VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Electrical Engineering (SELECT)

Mission

To be a leader for academic excellence in the field of electrical, instrumentation and control engineering imparting high quality education and research leading to global competence for the societal and industrial developments.

Vision

- Impart high quality education and interdisciplinary research by providing conducive teaching learning environment and team spirit resulting in innovation and product development.
- Enhance the core competency of the students to cater to the needs of the industries and society by providing solutions in the field of electrical, electronics, instrumentation and automation engineering.
- Develop analytical skills, leadership quality and team spirit through balanced curriculum.

DEAN'S MESSAGE

Message from Dean, School of Electrical Engineering:

The School of Electrical Engineering has steadily grown in eminence since its inception in 2009 and enables undergraduate and graduate students to provide technological solutions to societal problems. In particular, the QS world subject rank of our EEE program has improved by 50 ranks over the past years and stands at **201-250 globally as of 2023**. The field of Electrical Engineering is evolving faster than ever, growing ever more complex and multidisciplinary. We keep abreast of latest developments by continually revising our curriculum with inputs from academia and industry. In addition we ensure that at least 80 % of students in every batch take multiple Value Added Programs (VAPs) to acquire new employability skills. Since the start of our academic year in July 2022, the School of Electrical Engineering has organized **15 international Guest Lectures** to provide global exposure and make our students cognizant of research in top international universities. An industry sponsored hackathon was organized to provide students with experience in solving real-world problems. **12 Faculty Development Programs** and **16 industrial visits** were organized during this same period to improve the quality of our academic programs and help faculty adopt effective pedagogies. The faculty of our school published **354 journal papers**, **32 conference papers and 24 books/chapters** till date this academic year. I encourage you to follow the activities of our school and keep in touch with us through our official social media handles listed at the end of this newsletter.

QS WORLD UNIVERSITY RANKINGS

2023
QS World University Ranking by Subject
Electrical and Electronics Engineering
(201-250)

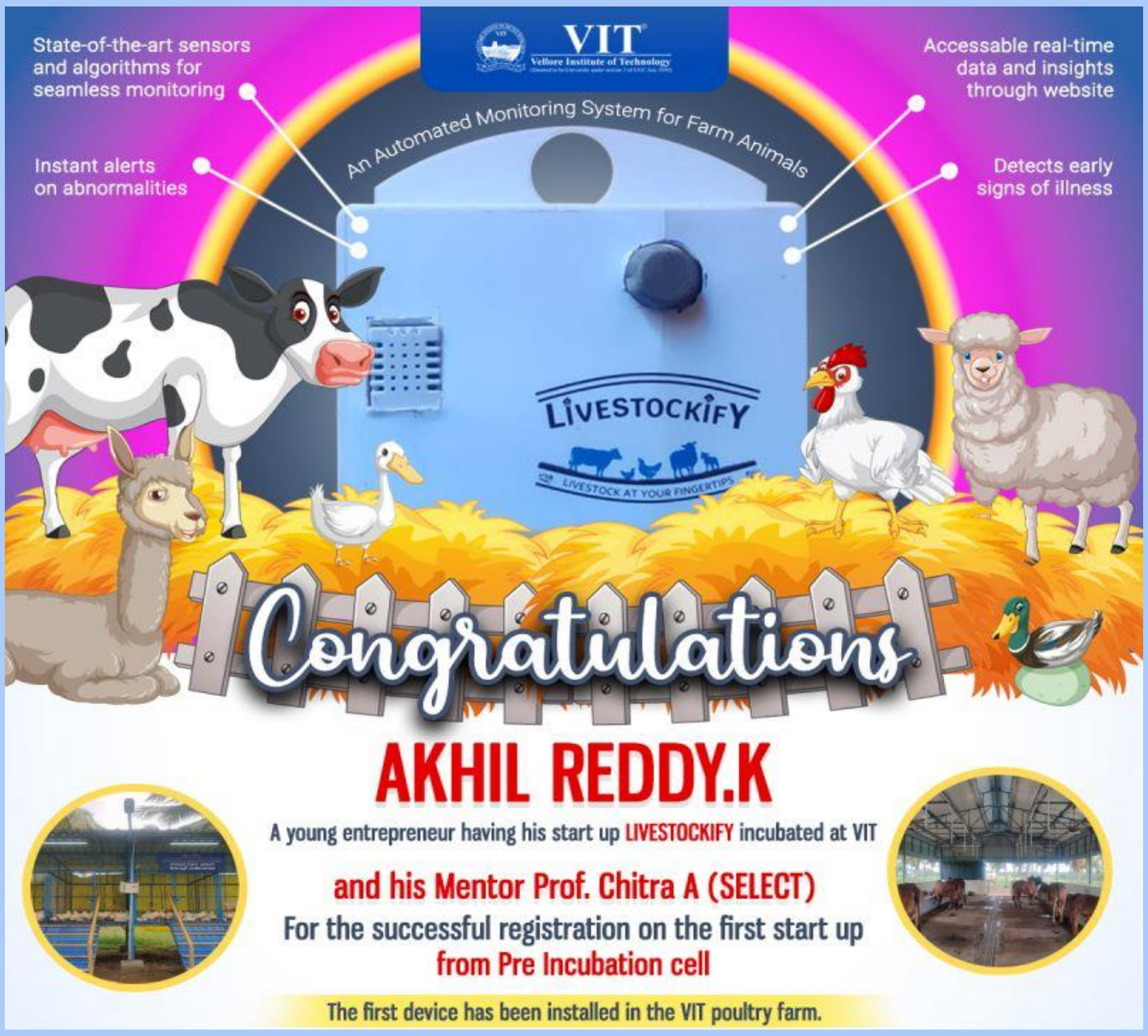
START-UP (SELECT PRE-INCUBATION CELL)

