Curriculum Vitae

Dr Suryanarayana Gangolu has been working as an Assistant Professor at the National Institute of Technology, Tiruchirappalli since June 2024 in the Department of Electrical and Electronics Engineering. Earlier, Dr Gangolu served 10 years at the National Institute of Technology, Uttarakhand. He received a PhD degree in Electrical Engineering from NIT Tiruchirapalli, Tamilnadu in the year 2019 on the thesis topic of "Effective relaying schemes for long transmission line protection". He received an M.Tech degree in Power Systems specialization from NIT Kurukshetra in the year 2012 and a B.Tech in EEE at QIS CET-Ongole (affiliated with JNTU) in the year 2010. He has 12 years of teaching experience. Currently, he has been carrying out research in the field of protection of modern power systems. Further, he has published 38 research publications in various reputed journals and conferences. Furthermore, for the year 2021, the Mtech student thesis was awarded the POSOCO Power Awards (PPSA) in Master Category-2021 under his supervision on the topic "Novel Protection Techniques for Highly PV Connected Distribution System".

1. Name: Dr. SURYANARAYANA GANGOLU
2. Designation: ASSISTANT PROFESSOR
3. Office Address: EEE, NIT Trichy
4. Telephone (Direct) (Optional): ---

   Telephone : Extn (Optional):

   Mobile (Optional):
5. Email (Primary): suryanarayana@nitt.edu Email (Secondary) : Suryanarayana.eee@gmail.com
6. Field(s) of Specialization: Power system Protection of Transmission line and Microgrid. Cyber security of Modern power system
7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Uttarakhand	07/2014	06/2024
Assistant Professor	NIT Trichy	06/2024	Till now

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
PhD (Electrical and Electronics Engineering)	NIT Trichy	2019	_	_
Power System (Electrical Engineering)	NIT Kurukshetra	2012	First	_
B.Tech (Electrical and Electronics Engineering)	JNTU Kakinada	2010	first	_

9. Academic/Administrative Responsibilities within the University

S. No	Position Held	From	To	Organization
11	Seating & Logistic Committee Member	03/08/2024	03/08/2024	NIT Trichy
10	HoD	01/03/2024	03/05/2024	NIT Uttarakhand
9	Medical Service- Coordinator	03/06/2019	29/02/2024	NIT Uttarakhand
8	Faculty In-Charge (Technical Activity)	24/07/2017	02/06/2019	NIT Uttarakhand
7	Faculty in Charge (Hostel)	18/07/2016	05/07/2017	NIT Uttarakhand
6	Member (IPC)	12/07/2018	02/06/2019	NIT Uttarakhand
5	Member (Students mess)	03/06/2019	21/04/2022	NIT Uttarakhand
4	Member-Indoor/Outdoor Games	03/06/2019	01/06/2020	NIT Uttarakhand
3	Member (Innovation & Incubation)	01/06/2020	08/12/2020	NIT Uttarakhand
2	Member (Special Cell)	06/07/2016	25/08/2017	NIT Uttarakhand
1	Member (Grievance Cell)	06/07/2016	24/07/2017	NIT Uttarakhand

S.	Position Held	From	To	Organization

No				
17	Industrial Interaction coordinator	10/06/2024	Till date	NIT Trichy
16	PE lab Advisory Member	10/06/2024	Till date	NIT Trichy
15	NBA Coordinator	10/06/2024	Till date	NIT Trichy
14	DUGC Convener	01/07/2020	21/08/2022	NIT Uttarakhand
13	DUGC Secretary	01/07/2020	21/08/2022	NIT Uttarakhand
12	DPGC Secretary	01/07/2020	21/08/2022	NIT Uttarakhand
11	Degree Committee Member (M.Tech)	01/07/2020	21/08/2022	NIT Uttarakhand
10	M.Tech Project Evaluation Committee Member	01/07/2020	21/08/2022	NIT Uttarakhand
8	Culture and Technical Activity Coordinator	01/07/2020	21/08/2022	NIT Uttarakhand
7	Time Time Coordinator	01/07/2020	21/08/2022	NIT Uttarakhand
6	In-charge Examination	01/07/2020	21/08/2022	NIT Uttarakhand
5	In-charge Annual Report	01/02/2019	06/07/202	NIT Uttarakhand
4	NBA Coordinator	01/02/2019	06/07/2020	NIT Uttarakhand
3	Lab in Charge (Simulation Lab)	23/07/2019	01/11/2020	NIT Uttarakhand
2	Lab in Charge (Measurement Lab)	15/01/2015	07/06/2014	NIT Uttarakhand
1	Faculty advisor	15/01/2015	25/05/2023	NIT Uttarakhand

10. Academic/Administrative Responsibilities outside the University

1. Member for **Board of Studies** (**BoS**), Department of Electronics, Electrical Engineering, QIS College of Engineering and Technology, Ongole, Andhra Pradesh (July 2024 - Going on).

