



SRI SAIRAM ENGINEERING COLLEGE

WEST TAMBARAM

CHENNAI - 44

**IEEE PELS SEC SBC and DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING**

**PELS DAY CELEBRATION - ROLE OF MACHINE LEARNING IN POWER
ELECTRONICS**

IEEE PELS and DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Session Topic : ROLE OF MACHINE LEARNING IN POWER ELECTRONICS

Date & Timing : 20.06.2023 & 10:00 am to 11:00 am

Venue : SSR Hall

Guest Speaker : **Dr. S. Albert Alexander**

Total Participants : 300

About the speaker:

Dr.S. Albert Alexander is the recipient of the prestigious Raman Research Fellowship from the University Grants Commission (Government of India). He is a Postdoctoral Research Fellow from Northeastern University, Boston, Massachusetts, USA. His current research focuses on fault diagnostic systems for solar energy conversion systems and smart grids.

Sairam RAISE EOMS **ARILA** **nirf 157 RANK** **INSTITUTION'S INNOVATION COUNCIL** **SUSTAINABLE DEVELOPMENT GOALS**

Sri SAI RAM ENGINEERING COLLEGE
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Sairam **IEEE**
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
in association with
IEEE PELS SEC SB CHAPTER

IEEE PELS DAY
JUNE 20
POWERING & SUSTAINABLE FUTURE

IEEE POWER ELECTRONICS SOCIETY
SEC STUDENT BRANCH CHAPTER

"ROLE OF MACHINE LEARNING IN POWER ELECTRONICS"

RESOURCE PERSON

Dr. S. Albert Alexander
CHAIRMAN, IEEE POWER ELECTRONICS SOCIETY
IEEE MAGNUS SECTION
UGC RAMAN RESEARCH FELLOW
ASSOCIATE PROFESSOR
SCHOOL OF ELECTRICAL ENGINEERING
VELLORE INSTITUTE OF TECHNOLOGY, VELLORE

20/06/2023 TUE

SSR HALL

TIME : 10 AM - 11 AM

OFFICE BEARERS

Mr. VISVAKS Mr. VIJAY KUMAR A CHAIRPERSON SEC IEEE PELS SBC	Mr. SIDHARTH KA Mr. CHANDRAVELAN M.P VICE-CHAIRPERSON SEC IEEE PELS SBC	Ms. ARCHANA.R Mr. H. BARATH KUMAR SECRETARY SEC IEEE PELS SBC	Ms. JANANI.J Ms. SOIWHYAS TREASURER SEC IEEE PELS SBC	Mr. SATHIHEKANJ Mr. RAVEENDRANATHILL WEB MASTER SEC IEEE PELS SBC
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REPORT:

Mr. SATHMIKAN I & Ms. JANANI J of third year from the department of Electrical and Electronics Engineering (EEE) hosted the event in an amazing and very enthusiastic way.

DLP SESSION:

The screenshot shows a Zoom meeting in progress. The main window displays a presentation slide titled "Role of Machine Learning in Power Electronics". The slide includes the VIT logo and text identifying the speaker as Dr. S. ALBERT ALEXANDER., PDF (USA), Raman Research Fellow, Chairman of IEEE PELS and IEEE MADRAS SECTION, from the School of Electrical Engineering at Vellore Institute of Technology. Handwritten text "The 20th!!" is visible on the slide. The slide footer shows the date 6/20/2023 and the presenter's name. On the right side, there is a vertical list of participant thumbnails, including Vijay Kumar A, Janani J SEC 2020, Chandravelan M.P., and Albert Alexander. The bottom of the screen shows the Zoom toolbar with icons for mute, video, chat, and other controls.

ALBERT ALEXANDER is presenting

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Role of Machine Learning in Power Electronics

The 20th!!

Dr.S.ALBERT ALEXANDER., PDF (USA), Raman Research Fellow
Chairman, IEEE PELS, IEEE MADRAS SECTION
SCHOOL OF ELECTRICAL ENGINEERING
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6/20/2023 Dr S ALBERT ALEXANDER/SELECT/VIT 1

10:07 AM Role of Machine Learning in Power Electronics

Participants: VIJAY KUMAR A, JANANI J SEC 2020, CHANDRAVELAN M.P., ALBERT ALEXANDER, You

ALBERT ALEXANDER is presenting



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

Role of Machine Learning in Power Electronics

Handwritten notes: >90% Tuning, <50 (50) (50)

Dr.S.ALBERT ALEXANDER., PDF(USA), Raman Research Fellow
Chairman, IEEE PELS, IEEE MADRAS SECTION
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6/20/2023 Dr S ALBERT ALEXANDER/SELECT/VIT 1

10:19 AM | Role of Machine Learning in Power Electronics

ALBERT ALEXANDER is presenting

ML Algorithms

Create a predictive model based on input and output (known data or response)

Machine Learning

Supervised Learning

Unsupervised Learning

Extract inference by grouping data based on input data

Regression (Curve-fitting)

predicts continuous response

1. Electricity load forecasting
2. Algorithmic trading
3. Price prediction of houses
4. Body-Mass-Index data

Classification

predicts discrete response

1. Spam filtering
2. Credit scoring
3. Medical image processing
4. Speech recognition
5. Language detection

Clustering

Exploratory data analysis

1. Market segmentation
2. Object / face recognition
3. Position cell phone towers
4. Social network analysis
5. Organize computing clusters

6/20/2023 Dr S ALBERT ALEXANDER/SELECT/VIT 24

10:36 AM | Role of Machine Learning in Power Electronics

FEEDBACK:

Ms. SREEJA K of second year department of Electrical and Electronics Engineering gave feedback for this program, it was very useful to learn about the machine learning operations and role in power electronics and it was a very informative session.

Conclusion:

We thank our righteous CEO **Dr. Sai Prakash Leo Muthu**, beloved Principal **Dr.Porkumaran** and our HOD **Dr.R.Azhagumurugan**, and PELS Chapter Advisor **Dr.T.Porselvi** for giving this wonderful opportunity for this wonderful knowledgeable program during this period.