Introducing LIVESTOCKIFY: Revolutionizing Farming with Automated Health Monitoring System

A SELECT School Pre-Incubated startup LIVESTOCKIFY

A startup named LIVESTOCKIFY is going to emerge with a vision to transform the way farmers cared for their livestock. Armed with cutting-edge technology and a passion for livestock welfare, LIVESTOCKIFY introduced an innovative solution – an Automated Monitoring System that would forever change the landscape of farming.

START-UP (SELECT PRE-INCUBATION CELL)



A huge shout out to AKHIL Reddy, a BTech EEE student Classof2023 who has become a Young Entrepreneur and has his start-up LIVESTOCKIFY fostered at VIT. Dr. A. Chitra mentored Akhil Reddy throughout his entrepreneurial journey. The #SELECT School provided the initial funding for the prototype initiative development. The E-Cell SSV, VIT has financed the project to create devices for livestock automation. The VIT Poultry Farm has installed the first device.

FACULTY POSTDOCTORAL RESEARCH

DR.KOWSALYA AT KUNSAN NATIONAL UNIVERSITY

INTERNSHIP OFFERED BY SELECT

Three students from Egypt namely, (1) Omar Ahmed, (2) Farah and (3) Tasneim Elahmady are undergoing research internship for 8 weeks under AIESEC's Global Talent Internship program. The students are undergoing internship under the guidance of Dr.S.Albert Alexander.

Professor from National University of Singapore visited VIT under IEEE PELS DL program and delivered an expert lecture on "Single-phase inverter control techniques for interfacing renewable energy sources with micro-grid – Parallel connected inverter topologies with active and reactive power flow control along with grid current shaping".

FACULTY ACHIVEMENTS

TAYLOR'S UNIVERSITY
Wisdom · Integrity · Excellence

CERTIFICATE
OF
APPOINTMENT

PROF. DR STONIER ALBERT ALEXANDER
IS OFFICIALLY APPOINTED AS

ADJUNCT PROFESSOR
15 JANUARY 2023 – 31 JANUARY 2025

SELECT faculty elected as Chairman of IEEE Power Electronics Society

Dr.S.Albert Alexander, faculty of SELECT is elected as Chairman of IEEE Power Electronics Society, IEEE Madras Section.