11. Awards, Associateships etc.

1. **Best paper award** in the 5th International Conference on Power, Control & Embedded Systems (ICPCES), Conducted by MNNIT, Allahabad, **from** January **06-08, 2023**.
2. **Organizing Secretary and Technical Chair** 2nd International Conference on Computer, Electronics, Electrical Engineering and their applications (**IC2E3 2024**), Organized by NIT, Uttrakhand from **June 6-7, 2024.**

12. Fellowships

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13. Details of Academic Work

(i) Curriculum Development- Digital Relaying for modern power system

(ii) Courses taught at Postgraduate and Undergraduate levels

1) Power systems I & II,
2) Power system switchgear and Protection,
3) Power Generation Systems.
4) Transmission and Distribution systems
5) Power system Analysis
6) Distribution System Modelling and Analysis
7) Measurement and Instrumentation
8) Basic Electrical Engineering,
9) Electrical Safety
10) Digital Power System Protection
11) Power System Economics and Control Techniques
12) EHVAC Transmission System

(iii)Projects guided at Postgraduate level

1. Title: **Both End Current Based Fault Discrimination on Techniques in Grid Connected PV System** Org.: NIT Uttarakhand Student Name: Snehalatha and MT20EEE003 Academic Year: 2021-2022.

2. Title: **Fault Detectiontion and Classification on Technique in Grid Connected Floating PV System Using DC Leakage System** Org.: NIT Uttarakhand Student Name: Gampa Srinivas Murthy and MT19EEE006 Academic Year: 2020-2021.

3. Title: **Sequence Component-Based Fault Discrimination on Techniques in Grid Connected PV System** Org.: NIT Uttarakhand Student Name: Ashutosh Sharma and MT19EEE007 Academic Year: 2020-2021.

4. Title: **New Fault Detection on Schemes for Transmission Line Using Wavelet Transform** Org.: NIT Uttarakhand Student Name: Ekta Priyadarsini and MT18EEE008 Academic Year: 2019-2020.

5. Title: N**ovel Protec on Techniques for Highly PV Connected Distribution on Syste**m Org.: NIT Uttarakhand Student Name: Sunil Kumar Maurya and MT18EEE007 Academic Year: 2019-2020. (Received **POSOCO** award)
6. Title: **Advanced Relaying Schemes for Modern Power Syste**m Org.: NIT Uttarakhand, Student Name: Rishabh Narendra Jain and MT17EEE007 Academic Year: 2018-2019.
7. Title: **Novel Protec on and Fault Loca on Techniques in Transmission Networks** Org.: NIT Uttarakhand Student Name: Gade Kesava Rao and MT16EEE004 Academic Year: 2017-2018.

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
-	-	-	-	-

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
_-	-	-	-

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

3. Programme: **Recent Trends in Microgrid**, Organization: NIT Uttarakhand Period: 27.09.2022 To 01.10.2022 Role: Coordinator Category: Workshop.
4. Programme: **Stability Issues, Challenges and Solutions in Renewable Integrated Power Systems**, Organization: NIT Uttarakhand Period: 28.02.2022 To 04.03.2022 Role: Coordinator Category: STTP.
5. Programme: **Microgrid Issues, Challenges and Solutions in Smart Grid,** Organization: NIT Uttarakhand, Period: 08.03.2021 To 12.03.2022 Role: Coordinator Category: STTP.
4. Programme: **Renewable and Sustainable Development of Electrical Energy Systems**, Organization: NIT Uttarakhand Period: 25.11.2019 To 29.11.2019 Role: Coordinator Category: STTP.

18. Invited Talks delivered

1.Delivered talk in the alumni interactive on "**Electric Power Engineering**" Organized by the Department of Electrical and Electronics Engineering, NIT Tiruchirappalli, from 13th to 17th September 2021.
2.Delivered a talk on "**Protection Issues and Challenges in PV Connected Distribution System**" AICTE Training and Learning (ATAL) sponsored a one-week online Faculty Development Programme, from 13th to 17th September 2021, Organized by the Department of Electrical Engineering, PTU, Puducherry.
3. Delivered an expert talk on "**Protection Challenges with Renewable Sources in Modern Power System**" in a sponsored Two-week Faculty Development Programme (FDP) Organized by the Department of Electrical and Electronics Engineering, BIT Campus, Anna University, Tiruchirappalli, from 26th Nov. to 9th Dec. 2021.

