Personal Information

Name	**Dr. Balusu Srinivasa Rao**
Years of Experience	Teaching: 26 Years 8 Months Research: NIL Industry: NIL
Email Id	srao.balusu@bvrithyderabad.edu.in
CN ID	thecn.com/BR609
Areas of Specialization	Power Systems

Date of Joining: ***27-10-2022***

Educational Qualifications

Doctoral Degree	Ph.D.	EEE – Power Systems
PG Degree	M.Tech.	Electrical Power Systems
UG Degree	B.Tech.	Electrical and Electronics Engineering

Professional Experience

S. No	Duration	Designation	Institute	Experience
1.	27-10-2022 to till date	Professor, EEE Department	BVRIT HYDERABAD College of Engineering for Women	Working
2.	1-7-2015 to 26-10-2022	Professor, EEE Department	V.R. Siddhartha Engineering College, Vijayawada	7Y 4M
3.	1-4-2004 to 30-6-2015	Associate Professor, EEE Department	V.R. Siddhartha Engineering College, Vijayawada	11Y 3M
4.	01-6-2001 to 31-3-2004	Reader in EEE Department	SIR C.R.Reddy College of Engineering, Eluru	2Y 10M
5.	4-11-1996 to 31-5-2001	Lecturer in EEE Department	V.R. Siddhartha Engineering College, Vijayawada	4Y 7M

Funded Projects:

1. ***CARS-Anurag, DRDO, Hyderabad***
   Title: Analysis & Implementation of Energy Harvesting Techniques to Power GPS
   Principle Investigator: Dr. B. Srinivasa Rao, Professor, EEE, VRSEC
   Total Project Cost Rs: **9.8 Laks;** Duration: 16th June 2016–15th Feb 2018
2. ***UGC Minor Research Project***
   Title: Optimal Operation of Power System with Multi-type FACTS devices using Artificial Immune System based algorithm
   Principle Investigator: Dr. B. Srinivasa Rao, Professor, EEE, VRSEC
   Total Project Cost Rs. **4.0 Laks;** Duration: January 2015 - December 2016
3. ***AICTE-MODROB Project***
   Title: MODROB Power Systems lab
   Co-Investigator: Dr. B. Srinivasa Rao, Professor, EEE, VRSEC
   Project amount of Rs. **12.0 Laks;** Duration: 2007-2009**.**

4. ***AICTE-STTP under AQIS 2019-20***

Title: "**Recent trends and challenges in power market with smart grid technology" Project amount Rs. 3.45Laks**

Coordinator: Dr. B. Srinivasa Rao, Professor, EEE, VRSEC

Research Publications

Patents Published:

[1] Indian design patent titled "**Smart Home Energy Management System**" (405409-001); published on 14th April 2024; Authors – Dr. Kanchapogu Vaisakh, **Dr. Balusu Srinivasa Rao** Dr. N.Bhupesh Kumar, Dr.M.Veera Kumari & Mr.K.Kiran Kumar

[2] UK design patent titled "**Solar Powered Agriculture E-Vehicle" (**6256059) published on 30th January 2023; Authors - Kanchapogu Vaisakh, **Balusu Srinivasa Rao**, K Veeresham, M.Veerakumari, B.Kiran Karunakar Rao & Raavi Satish.

[3] German patent titled "**Wind solar-Diesel-hybrid electric vehicle**" (202022 100 316.5), Published on 10th March 2022; Authors - Alla Srinivasa Reddy, Kanchapogu Vaisakh, Pidatala Prabhakara Sharma, **Balusu Srinivasa Rao**, Umme Salma, Kothapalli Naga Sujatha & Shaik Kalesha Vali.

Book Chapter:

[1] **B. Srinivasa Rao** and K. Vaisakh, "Multi-Objective Optimization Methods for Solving the Economic Emission Dispatch Problem", *Computational Intelligence Applications in Smart Grids: Enabling Methodologies for Proactive and Self-Organizing Power Systems*, February 2015, Pages 77-111 (Imperial College Press).

International Journals:

[1] Yadlapalli, Ravindranath Tagore, Anuradha Kotapati, and **Srinivasa Rao Balusu**. "Fuzzy logic control based high step up converter for electric vehicle applications." *International Journal of Innovative Computing and Applications* 13.1 (2022): 41-56.