SL. NO.: ACSE/EXPERT/JULY/2022/16

आज़ादी का अमृत महोत्सव

Celebrating 60 Years of Academic Excellence

CERTIFICATE OF APPRECIATION

is hereby awarded to

Prof. Mathew Mithra Noel

of

Vellore Institute of Technology (Deemed University), Vellore

for delivering an expert lecture in the one week online short term course on

Advanced Control Systems and Experiments (ACSE-2022)

Organized by

Department of Electrical Engineering
National Institute of Technology Kurukshetra
during July 18-23, 2022

(Dr. M. P. R. Prasad) Coordinator

(Dr. Bhanu Pratap) Coordinator

(Prof. Jyoti Ohri) Convenor

MOU SIGNED BY SELECT

The Memorandum of Understanding with KMCT Hospital, Calicut, Kerala

Team members

Dr. Jacob Raglend

Dr. Albert Alexander

Dr. Belwin Edward

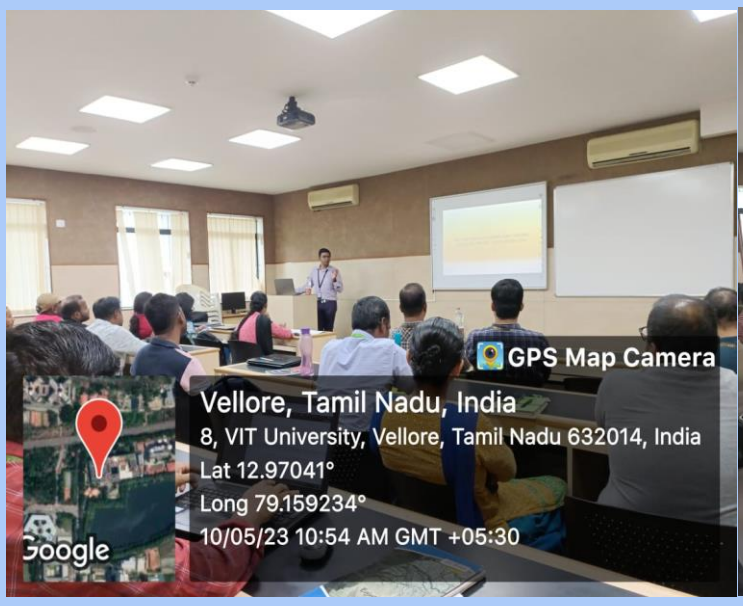
Dr. Geetha Mani

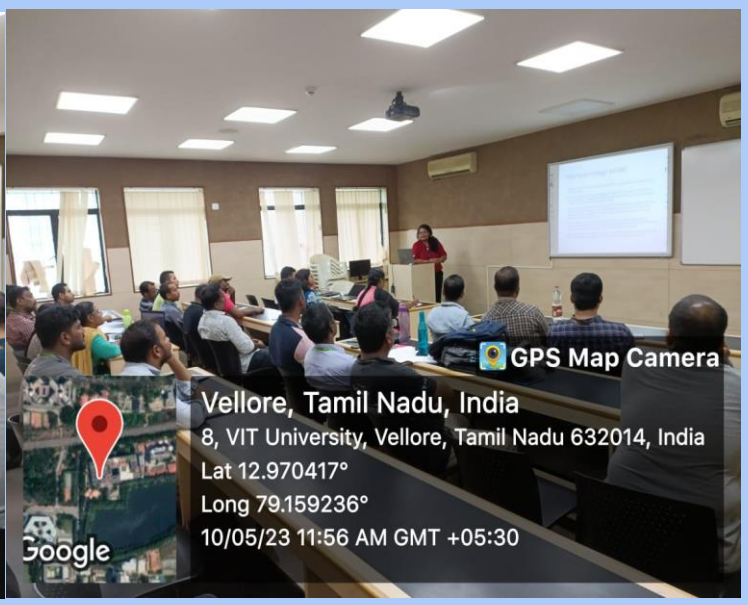
Dr. A Sharmila

Dr. T.Yuvapriya

EVENTS CONDUCTED

Faculty Development Program on Embedded Application of Power Electronics in Trucks conducted from 10/05/2023 to 12/05/2023.





