FACULTY PROFILE

Name: Dr Subramanya K

Designation: Assistant Professor

Qualification: B.E, M.Tech.

Joining Date: 16-07-2012

Residential Address: LIG 36, KHB COLONY, KAVOOR POST MANGALORE 575015

Office Ph: 0824-2263753/54/55 (4 Lines) Extn :

Mobile No.:9986870096

Email: subramanya@sjec.ac.in

Current Responsibility:

Educational Qualification

Degree	University	Specialization	Year of passing
PhD	IIT Roorkee	Static Machines	2024
M. Tech	VTU	Power Electronics	2012
B. E	VTU	Electrical & Electronics	2007
DEE	KSB	Electrical & Electronics	2003

Work Experience:

Period	Description
2012 to present	Assistant Professor in the Department of Electrical and Electronics, Mangaluru
2008 to 2012	Four year experiences as Enterpruner in **Ambition Microlabs.** Over the last few years, Ambition Microlabs has been successfully able to develop many innovative projects and pannel boards across different arenas.
2008 to 2009	One year experience as a **"Graduate Trainee"** in Electrical Maintenance Division at **NEW MANGALORE PORT TRUST**, Panambur, Mangalore. **Job Description:** 1. Operation and maintenances of 33KV/11KV master unit sub-station and 33KV switch yard, diesel generator sets with auto synchronizing system, and 11KV/ 3.3KV / 433V substation and distribution centers. 2. Preparing estimates, maintenance and supervision of electrical works.
2007 to 2008	One year experience in Generator department at **GREENSOL POWER SYSTEMS PVT.LTD, BANGALORE,** an 'Indo-china' company (A joint venture with HTC, China), catering to Biomass, Co-generation and captive power plants requirements. **Job Description:** 1. Assisting GENERATOR testing and commissioning works. 2. Root cause analysis for problems encountered to provide enduring solutions. 3. Prioritize customer calls, prepare work proposals and have regular discussion with terms on general issues. 4. Coordinating with vendors and customers, and preparing monthly work reports.

Details of Research Publications/Presentation:

International Journal	National Journal	International Conference	National Conference	Book Published
5	2	10	2	1

Workshop/others

No. of workshop/Seminar/FDP attended	Interaction with the outside	No of funded Projects/IPR	No. of Project Guided	No. of PhD students registered

	world		UG	PG	PhD	
25	3		6	3		

Publications

[1]. Subramanya K., Thanga Raj Chelliah, *"DC bias impact analysis on the capability of power transformer and failure risks"*, Engineering Failure Analysis, Volume 163, Part B, 2024, 108537, ISSN 1350-6307, https://doi.org/10.1016/j.engfailanal.2024.108537.

[2]. Subramanya K., Thanga Raj Chelliah, *"Capability of synchronous and asynchronous hydropower generating systems: A comprehensive study"*, Renewable and Sustainable Energy Reviews, Volume 188, 2023, 113863, ISSN 1364-0321, https://doi.org/10.1016/j.rser.2023.113863.

[3]. Subramanya K and T. R. Chelliah, "DC bias Capability of Power Transformers associated with Pumped Storage Hydro Power Plants", Power Engineer Journal, Year : 2023, Volume : 25, Issue : 1, page: 45 page: (48) Print ISSN: 2229-4465. Online ISSN : 0976-2396. https://www.indianjournals.com/ijor.aspx?target=ijor:pej&volume=25&issue=1&article=007

[4]. Subramanya K, Kanakabettu AKM, Mahadevappa M. *"Functional electrical stimulation for stoke rehabilitation". Med. Hypotheses* 2012; First published online: Feb 28, 2012, http://dx.doi.org/10.1016/j.mehy.2012.01.027.

[5]. Subramanya K, Pinto APJ, Kanakabettu AKM, Arya BK, Mahadevappa M. *"Surface electrical stimulation technology for stroke rehabilitation: A review of 50 years of research",* J. Med. Imaging Health Inf. 2012, 2(1):1-14. http://dx.doi.org/10.1166/jmihi.2012.1069.

[6]. Subramanya K. Mudhol A. *"An innovative device to predict acute hypotension episodes in critically ill patients: Hypothesis and prototype development".* Med. Hypotheses 2012; First published online: 29 March 2012, http://dx.doi.org/10.1016/j.mehy.2012.03.004.

[7]. Subramanya K. & Ajithanjaya Kumar Mijar Kanakabettu, *"Functional Electrical Stimulation For Neuro Rehabilitation- A new Design Paradigm"*, Nitte University journal of Health Science (NUJHS), Nitte University, Vol.2, No.3, September 2012. http://nitte.edu.in/journal/SepSplit/fesfnr.pdf

[8]. Bhat L, Subramanya K, "Human "tuning forks"! Do circadian clocks govern good marital matching?" *Plos ONE* 2011. (*A Public Library of Science journal*) Available at: https://journals.plos.org/plosone/article/comment?id=10.1371/annotation/317e6b7c-7715-4f36-a8ac-064d2adc2a2e

[9]. Vishnuprasada V Bhat, Subramanya K. Aortic arch physiodynamics: An engineering and evolutionary perspective. Submitted to *Journal of Mechanics in Medicine and Biology*. http://www.worldscientific.com/worldscinet/jmmb

Text book Chapter

Arya BK, Subramanya K, Mahadevappa M, Kumar R. Electrical stimulation devices for cerebral palsy: design considerations, therapeutic effects and future directions. In: Yue W, Chattopadhyay S, Lim T-C, Acharya RU (eds). Advances in Therapeutic Engineering. *CRC Press, Taylor & Francis Group, UK.* To be published in November 1, 2012.

http://www.taylorandfrancis.com/books/details/9781439871737.

