, MI POWER, MULTI SIM, C, Data Structures and DBM</li></ul>
Core area of expertise	<ul style="list-style-type: none"><li>• Power System Reliability</li><li>• Smart Grid technologies – Renewable Energy Resources</li><li>• Power Markets – Ancillary Services</li><li>• Power System Protection</li></ul>

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HONORS & AWARDS	<ul style="list-style-type: none"><li>• Received the <b>POSOCO Power System Award (PPSA-2018)</b> from Power System Operation Corporation Limited (POSOCO) and Ministry of Power (India), for Ph.D. research work (Best PhD thesis)</li><li>• Received Research Excellence and Young Achiever Award from IEAE</li><li>• Received excellent research work comment from all the Ph.D thesis Adjudicators</li><li>• Received appreciation mail about my research work from one of my Ph.D. adjudicators and presented gift worth of \$250</li><li>• University Topper of Power Systems specialization in M.Tech (2012-14)</li><li>• Topper of Electrical and Electronics Engineering Department in B.Tech (2008-12)</li></ul>
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## PUBLICATIONS

JOURNALS	<ul style="list-style-type: none"><li>• <b>T.Bharath Kumar</b>, O.Chandra Sekhar, M.Ramamoorthy, "Composite Power system Reliability evaluation using modified Minimal cut set approach" in "Alexandria Engineering Journal – Elsevier", Vol 57, Issue 4, 2018, pp. 2521–2528. (DOI: 10.1016/j.aej.2017.09.008).</li><li>• <b>T.Bharath Kumar</b>, O.Chandra Sekhar, M.Ramamoorthy and S V N L Lalitha, "Evaluation of Power Capacity availability at Load bus in a Composite Power System" in "IEEE Journal of Emerging and selected topics in Power Electronics (JESTPE)", Vol 4, Number 4. 2016, pp. 1324-1331. (DOI: 10.1109/JESTPE.2016.2615655)</li><li>• <b>T.Bharath Kumar</b>, O.Chandra Sekhar and M.Ramamoorthy, "Reliability Modelling of Power System components through Electrical Circuit Approach" in " Journal of Electrical Engineering (JEE)", Vol 16, Number 3, 2016, pp. 232-239.</li><li>• <b>T.Bharath Kumar</b>, O.Chandra Sekhar and M.Ramamoorthy, "Evaluation of Loss of Load in Expected in an Integrated Energy System" in "Journal of Electrical Engineering (JEE)", Vol 16, Number 4, 2016, pp. 75-80.</li><li>• <b>T.Bharath Kumar</b>, O.Chandra Sekhar, Musti K S Sastry, M. Ramamoorthy, "Heuristic Algorithm for Optimal Location of DGs in Distribution System based on Probability of Power Availability" in International Journal of Control Theory and Applications, Vol 10, Number 5, 2016, pp. 343-354.</li><li>• <b>T.Bharath Kumar</b>, M.Venu Gopala Rao, "Coordinated Voltage Control Schemes for SEIG-Based Wind Farm Using FLC STATCOM and ULTC Transformer" in " International journal of Applied Engineering Research (IJAER)" Vol 9, Number 13 (2014) pp. 13867-13875.</li><li>• <b>T.Bharath Kumar</b> and M.Uma Vani, "Load Frequency Control in Two Area Power System Using ANFIS" in "International Journal of Electrical and Electronics Engineering Research (IJEER) ", ISSN(Online):2278-943X, 2013, Impact Factor(JCC): 5.6397.</li></ul>
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- CONFERENCES**
- **T.Bharath Kumar**, Anoop Singh, G Yadav, Rahul Karna, "Security Constrained Economic Despatch – India: A Rolling Block Implementation Framework" IEEE ICPS 2019, Dec. 2019.
  - **T.Bharath Kumar**, O.Chandra Sekhar, M.Ramamoorthy, S.Koteswara Rao, D.Venkata Bhaskar Rao, "Comparative Study on Wind Forecasting Models for Day ahead Power Markets", IEEE SPICES 2017, Aug. 2017 (DOI: 10.1109/SPICES.2017.8091273).
  - **T.Bharath Kumar**, O.Chandra Sekhar, M.Ramamoorthy and S. Cherukupalli, "Optimal sizing of Energy Storage Capacity for a Wind Power Generator to reduce the Loss of Load Probability" in "Proceedings of CIGRE Canada Conference" Vancouver, Canada, October, 2016.
  - **T.Bharath Kumar**, O.Chandra Sekhar, M.Ramamoorthy, "Evaluation of Average Power Availability at Load buses for an interconnected Composite Power System using step by step method with Conditional Probability" IEI Proc. "Sustainable Development in Indian Power Sector for the next Decade", Nov. 2016.
  - **T.Bharath Kumar**, M.Venu Gopala Rao, "Mitigation of Harmonics and Power Quality Enhancement for SEIG based Wind Farm" in "IEEE Conference on SMART ELECTRIC GRID", ISEG-2014, K.L.University, Vijayawada, India, September (19-20). 2014. (DOI: 10.1109/ISEG.2014.7005595)
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- BOOK CHAPTERS**
- **T.Bharath Kumar**, M.Ramamoorthy, O.Chandra Sekhar, Invited Book Chapter titled as "Assessment of reliability in Composite Power System including Smart Grids " in the book on "Smart Micro Grid", InTech publisher, ISSN-978-953-51-6180-6, 2018 (DOI: 10.5772/intechopen.75268).
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- INVITED TALKS**
- **Ancillary Services in Indian Power Sector**  
2nd Global Regulatory Perspectives Programme for Commissioners of Electricity Regulatory Commissions supported by Forum of Regulators, Ministry of Power India  
Sydney, Australia Nov 2019
  - **Assessment of reliability in Micro-Grids for the day ahead Power Markets**  
Department of Industrial & Management Engineering, IIT Kanpur Aug 2018
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**REFERENCES**

**Dr. S. S. (Mani) Venkata**

President, Venkata Consulting Solutions Inc.  
Affiliate Professor of ECE, University of Washington  
Professor and Chair Emeritus of ECE, Iowa State University- Principal Enterprise Architect, GE Power (Retired), USA  
Email: [ssvenkata@comcast.net](mailto:ssvenkata@comcast.net)

**Dr.M.Ramamoorthy**

Director General (Retired)  
Central Power Research Institute (CPRI)- Bangalore  
Former Professor IIT Kanpur  
India  
Email: [mrmoorthy@gmail.com](mailto:mrmoorthy@gmail.com)

**Dr.Mukesh Nagpal**

Power System Protection  
BC HYDRO, Vancouver, Canada  
Email: [mukesh.nagpal@bchydro.com](mailto:mukesh.nagpal@bchydro.com)

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**PERSONAL** Address: # 22-37, Thurupu Bazaar, Khazipet Post, Tenali (M) Guntur (D), Andhra Pradesh - 522307  
Date of Birth: 10<sup>th</sup> July 1991  
Skype ID: tbkumar256  
Passport No: Z2979257 Date of issue: 31-10-2014 Date of expiry: 30-10-2024

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**DECLARATION**

I hereby certify that all the details given above are true to the best of my knowledge.

Place:  
Date:

*T. Bharath Kumar*  
(Dr. T BHARATH KUMAR)