



MACHINE LEARNING AND DEEP LEARNING TECHNIQUES FOR VLSI

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Conduction of SERB Sponsored 5 Days Faculty Development Programme on "Machine Learning and deep Learning Techniques for VLS" organized by Microelectronics Research group, Department of ECE, KLEF – Reg.

Registrar <registrar@kluniversity.in>

Wed 11/9/2022 11:13 AM

To:VARADA VENKATA SUBBARAO <subbarao6373@kluniversity.in>;BRAJESH KUMAR SHUKLA <brajesh.shukla@kluniversity.in>; NAWEEN KUMAR <naween@kluniversity.in>;GARIGIPATI RAMA KRISHNA <umarkcse@kluniversity.in>;NAGALAKSHMI THIRUNAVUKKARASU <lakshmisenthil@kluniversity.in>;DODDI SURESH KUMAR <sureshkumarmca@kluniversity.in>; GARIKIPATI NAGA LAKSHMI SOWJANYA <chlks1709@kluniversity.in>;AREPALLI GOPI <gopi.arepalli@kluniversity.in>; anushaponnuru588@kluniversity.in <anushaponnuru588@kluniversity.in>;SRITHAR.S <sss.srithar@kluniversity.in>;SREEDHAR BURADA <sreedharburada@kluniversity.in>;drsatishtatavarthi@kluniversity.in <drsatishtatavarthi@kluniversity.in>;Yogesh Tripathi <yogeshtripathi27@kluniversity.in>;asesh.trpathy@kluniversity.in <asesh.trpathy@kluniversity.in>;Dr. Iwin Thanakumar Joseph. S <iwineee2006@kluniversity.in>;SaiRam Vakkalanka <sairam.vakkalanka@kluniversity.in>;Anjana Devi A <anjana.nadam@kluniversity.in>;Sai Durga Tejaswi <saidurga.vinna@kluniversity.in>;Raj Kumar Parida <rajkumarparida@kluniversity.in>;CH Divya <chdivya333@kluniversity.in>

📎 1 attachments (914 KB)

SERB_FDP-1.pdf;

Ref: KLEF/RO/ECE/2022-23

Date: 09.11.2022

Orders of the Vice Chancellor dt.09.11.2022

CIRCULAR

Sub: Conduction of SERB Sponsored 5 Days Faculty Development Programme on
"Machine Learning and deep Learning Techniques for VLS" organized by
Microelectronics Research group, Department of ECE, KLEF – Reg.

Ref: Letter dated 05.11.2022 from Dr. K. Srinivasa Rao, Professor, ECE forwarded by
Dr.M. Suman, HoD-ECE.

This is to inform that Microelectronics Research Group, Department of ECE, KLEF, is conducting SERB Sponsored 5 Days Faculty Development Programme on **"Machine Learning and deep Learning Techniques for VLSI"** as per the details given below.

Dates : 15th to 19th November 2022.

Chair : Dr.M. Suman, Professor & HOD, Department of ECE, KLEF

Technical Chair : Dr.K. Srinivasa Rao, Professor, Research Group Head-MERG,
Department of ECE, KLEF

Convenor : Dr.B.Balaji, Assoc. Professor, Department of ECE, KLEF

Co-Convenor : Dr.K.Girija Sravani, Associate Professor, Department of ECE, KLEF

Registration Link: <https://forms.gle/ufXTS4TBGJhcyCrD7>

All the faculty members and students register and participate in the event.

Poster of the FDP is enclosed herewith.

REGISTRAR (I/C)

Encl: Poster

Mail & Hard copy to: Hon'ble President, KLEF

Mail to: Hon'ble Vice-Presidents, KLEF

Mail & Hard copy to: Hon'ble Pro Chancellor

Mail & Hard copy to: Hon'ble Vice Chancellor

Mail & Hard copy to: Hon'ble Pro Vice Chancellor (Administration)

Mail to: Advisor – NAAC & Hyderabad Operations - Prof. K.Koteswara Rao

Mail to: All Advisors / All Deans / All Principals / All Directors

Mail to: Controller of Examinations-Dr.A.S.C.S.Sastry

Mail to: KL H - Principal-Engg.College / Vice-Principal / Director / Deputy Director