FACULTY INDUSTRY VISIT

SELECT Faculty Members Visited BOSCH, Coimbatore on 30/06/2023.

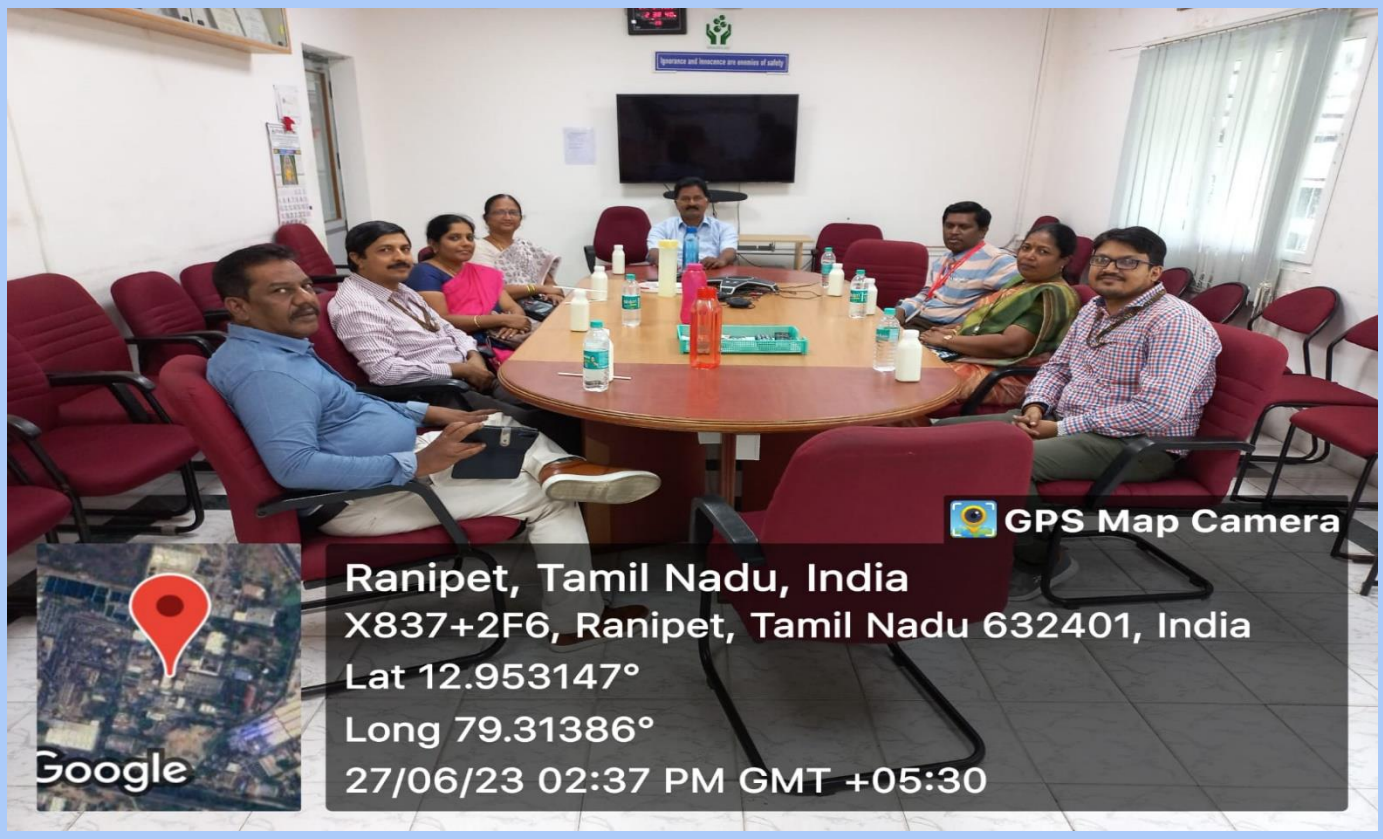
FACULTY INDUSTRY VISIT

SELECT Faculty Members Visited L and T Pvt Ltd, Chennai on 06/06/2023.

