Dr. Ankur Rai

Current position: Technical Assistant

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Employment History

2021 – Present **Technical Assistant.** Electrical and Electronics Engineering Department, National Institute of Technology, Meghalaya, India. (Dec 2021– Present.)

2018 – 2021 **Assistant Professor.** Electrical and Electronics Engineering Department, National Institute of Technology, Nagaland, India. (Contract basis Sep 2018– Apr 2021.)

2018 – 2018 **Guest Faculty.** Electrical and Electronics Engineering Department, National Institute of Technology, Nagaland, India. (Jan 2018–Sep 2018.)

2015 – 2017 **Teaching Assistant.** Electrical and Electronics Engineering Department, National Institute of Technology, Nagaland, India. (Aug 2015–Jun 2017.)

Education

2017 – 2021 **Ph.D., Electrical and Electronic Engineering, NIT Nagaland, India**
Thesis title: *Meta-heuristic Optimization based Load Frequency Control Design for Interconnected Power System.*
First Class. with 9.75 CGPA (Ph.D. defense in feb-2024).

2015 – 2017 **M.Tech, Power System Engineering, NIT Nagaland, India**.
Thesis title: *Speed control of DC Servo motor using myRIO.*
First Class. with 7.75 CGPA.

2010 – 2014 **B.Tech, Electrical and Electronic Engineering, RRIMT Lucknow, UP, India.**
Thesis title: *Speed control of DC motor based on micro controller switch.*
First Class. with 66.00% .

Research Publications

Journal Articles

1. Acharya, D., **Ankur Rai**, & Das, D. K. (2023). Optimal rule based fuzzy-pi controller for core power control of nuclear reactor. *Annals of Nuclear Energy*, *194*, 110118.
2. Singh, P. P., **Ankur Rai**, & Roy, B. K. (2022). Memristor-based asymmetric extreme multistable hyperchaotic system with a line of equilibria, coexisting attractors, its implementation and nonlinear active-adaptive projective synchronisation. *The European Physical Journal Plus*, *137*(7), 875.
3. **Ankur Rai** & Das, D. K. (2022a). Adaptive quantum class topper optimization tuned three degree of freedom-pid controller for automatic generation control of power system incorporating ipfc and real-time simulation. *Soft Computing*, *26*(7), 3273–3291.
4. **Ankur Rai** & Das, D. K. (2022b). The development of a fuzzy tilt integral derivative controller based on the sailfish optimizer to solve load frequency control in a microgrid, incorporating energy storage systems. *Journal of Energy Storage*, *48*, 103887.
5. **Ankur Rai** & Das, D. K. (2022c). Ennoble class topper optimization algorithm based fuzzy pi-pd controller for micro-grid. *Applied Intelligence*, *52*(6), 6623–6645.
6. **Ankur Rai** & Das, D. K. (2020). Optimal pid controller design by enhanced class topper optimization algorithm for load frequency control of interconnected power systems. *Smart Science*, *8*(3), 125–151.

Skills

Languages	Strong reading, writing and speaking competencies for English, Hindi.
Coding	Matlab, LabVIEW, C, C++, Multisim, Python, HTML.
Hardware tools	myRIO, QUANSER, Opal-RT, Arduino.
Misc.	Academic research, teaching, project, training, Ms-Word office, LaTeX typesetting and publishing.

Miscellaneous Experience

Awards and Achievements

2017	Awarded certificate of Quarterfinalist in DST and Texas Instruments India Innovation Challenge Design Contest 2017, Anchored by IIM, Bangalore.
	Awarded certificate of participation in ICETNMST-2017 conference conducted by NIT, Nagaland.
	Awarded certificate of participation in Design with we bench online program conducted by TI India university program.
2015	Qualified Graduate aptitude test in engineering **(GATE-2015)** conducted by IIT Kanpur.
2013	Awarded certificate of achievement for vocational training on MATLAB by UPTEC computer consultancy LTD.

Workshop Attended

17^{th} Feb-2021	A Blended Workshop on National Education Policy 2020 with a focus on "Higher Education and Research".
05^{th}-9^{th} Sep-2020	Engineering Applications of Optimization Techniques (EAOT 2020).
17^{th}-21^{st} Aug-2020	Aspects of Modern Optimization Techniques in Science and Engineering.
17^{th}-20^{th} June-2020	Role of Artificial Intelligence in Future Microgrid Control.
28^{th} May-01^{st} June-2018	Faculty Development program on Electric Vehicle.
5^{th}-9^{th} Dec-2017	Control system engineering and its application: simulation and real-time implementation using MATLAB and LabVIEW platform.
25^{th} Feb-2017	Recent trends in power system.
28^{th}-30^{th} July-2016	Internet of things.

PERSONAL DETAILS

Father	Ashok Rai.
Date of Birth	05/05/1994.
Nationality	Indian.
Residence address	Village Narayanpur, Post Aamghat, Dist Ballia, U.P (277203).

Declaration

I hereby declare that the above information is true to best of knowledge.

Yours sincerely
(Dr. Ankur Rai)