[2] Yadlapalli, Ravindranath Tagore, Anuradha Kotapati, Rajani Kandipati, **Srinivasa Rao Balusu**, and Chandra Sekhar Koritala. "*Advancements in energy efficient GaN power devices and power modules for electric vehicle applications: a review*. "*International Journal of Energy Research*, Wiley, 04 April 2021

[3] K. Indira, **B. Srinivasa Rao**, "*Transmission Expansion Planning Considering Wind Energy Conversion Systems Using PSO"*, International Journal of Engineering and Advanced Technology (IJEAT)ISSN: 2249 – 8958, Volume-8, Issue-6S3, September 2019

[4] Nadakuditi, G**., Balusu, S**., Bathina, V., & Narasimham, P. V. R. L. "*Nondominated sorting-based disruption in oppositional gravitational search algorithm for stochastic multiobjective short-term hydrothermal scheduling"*, Soft Computing, Springer (2018).

[5] **Balusu, Srinivasa Rao**, and Lakshmi Narayana Janaswamy. *"Enhancement of ATC Using PSO by Incorporating Generalized Unified Power Flow Controller."* Artificial Intelligence and Evolutionary Computations in Engineering Systems. Springer, Singapore, 2018. 561-573.

[6] **B. Srinivasa Rao**, *"Application of Adaptive Clonal Selection Algorithm to Solve Multi-Objective Optimal Power Flow with Wind Energy Conversion Systems",* International Journal of Power and Energy Conversion*,* Vol.8, Issue.3, 2017, Inderscience publications, pp.322-342.

[7] A. Bala Naga Lingaiah and **B. Srinivasa Rao** "*Solving Multi Objective ORPD Problem Using AIS Based Clonal Selection Algorithm with UPFC*", Journal of Electrical Systems(JES), Vol.13, Issue.1, 2017

[8] **B. Srinivasa Rao** and K. Vaisakh, "Multi-Objective Adaptive Clonal Selection Algorithm for Solving Optimal Power Flow Problem with Load Uncertainty", *Int. J of Bio-Inspired Computation(IJBIC)*, 2016 Vol.8, No.2, pp.67-83 (*Inderscience publication Impact factor 1.01)*

[9] Rao, S. Manmadha, SVR Lakshmi Kumari, and **B. Srinivasa Rao**. "Compensation of Unbalanced Sags/Swells by Single Phase Dynamic Voltage Restorer. "*International Electrical Engineering Journal (IEEJ)* Vol. 6 (2015) No.1, pp. 1743-1748

[10] Praveen .J and **B. Srinivasa Rao "** Single objective optimization using PSO with Interline Power Flow Controller", *International Electrical Engineering Journal (IEEJ),* Vol. 5 (2014) No.12, pp. 1659-1664

[11] **B. Srinivasa Rao** and K. Vaisakh, "Multi-objective Adaptive Clonal Selection Algorithm for Solving Optimal Power Flow Considering Multi-Type FACTS Devices and Load Uncertainty", *Applied Soft Computing* – 23 (2014) 286–297 *(Elsevier Publications, Impact factor1.86)*.

[12] **B. Srinivasa Rao** and K. Vaisakh, "Multi-Objective Adaptive Clonal Selection Algorithm for Solving Optimal Power Flow with Wind Energy Conversion Systems and Load Uncertainty", *International Journal of Power and Energy Systems, Vol. 33, No. 3, 2013, pages 119-129 (ACTA PRESS Publications, Impact factor 0.14).*

[13] **B. Srinivasa Rao** and K. Vaisakh, "New Variants/Hybrid Methods of Memetic Algorithm for Solving Optimal Power Flow Problem with Load Uncertainty", I*nternational Journal of Hybrid Intelligent Systems (IJHIS), Volume 10, Number 3 2013, pages 117-128, (IOS Press)*

[14] **B. Srinivasa Rao** and K. Vaisakh, "Multi-objective Adaptive Clonal Selection Algorithm for Solving Environmental / Economic Dispatch and OPF Problems with Load Uncertainty", *International Journal of Electrical Power and Energy Systems, December 2013, Volume-53, Pages 390-408(Elsevier Publications, Impact factor 1.52).*

International Conferences:

[1] Kuntla Veeresham, **B.Srinivasa Rao** and Maddipati Veerakumari, "Multi-Criteria Optimization of Power System with Various Controllers Using Bat Algorithm" First International Conference On Recent Advances in Smart Energy Systems & Intelligent Automation (RASESIA 2024) held at NIT Kurukshetra, Haryana, India – 136119 during 14th – 15th June 2024.