SELECT Faculty Members Visited Danfoss Industries Pvt Ltd, Chennai on 12/05/2023

SELECT Faculty Members Visited Alacritas private solutions, Bangaluru on 04/05/2023

SELECT Faculty Members Visited Thirumalai Chemicals Pvt Ltd, Thiruvalam on 27/06/2023



HIGH IMPACT FACTOR PUBLICATIONS - APRIL 2023

Gopinath M., Marimuthu R., PV-TEG output: Comparison with heat sink and graphite sheet as heat dissipators, Case Studies in Thermal Engineering, I.F. 6.268

Chikondra B., Yepes A.G., Al, Zaabi O., Al Hosani K., Doval, Gandoy J., Behera R.K., Open-Phase Fault Tolerant DTC Technique for Three-Level NPC VSI-Fed Five-Phase Induction Motor Drives, IEEE Journal of Emerging and Selected Topics in Power Electronics I.F. 5.462

Ramkumar A., Marimuthu R. The reclassification of energy sources for electrical energy, Frontiers in] Energy Research I.F. 3.858

Lal M.D., Varadarajan R., A Review of Machine Learning Approaches in Synchrophasor Technology, IEEE Access I.F. 3.476

Aishwarya M., Brisilla R.M., Design and Fault Diagnosis of Induction Motor Using ML-Based Algorithms for EV Application, IEEE Access, I.F. 3.476

Yadav P.K., Bhasker R.,, Stonier A.A., Peter G., Vijayakumar A., Ganji V. Machine learning based load prediction in smart-grid under different contract scenario IET Generation, Transmission and Distribution. I.F. 2.503

Alzahrani A., Devarajan G., Subramani S., Vairavasundaram I., Ogbuka C.U. Analysis and validation of multi-device interleaved DC-DC boost converter for electric vehicle applications, IET Power Electronics, I.F. 2.112

Sachan A., Kumar Soni S., Kumar Goyal J., Kumar, Deveerasetty K., Xiong X., Quantiser-based Hands-off control for robust [K,KL] sector, International Journal of Control, I.F. 2.102

Vankadara K., Jacob Raglend I., Cost Analysis for DC Microgrid Incorporating Renewable Energy Resources using Search- and Rescue-Based Emperor Penguin Optimization Algorithm, Electric Power Components and Systems, I.F. 1.276

Pydikalva P., Natarajan S., Aljafari B., Balasubramanian K., Thanikanti S.B., PV-Fed Micro-Inverter with Battery Storage for Single Phase Grid Applications Electric Power Components and Systems, I.F. 1.276

Manikandan R., Raja Singh R. , Fault diagnosis of wind turbine power converter using intrinsic mode functions with relative energy entropy , Circuit World, I.F. 1.027

HIGH IMPACT FACTOR PUBLICATIONS – MAY 2023

Rafikiran S., Devadasu G., Basha C.H.H., Tom P.M., Prashanth V., Dhanamjayulu, C., Kumbhar A., Muyeen S.M., Design and performance analysis of hybrid MPPT controllers for fuel cell fed DC-DC converter systems, Energy Reports, I.F. 4.937

Odayappan A., Sivakumar P., Kotawala S., Raman R., Nachiappan S., Pachiyappan. A., Venkatesh R. Comparison of a New Head Mount Virtual Reality Perimeter (C3 Field Analyzer) with Automated Field Analyzer in Neuro-Ophthalmic Disorders Journal of Neuro-Ophthalmology, I.F. 4.415

Mathew A.A.,, Shanmugasundaram V. Fabrication of Screen-Printed Single-Electrode Triboelectric Nanogenerator-Based Self-Powered Sensor for Pulse Measurement and Its Characterization Energy Technology, I.F. 4.149