19. Membership of Learned Societies

1) Senior Member - IEEE

20. Academic Foreign Visits

Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

1. **Suryanarayana Gangolu**., Sarangi, S., & Mohanty, R. (2024). Relay algorithm for STATCOM compensated line using differential current ratio—International Journal of Electrical Power & Energy Systems, 155, 109473.
2. **Suryanarayana Gangolu**., & Sarangi, S. (2023). A new pilot relaying technique for the STATCOM compensated transmission line—International Journal of Electrical Power & Energy Systems, 146, 108759.
3. **Suryanarayana Gangolu**., Raja, P., Selvan, M. P., & Murali, V. K. (2019). An effective algorithm for fault discrimination and estimation of fault location in transmission lines. IET Generation, Transmission & Distribution, 13(13), 2789-2798.
4. **Suryanarayana Gangolu**., Rao, G. K., Sarangi, S., & Raja, P. (2019). Directional relaying using parameter estimation approach. International Journal of Electrical Power & Energy Systems, 107, 597-604.
5. **Suryanarayana Gangolu**., & Sarangi, S. (2020). A novel complex current ratio-based technique for transmission line protection. Protection and Control of Modern Power Systems, 5(3), 1-9.
6. **Suryanarayana Gangolu**., & Sarangi, S. (2023). Fuzzy-based fault detection and classification in grid-connected floating PV System. Journal of Control, Automation and Electrical Systems, 34(2), 324-332.
7. Maurya, S. K., **Suryanarayana Gangolu**., & Sarangi, S. (2023). A Modified Over-Current Relaying Scheme for Highly PV Connected Distribution System. Arabian Journal for Science and Engineering, 48(5), 5979-5990.
8. **Suryanarayana Gangolu**., & Sarangi, S. (2024). Enhanced sensitive phase alpha plane scheme against high resistance ground faults. International Journal of Emerging Electric Power Systems, 25(2), 221-235.
9. **Suryanarayana Gangolu**., & Sarangi, S. (2022). A New Differential Current Protection Algorithm for Three-Terminal Line. Arabian Journal for Science and Engineering, 47(11), 14075-14085.
10. **Suryanarayana Gangolu**., & Sarangi, S. (2023). A new differential current circle diagram-based technique for long transmission line protection. International Journal of Emerging Electric Power Systems, 24(2), 115-127.

(B) Conferences/Workshops/Symposia Proceedings

1. E. Priyadarshini and **Suryanarayana Gangolu**, "Local End Data Based Fault Detection Technique in Transmission Line Using DWT," 2020 IEEE Students Conference on Engineering & Systems (SCES), Prayagraj, India, 2020, pp. 1-6, doi: 10.1109/SCES50439.2020.9236709.
2. **Suryanarayana Gangolu** and S. Sarangi, "A Novel Complex Current Ratio-Based Technique for Transmission Line Protection," in Protection and Control of Modern Power Systems, vol. 5, no. 3, pp. 1-9, July 2020, doi: 10.1186/s41601-020-00168-6.
3. A. Sharma and **Suryanarayana Gangolu**, "Sequence Impedance Angles based Fault Discrimination Technique in Grid Connected Solar PV System," 2021 International Conference on Intelligent Technologies (CONIT), Hubli, India, 2021, pp. 1-6, doi: 10.1109/CONIT51480.2021.9498492.
4. S. M. Gampa and **Suryanarayana Gangolu**, "A New Technique for Fault Discrimination in Shunt Compensated Transmission Line," 2021 2nd International Conference for Emerging Technology (INCET), Belagavi, India, 2021, pp. 1-6, doi: 10.1109/INCET51464.2021.9456241.
5. A. Sharma and **Suryanarayana Gangolu**, "Positive Sequence Impedance based Fault Discrimination Technique in Grid Connected Solar PV System," 2021 2nd International Conference for Emerging Technology (INCET), Belagavi, India, 2021, pp. 1-6, doi: 10.1109/INCET51464.2021.9456143.
6. S. M. Gampa, **Suryanarayana Gangolu** and A. Sharma, "Negative Sequence-based Fault Discrimination Technique for Shunt Compensated Transmission Line," 2021 2nd International Conference for Emerging Technology (INCET), Belagavi, India, 2021, pp. 1-6, doi: 10.1109/INCET51464.2021.9456429.
7. R. N. Jain, S. Sarangi and **Suryanarayana Gangolu**, "Improvising Differential Protection Scheme to Differentiate Between Internal and External Fault in Presence of Charging Current," 2018 IEEE 8th Power India International Conference (PIICON), Kurukshetra, India, 2018, pp. 1-6, doi: 10.1109/POWERI.2018.8704450.
8. Snehalatha and **Suryanarayana Gangolu**, "Fault Location Estimation Algorithm using Local End Data for Transmission Line," 2021 IEEE 8th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), Dehradun, India, 2021, pp. 1-6, doi: 10.1109/UPCON52273.2021.9667625.
9. A. Saini and **Suryanarayana Gangolu**, "Sequence Current Components Based Directional Relaying Technique for Unsymmetrical Faults," 2022 22nd National Power Systems Conference (NPSC), New Delhi, India, 2022, pp. 379-384, doi: 10.1109/NPSC57038.2022.10069934.
10. **Suryanarayana Gangolu** and S. Sarangi, "An Inverse Differential Current Scheme for Transmission Line Protection," 2022 IEEE Delhi Section Conference (DELCON), New Delhi, India, 2022, pp. 1-6, doi: 10.1109/DELCON54057.2022.9753473.