[2] T. Aravind, B.Srinivasa Rao "**Optimal Power Flow Using Firefly Algorithm with Solar Power**" *International Conference on Emerging Technologies for Computing Communication and SMART cities (ETCCS-2021)* at Baba Farid College of Engineering and Technology, Bathinda, Punjab, India on 21-22 August 2021.

[3] K. Indira, Dr. B. Srinivasa Rao, "**Transmission Expansion Planning Considering Wind Energy Conversion Systems Using PSO"** *International Conference on Innovations in Power, Energy and Intelligent Control Systems(IPEICS-2019)* at Vignan's Foundation for Science, Technology & Research, Vadlamudi, Guntur Dist., Andhra Pradesh on 8th - 10th August 2019.

[4] Lakshmi Narayana Janaswamy, **Srinivasa Rao Balusu**, "Enhancement of ATC using PSO by Incorporating Generalized Unified Power Flow Controller", Joint International Conference on Artificial Intelligence and Evolutionary Computations in Engineering

Systems (ICAIECES-2017) & Power, Circuit and Information Technologies (ICPCIT-2017), at Madanapalle Institute of Technology & Science (MITS), Madanapalle, India during 27-29 April 2017. (***Awarded as Best Paper in Conference***).

[5] J Praveen and **B. Srinivasa Rao**, "Multi objective optimization for optimal power flow with IPFC using PSO" *3rd International Conference on Electrical Energy Systems (ICEES-2016) at SSN College of Engineering, Chennai, India during 17th – 19th March 2016.*

[6] J.Praveen and **B.Srinivasa Rao**, "Comparative Study of UPFCand IPFC For Single Objective Optimization Using PSO",*2nd International Conference on power system analysis control and optimization (ICPSACO-2015)* at Andhra University, Visakhapatnam, A.P., India 10th & 12th December, 2015.

[7] **B. Srinivasa Rao** and K. Vaisakh "Solving Economic Emission Dispatch Problem Using Adaptive Clonal Selection Algorithm*", International Conference on Environment & Energy 2013 (ICEE-2013) at International Center for Research and Development*, Srilanka, 18th -19th December 2013.

[8] **B. Srinivasa Rao** and K. Vaisakh, "Adaptive Clonal Selection Algorithm for solving OPF problem with Emission Constraints", *Annual IEEE India Conference (INDICON 2013) at IIT Mumbai, India December 13th – 15th 2013*.

[9] **B. Srinivasa Rao** and K. Vaisakh, "Application of ACSA to solve single/multi objective OPF problem with multi type FACTS devices", *5th IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC 2013) at Kowloon Shangri-La Hotel, Hong Kong, 8th – 11th December 2013*.

[10] **B. Srinivasa Rao** and K. Vaisakh, "Application of ACSA to solve single/multi objective OPF problem with FACTS devices", *15th IEEE International Conference on Advanced Computing Technologies (ICACT), at* Annamacharya Institute of Technology & Sciences, Rajampet, A.P., *September 21st - 22nd 2013*.

[11] **B. Srinivasa Rao** and K. Vaisakh, "Application of ACSA for Solving Multi-Objective Optimal Power Flow Problem with Load Uncertainty", IEEE International Conference on Emerging Trends in Computing, Communication and Nanotechnology (ICE-CCN 2013), at Infant Jesus College of Engineering & Technology, India. *Tuticorin, Tamilnadu, India, March 25-26, 2013, pp.764-771.*

[12] **B. Srinivasa Rao** and K. Vaisakh, "Application of Clonal Selection Algorithm and Its Variant for Solving Single Objective OPF Problems" *IEEE International Conference on Advanced Research in Engineering and Technology (ICARET-2013) at K L University, Vijayawada, A.P, Feb 8-9, 2013, pp.406-412.*

National Conferences:

[1] A.Bala Naga Lingaiah and **B.Srinivasa Rao**, "Artificial Immune System based Clonal selection algorithm to solve ORPD problem with UPFC" National Conference on Power Systems (NCPS-2015) at Andhra University, Visakhapatnam, A.P.25th & 26th September, 2015, pp. 7-12.