Conferences

[1]. K. Subramanya and T. R. Chelliah, "Thermo Electrical Analysis and its Correlation in a DC Biased Power Transformer Subjected to Over and Under Excitations," *2023 13th International Conference on Power, Energy and Electrical Engineering (CPEEE)*, Tokyo, Japan, 2023, pp. 106-111, doi: 10.1109/CPEEE56777.2023.10217370.

[2]. S. K and T. R. Chelliah, "Identification of SOZ and Influence on Neutral Current and Flux Distribution Capability in a Y-y Power Transformer Subjected to DC Bias," *2023 Joint International Conference on Digital Arts, Media and Technology with ECTI Northern Section Conference on Electrical, Electronics, Computer and Telecommunications Engineering (ECTI DAMT & NCON)*, Phuket, Thailand, 2023, pp. 290-295, doi: 10.1109/ECTIDAMTNCON57770.2023.10139765.

[3]. S. K and T. R. Chelliah, "DC Bias Impact Analysis on Hydropower Plant Excitation Transformer," *2022 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)*, Jaipur, India, 2022, pp. 1-6, doi: 10.1109/PEDES56012.2022.10080732.

[4]. Subramanya K and T. R. Chelliah, "DC bias Capability of Power Transformers associated with Pumped Storage Hydro Power Plants", *CBIP National Conference on Energy Storage including Pumped Storage – Opportunities and Challenges, Shimla*, India, 4-5 Nov. 2022.

[5]. K. Subramanya and Ajithanjaya Kumar M. K., "Design of a programmable flyback based FES system for restoring foot drop in stroke rehabilitation," *2015 Annual IEEE India Conference (INDICON)*, New Delhi, India, 2015, pp. 1-5, doi: 10.1109/INDICON.2015.7443860.

[6]. K. Subramanya, V. V. Bhat and S. Kamath, "A wearable device for monitoring galvanic skin response to accurately predict changes in blood pressure indexes and cardiovascular dynamics," *2013 Annual IEEE India Conference (INDICON)*, Mumbai, India, 2013, pp. 1-4, doi: 10.1109/INDCON.2013.6726085

[7]. B. K. Arya, K. Subramanya, P. K. Lenka and M. Mahadevappa, "A simple model for bedside evaluation of current for neuromuscular electrical stimulation in cerebral palsy," *2013 IEEE Point-of-Care Healthcare Technologies (PHT)*, Bangalore, India, 2013, pp. 148-151, doi: 10.1109/PHT.2013.6461306.

[8]. B. K. Arya, J. Mohapatra, K. Subramanya, H. Prasad, R. Kumar and M. Mahadevappa, "Surface EMG analysis and changes in gait following electrical stimulation of quadriceps femoris and tibialis anterior in children with spastic cerebral palsy," *2012 Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, San Diego, CA, USA, 2012, pp. 5726-5729, doi: 10.1109/EMBC.2012.6347295.

[9]. K. Subramanya, Sandeep Kamath & and Hari Prasad, "Development of a wearable device for monitoring electrodermal activity and predicting changes in different blood pressure indexes", IEEE EMBS, https://www.jstage.jst.go.jp/article/jsmbe/51/Supplement/51_R-177/_pdf

[10]. K. Subramanya, V. V. Bhat and S. Kamath, "A wearable device for monitoring galvanic skin response to accurately predict changes in blood pressure indexes and cardiovascular dynamics," *2013 Annual IEEE India Conference (INDICON)*, Mumbai, India, 2013, pp. 1-4, doi: 10.1109/INDCON.2013.6726085

[11]. K. Subramanya and Hari Prasad, "Automatic ECG analysis methodology for discrimination of atrial flutter, atrial fibrillation and normal sinus rhythm", International Conference on Biomedical Engineering (ICBME-2011), Manipal Institute of Technology, Manipal, Karnataka, December 10-12, 2011.

[12]. K. Subramanya and Abdhul Kareem "A comparative study of bio-inspired algorithms for the fuzzy controller design". National conference on Modern Trends in Science and Technology organized by Dr. M. V. Shetty Institute of Technology, Mangalore, October 14-15, 2011

[13]. K. Subramanya and Ajithanjaya Kumar MK "A Study on Functional electrical stimulator for post-stroke: An emerging rehabilitation tool for stroke patients", National conference on communication, control and computing held in SJEC Mangalore, February 12th 2011.

Subjects Taught

UG	PG
Power Electronics **Basic Electrical Engineering** **Industrial Drives and application** **Testing and Commissioning of Power System Apparatus** **Operation and Maintenance Of Solar Electrical System** **Computer Aided Electrical Drawing**	**Power Electronics System Design Using ICS** **Modeling and Simulation Of Power Electronic System**

Technical Interest:

Ansys Modelling

Bio Medical Instrumentation

Skill Sets:

Ansys

Auto CAED

MatLab,

Pspice,

LabView

Awards/Recognition

- Research paper entitled “Thermo Electrical Analysis and its Correlation in a DC Biased Power Transformer subjected to Over and Under Excitation” has been presented in Tokyo Japan, at the 13th International Conference on Power, Energy, and Electrical Engineering (CPEEE 2023), held between February 25th and 27th, 2023. This research paper was awarded the **best paper award** in CPEEE 2023.

- Research paper entitled ““A Study on Functional electrical stimulator for post-stroke: An emerging rehabilitation tool for stroke patients”, has been presented in SJEC Mangaluru, at the National Conference on Smart Computing and Control, held between July 29th and 30th, 2017. This research paper was awarded the **best paper award** in NCSCC 17.