11. **Suryanarayana Gangolu** and S. Sarangi, "Additional logic for Alpha Plane Algorithm under Ground faults," 2023 International Conference on Computer, Electronics & Electrical Engineering & their Applications (IC2E3), Srinagar Garhwal, India, 2023, pp. 1-6, doi: 10.1109/IC2E357697.2023.10262729.
12. **Suryanarayana Gangolu** and S. Sarangi, "Novel Current Based Unit Protection Scheme for Transmission Line Connected to The Inverter Based DG," 2023 5th International Conference on Power, Control & Embedded Systems (ICPCES), Allahabad, India, 2023, pp. 1-6, doi: 10.1109/ICPCES57104.2023.10076046.
13. Snehalatha and **Suryanarayana Gangolu**, "Phase Current Ratio Based Protection Scheme for Grid Connected Renewable System," 2022 2nd International Conference on Intelligent Technologies (CONIT), Hubli, India, 2022, pp. 1-7, doi: 10.1109/CONIT55038.2022.9848324.
14. Snehalatha and **Suryanarayana Gangolu**, "DC Transient Current Polarity based Protection Scheme for Grid Connected PV System," 2022 2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET), Patna, India, 2022, pp. 1-6, doi: 10.1109/ICEFEET51821.2022.9847810.
15. Snehalatha and **Suryanarayana Gangolu**, "Sequence Current Ratio Based Relaying Technique for Grid Connected PV System," 2022 IEEE Delhi Section Conference (DELCON), New Delhi, India, 2022, pp. 1-7, doi: 10.1109/DELCON54057.2022.9752956.
16. A. Sharma, S. K. Maurya, **Suryanarayana Gangolu** and T. N. Gupta, "Wavelet Transform based Passive Technique to Detect Islanding in PV Interactive Power System," 2020 IEEE 7th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), Prayagraj, India, 2020, pp. 1-6, doi: 10.1109/UPCON50219.2020.9376470.
17. S. K. Maurya, **Suryanarayana Gangolu** and S. Sarangi, "Quadrature based over-current relay for PV penetrated primary distribution system," 2020 21st National Power Systems Conference (NPSC), Gandhinagar, India, 2020, pp. 1-6, doi: 10.1109/NPSC49263.2020.9331893.
18. S. K. Maurya, S. Sarangi and **Suryanarayana Gangolu**, "Secondary Controller for PV Sources in DC/AC Hybrid Microgrid," 2019 International Conference on Electrical, Electronics and Computer Engineering (UPCON), Aligarh, India, 2019, pp. 1-6, doi: 10.1109/UPCON47278.2019.8980011.
19. S. K. Maurya, **Suryanarayana Gangolu** and S. Sarangi, "Unsymmetrical Fault Analysis of PV for Different Transformer Configurations," 2020 IEEE 9th Power India International Conference (PIICON), Sonepat, India, 2020, pp. 1-6, doi: 10.1109/PIICON49524.2020.9112957.

(C) Books & Monographs

1. Gupta, S., & **Suryanarayana Gangolu**. (2022, January). Microgrid Islanding Detection Using Travelling Wave Based Hybrid Protection Scheme. In International Conference on Electrical and Electronics Engineering (pp. 92-105). Singapore: Springer Nature Singapore.
2. Srinivasa Murthy, G., & **Suryanarayana Gangolu**. (2022). Fault Detection in Floating PV System Using DC Leakage Current. In Control and Measurement Applications for Smart Grid: Select Proceedings of SGESC 2021 (pp. 179-189). Singapore: Springer Nature Singapore.
3. **Suryanarayana Gangolu**, Gupta, Nitin Kumar, Survey of Digital Overcurrent Relay for Microgrid Protection (Accepted-2024).