[2] S. Naga Devi and **B. Srinivasa Rao**, "Comparative Study of Optimal Location of UPFC using Sensitivity Factor Approach and L-Index Methods" National Conference on Advances and Applications in Power Systems, Power Electronics and Solar Energy (AAPS-2013) at JNTUH College of Engineering, Jagityala, A.P., 24th – 25th Oct 2013.

[3] Azeem Salma SK and **B. Srinivasa Rao**, "Optimal Location of TCSC for Line Congestion using Sensitivity Method" National Conference on Control of Power Electronic Drives and Systems (CPEDS-2010) at Andhra University, Visakhapatnam, 30th – 31st May 2010

[4] K. Sirisha and **B.Srinivasa Rao**, "Modelling and Placement of SSSC to Resolve Congestion and Minimize the Transmission Losses" National Conference on Control of Power Electronic Drives and Systems (CPEDS-2010) at Andhra University, Visakhapatnam, A.P., 30th – 31st May 2010.

Professional Memberships:

- **ISTE**- Life member - LM25171 from December 1997
- **IEEE-** Senior Member (2021) & Professional member (from 2014) 93062631
- **FIE** (Fellowship member -F1222038 from January 2017)

Resource Person

1. Session Chair in IEEE International Conference on **ICCIGST-2024** on 18th July 2024 at Siddhartha Academy of Higher Education (SAHE) 'Deemed to be University', Vijayawada.
2. Delivered an invitee talk on **"Smart Electric Grid: General Introduction"** during **National Conference** on "Smart Electrical & Communication Technologies", during 20th & 21st May – 2022 organized by SIR C R Reddy College of Engineering**,** Eluru.
3. Judge for **National Conference** on "**Smart Electrical & Communication Technologies**", at SIR C R Reddy College of Engineering**,** Eluru during 20th & 21st May – 2022.
4. Delivered an expert lecture on **"Power Systems Studies using MiPower"** during one-week FDP on "**Recent Advancements in Generation and Control in Modern Power Systems**" organized by GMRIT, Rajamin collaboration with V. R. Siddhartha Engineering College, Vijayawada from 7-12th March, 2022.
5. Organizing Chair for International Conference on Smart and Intelligent Systems (SIS-2021), held in Department of Electrical and Electronics Engineering, V R Siddhartha Engineering College, Andhra Pradesh, India, during February 25-26, 2021 (online mode).
6. Editorial Board member & Session Chairperson (Session II(A)) on 10.01.2020 in International Conference on Smart Energy Systems and Electric Vehicles (ICSESEV-2020) held during Jan 8th-10th, 2020 at V R Siddhartha Engineering College, Vijayawada, Andhra Pradesh, India
7. Delivered a talk on Ways & Types of Leadership for effective administration" on Tuesday, 18 Dec., 2018 at AP HRDI, Bapatla during Three-day training programme on "Ethics & Values in Administration" sponsored by DoPT, GoI for Direct Recruits of ASOs of GAD and Finance from 17th to 19th Dec., 2018.at APHRDI, Bapatla
8. Delivered an expert lecture on "**Artificial Immune System Based Clonal Selection Algorithm and its Variants**" during a Five Day FDP on "**Metaheuristic Techniques: Applications To Power Engineering** at LBRC, Mylavaram on 10th May 2018
9. Delivered a Talk on "**MATLAB coding basics & MiPower Applications**" in FDP on Electrical Engineering Software Tools Expo on 30-4-2018 at VRSEC, Vijayawada.
10. Delivered a Technical Talk on "**History, trends in power system protection and static relays**" during Workshop on **Relay Technologies** [from Electromagnetic relays to Numerical Relays] 19-23rd Dec 2017 at VRSEC, Vijayawada
11. Delivered a Technical Talk on "*Recent Trends in Energy Harvesting Techniques and Applications*" during CEP Course at **ANURAG Labs, DRDO**, Hyderabad on 23rd June 2016.
12. Resource person for one-day Workshop on "***MATLAB Applications to Electrical Engineering***" organized by the Department of Electrical and Electronics Engineering, Sai Ganapathi Engineering College, Anandapuram, Visakhapatnam on 4thMarch, 2016.