Bharathidasan M., Indragandhi.V., Aljafari B. Hybrid Controlled Multi-Input DC/DC Converter for Electric Vehicle Application, International Transactions on Electrical Energy Systems, I.F. 2.639

Dhanamjayulu C., Girijaprasanna T., Experimental Implementation of Cascaded H-Bridge Multilevel Inverter with an Improved Reliability for Solar PV Applications, International Transactions on Electrical Energy Systems, I.F. 2.639

Subramanian V., Vairavasundaram I., Aljafari B., Analysis of Optimal Load Management Using a Stand Alone Hybrid AC/DC Microgrid System International Transactions on Electrical Energy Systems I.F. 2.639

Kalaiarasu S., Natarajan S., Multi-Level Active EMI Filter for Conducted EMI Noise Mitigation for TSCB Converter in EV Applications, Iranian Journal of Science and Technology - Transactions of Electrical Engineering, I.F. 1.89

Iqubal M., sathiyan P., Stonier, A.A., Vanaja D.S., Peter G., Design of a modular converter in hybrid EV charging station with efficient energy management system, Electrical Engineering, I.F. 1.63

HIGH IMPACT FACTOR PUBLICATIONS – JUNE 2023

Thirunavukkarasu M., Lala H., Sawle Y., Reliability index based optimal sizing and statistical performance analysis of stand-alone hybrid renewable energy system using metaheuristic algorithms, Alexandria Engineering Journal. I.F: 6.626

Ramadevi A., Srilakshmi K., Balachandran P.K., Colak I., Dhanamjayulu C., Khan B., Optimal Design and Performance Investigation of Artificial Neural Network Controller for Solar-and Battery- Connected Unified Pow er Quality Conditioner, International Journal of Energy Research. I.F: 4.672

Basha A.A., Ali A.M., Tayfour O.E., Changalasetty S.B., Uddin M.S., Vivekanandan S., Parthasarathy P., Supervised fuzzy control strategy for mean arterial pressure regulation using cascade scheme controller: a continuum approach of hypertension with diabetics, Soft Computing. I.F: 3.732

Reddy K.R., Basha C.H.H.,Prashanth V., Dhanamjayulu C., Shivashimpiger S., Likhitha R., A Novel on Energy Management Strategy with Maximum Exploitation of Renewables and EV Storage in Distribution Networks, International Transactions on Electrical Energy Systems. I.F: 2.639

CV A., Misron N., Saadha A., Azhar F., Stonier A.A., Shunmugham Vanaja D., System design, analysis, and experimental investigations of linear switched reluctance machines with double mover configuration, JVC/Journal of Vibration and Control. I.F: 2.633

Prabhu S., Vijayakumar A., Stonier A.A., Peter G., Dorji S., Ganji V., Analysis of isolated phase windings and permanent magnet assists high energy efficient hybrid-reluctance motor for electric vehicle, IET Electrical Systems in Transportation. I.F: 2.387

Krishnachaitanya D., Annamalai C., Real time implementation of a new seven level multilevel inverter with design considerations for feasible and
reliable operation, International Journal of Circuit Theory and Applications. I.F: 2.378

Shivashanker K., Janaki M., An approach on nonlinear integration of MMC to linear model of ROPS in transient analysis, International Journal of Circuit Theory and Applications. I.F: 2.378