13. Resource person for two day Workshop on "***Matlab Programming And Simulink Applications in Electrical Engineering***" organized by the Department of Electrical and Electronics Engineering, Sai Spurthi Institute of Technology, B.Gangaram, Sathupally during 15th& 16th July, 2016.
14. Delivered an invitee talk on "***Solving Economic Emission Dispatch Problem Using Multi-objective Adaptive Clonal Selection Algorithm***" at Visakha Institute of Engineering & Technology, Visakhapatnam during ELECTRIKOTSAV 2k15 on 23.09.2015.
15. Delivered an invitee talk on "***Power System Optimization Using PSO***" in a Two-Day National Workshop on "**Evolutionary Computing: An Intelligent Problem Solving for Science and Engineering Applications**" organized by the Department of Computer Applications, RVR & JC College of Engineering, Guntur during 27th-28th November, 2015.
16. An industrial Visit to PRDC, Bangalore & BEC, Bagalkot to study the NRDE, Smart Grid Simulation software and Campus SCADA Lab established by PRDC at BEC, Bagalkot on 23rd - 25th February 2015.
17. Judge for National Level Technical Symposium – ELECTRIC TARANG-2015" at R V R & J C College of Engineering, Guntur on 28-2-2015
18. Delivered an invitee talk on "***Solving Economic Emission Dispatch Problem Using Adaptive Clonal Selection Algorithm***" at S R K R Engineering College, Bhimavaram during valedictory section of SANKALP-2014 on 24.12.2014.

Administrative Experience:

1. BOS Chairman for Electrical and Electronics Engineering at BVRIT HYDERABAD College of Engineering for Women from June 2023 onwards.
2. IQAC Coordinator at BVRIT HYDERABAD College of Engineering for Women from April 2023 onwards.
3. ***NIRF Nodal officer*** at **V R Siddhartha Engineering College** from 2016 to 2022.
4. ***Overall Coordinator*** for various engineering institutional ranking agencies from 2016 to 2022 at **V R Siddhartha Engineering College**.
5. Served as ***PG program coordinator*** in EEE department @VRSEC from 2007 onwards and the PG program (M.Tech-Power Systems Engineering) also got NBA accredited in 2015.
6. Inception ***Assistant Controller of Examinations (Autonomous)*** at VRSEC, Vijayawada for the period of 2008 to 2009.
7. **Institute level member** of Faculty Assessment Committee **(FAC)** to evaluate Performance Based Appraisal System (PBAS) of faculty for the last 5 years in VRSEC.
8. **Member of Disciplinary Action Committee** of VRSEC for student affairs, confidential exam section and employee indiscipline from 2009 to 2022.
9. Member in College level committee constituted by principal on 25-10-2014 for preparing the draft copy of "Document Retention Policy" of VRSEC.
10. Member in Autonomous section (confidential) from 2010 to 2021

Workshops / Seminars / FDP / Short Term Courses

A) Organized:

1. Organized 10 days workshop on "**Electric Vehicle Manufacturing with Golf Cart**" for II and III year EEE students at BVRIT HYDERABAD College of Engineering for Women from **1-11-2023 to 10-11-2023**.

B) Attended:

1. 5-Day Online FDP on "PYTHON for Electrical & Electronics Engineering: A Faculty Development Program On Python Applications" organized by the Dept. of EEE, Rajeev Gandhi Memorial College of Engineering & Technology (Autonomous), Nandyal during 27 March to 31 March 2023.
2. Attended a 21 days National level FDP on "**Online teaching platform and tools (technology management in education)"** organized by scrollwell from November 25 - December 15, 2022.

Dr. B. Srinivasa Rao