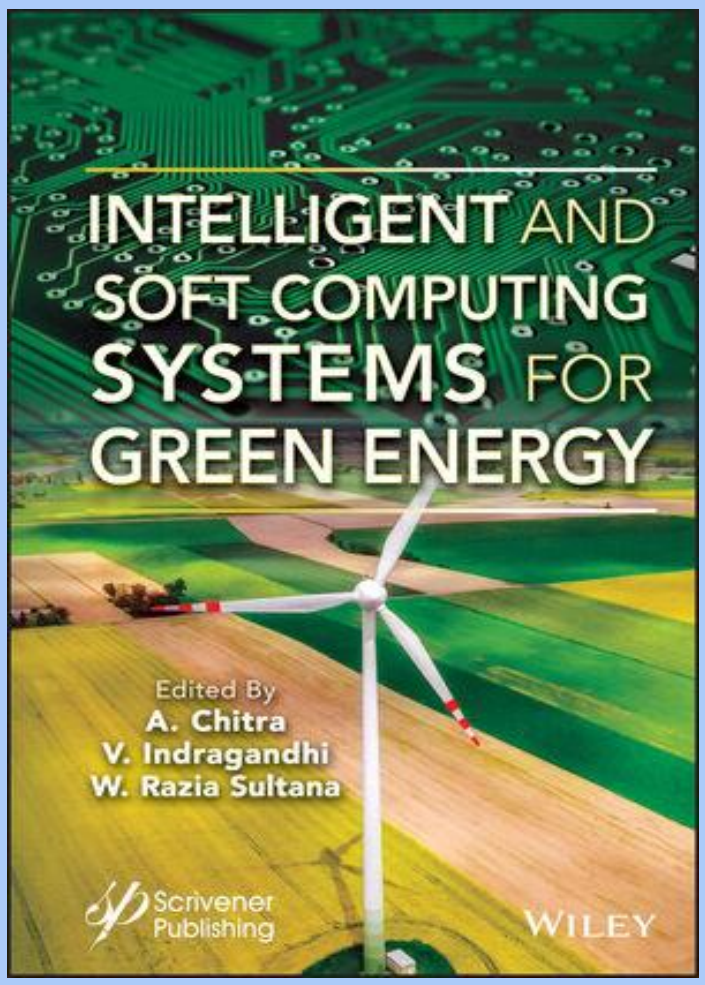
Jonnalagadda V.K., Elumalai V.K., Nonlinear stabilization and reference tracking of visual servo system using TS fuzzy augmented iterative learning control: Experimental validation, Transactions of the Institute of Measurement and Control. I.F: 2.146

Vijayakumar A., Stonier A.A., Peter G., Ganji V., Dual source novel nine level inverter (DSN2LI) design with minimum active devices and inherent polarity generation, IET Power Electronics. I.F: 2.112

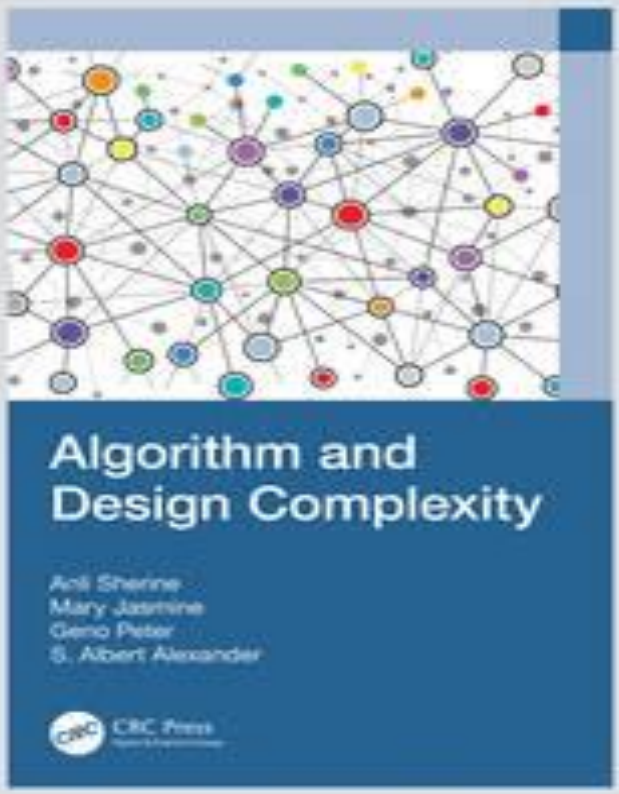
SELECT FACULTY INTERNATIONAL VISIT

Dr. Thirumalavasan from SELECT visited Glasgow Glasgow Caledonian University | Scotland, UK

SELECT FACULTY BOOK PUBLICATIONS



Dr.Albert Alexander S



SELECT STUDENTS ACHIVEMENTS

Gokul Krishnan S (20BEE0184) pursuing 3rd year of B. Tech in Electrical and Electronics Engineering have been selected as one of the fortunate 130 individuals from around the world for prestigious VSRP (Visiting Student Research Program) at KAUST (King Abdullah University of Science and Technology), Saudi Arabia.

Benefits provided by KAUST VSRP:

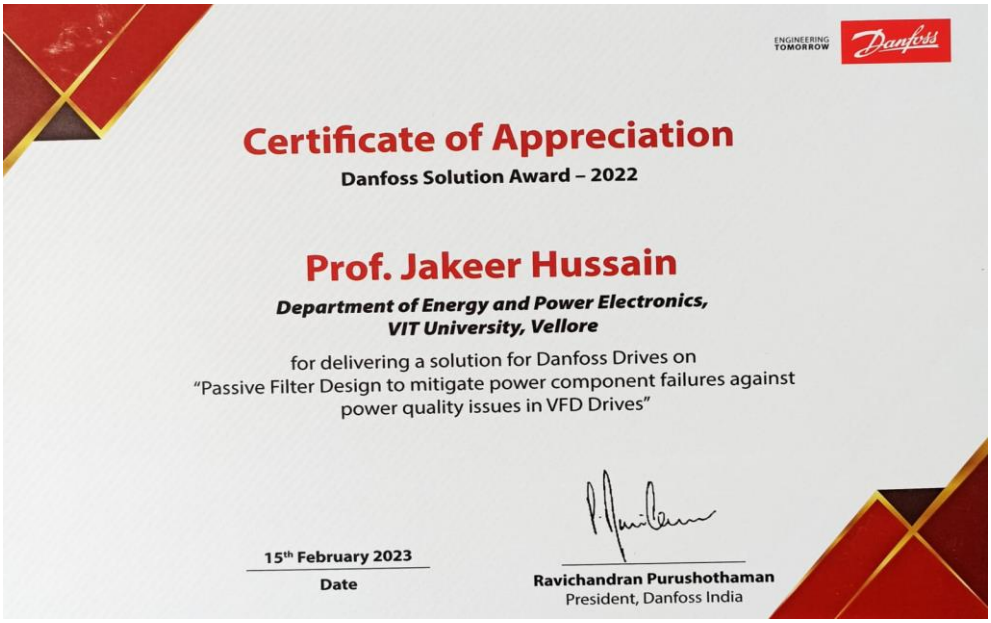
1. USD 1000 Monthly Stipend
2. Private Bedroom/Bathroom
3. Visa And Airfare Fees
4. Health Insurance
5. Social And Cultural Activities
6. Access to Core laboratories and major research and community facilities

GradSquare is pleased to announce that our student Pratyush Adhikary (VIT University, CAT 2022 - 99.93%ile) has been selected for the Two-year MBA at IIM Ahmedabad. It was a pleasure working with Pratyush and we wish him success in his future endeavours.

ALUMNI SPOTLIGHT

FACULTY AWARDS

Dr.Balamurugan.S Received Honesty Award from Our Honourable Chancellor



"Danfoss Solution Award-2022" to Dr. Jakeer Hussain, for delivering a solution for Danfoss Drives on "Passive Filter Design to mitigate power component failures against power quality issues in VFD Drives".

"Danfoss Solution Award-2022" to Dr. Raja Singh, for delivering a solution for Danfoss Drives on "IoT based Field data Monitoring".

ADVISORY TEAM

Dr.Mathew M Noel
Prof and Dean

Dr. Amutha Prabha N
Prof and Asso.Dean

Dr. Sathish Kumar.K
Prof and HOD/EEE

Dr.Rajini G. K
Prof and HOD/EIE

Dr. Ponnambalam.P
Prof and HOD/EPE

Dr. Jaganatha Pandian B
Prof and HOD/C&A

EDITORIAL TEAM

Dr. Indragandhi V

SELECT PRE-INCUBATION CELL

SELECT Pre-Incubation Cell *invites applications for start-ups and aspiring entrepreneurs for technology transfer and product development.*

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