Mail to: Vice-Principal-Coll. of Science & Humanities & Coordinator-FED.Dr.MSG Prasad

Mail & Hard copy to: HoDs.. AI&DS / BT / CE / CSE / Comp.Engg. / CS&IT / ECE / EEE / ECM / ME

HoDs..Maths / PHY / CHEM / ENG / BES-I / BES-II

HoDs..MBA / BBA / COM / HM / CSS / CA&MS / Law / Architecture / Pharmacy / CSA / Arts

Mail & Hard copy to: Head of Division..Communication Skills / Soft Skills / Quant & Reasoning

Mail to: All Dy. HoDs / All Alt. HODs

Mail to: KL H HoDs..CSE / AI&DS / ECE / Coordinator-FED

Mail to: All students

Mail to: All faculty

Thanks & Regards



Dr. A. Jagadeesh
REGISTRAR (I/C)

KONERU LAKSHMAIAH EDUCATION FOUNDATION

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Phone No. 08645 - 350200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Five Days Faculty Development Programme on

Machine Learning and Deep Learning Techniques For VLSI

Nov 15th – 19th, 2022

About the Organisation

K L University is a pioneer in the field of engineering education and research in private sector. It was established as Koneru Lakshmaiah College of Engineering in the year 1980, situated in a spacious 60 acre campus on the banks of Buckingham canal of river Krishna, 8 Km away from Vijayawada. The institute is accredited by National Assessment and Accreditation council (NAAC) of UGC with A grade K L University has knowledge base stems with the presence of eminent and highly qualified academic staff, numbering 600+ out of which 155+ doctorates and 300+ pursuing Ph.D is one of the best for any engineering institute. KLU offers 10 UG programs, 14 PG programs, 28 Integrated degree programs, dual degree programs and in addition to this research program is been offered in 14 disciplines.

Research at KLU

KLU places special emphasis on research. DSIR of Govt. of India recognized KLU as a Scientific and Industrial Research Centre. KLU has the credit of housing world class Excellency centres to boost research in emerging areas like Nanotechnology, Robotics, Nuclear Reactor design, Automobile, Aero VLSI, fusion, Space Structures etc. In order to extend R&D and consultancy activities within the university 43 faculty research groups are functioning effectively. Funded projects of worth more than 10 Crores are sanctioned & more than 5 Crores are in pipeline, which speaks about the strength of the outsourced research at KLU.

About the Department

Department of Electronics & Communication Engineering was established in the year 1980, has grown now to be a Department with 110 Faculty members and over 2000 Under Graduate and 200 Post Graduate students and about 200 research scholars. As the largest academic Department of University, Faculty of ECE are involved in an exceptional range of Educational, Intellectual and Research activities. We have grown over the years in many directions and currently recognized as a "Premier Teaching and Research Department" of the KL University and also recognized by DST under FIST program in the year 2012. Being a FIST-DST sponsored Department, recently we purchased the 18 GHz Network Analyser, 20 GHz Spectrum Analyser and HFSS Suite etc., In addition, the department is well equipped with various laboratories catering the UG and PG Programs and other research centres in VLSI, Communication Systems, Atmospheric Sciences and MEMS.

Topics to be Covered

- ✓ Machine Learning (ML) and Deep techniques in real world
- ✓ Types of ML & DL algorithms for VLSI automation
- ✓ Un Supervised learning methods, Partitioned method, hierarchical clustering method for VLSI design automation
- ✓ Hands on implementation of supervised and unsupervised methods for structural perspective for VLSI logic implementation
- ✓ Support vector machine classification and its application for VLSI
- ✓ ML&DL based VLSI CAD tools
- ✓ Reinforcement learning, optimization and data driven method for VLSI applications
- ✓ Overview of existing ML & DL VLSI Tools
- ✓ Impact of ML & DL in VLSI
- ✓ Future advancements in ML & DL intern VLSI compatible to VLSI

Outcome of FDP

Participants can able to:

- ✓ Solve practical and state of the art Machine Learning (ML) & Deep Learning (DL) problems to serve VLSI & MEMS industries.
- ✓ Apply ML & DL design approaches to solve energy efficient VLSI Circuits and devices
- ✓ Develop ML & DL algorithms compatible with Advanced VLSI

Resource Persons

Renowned experts from premier Institutions (IIT/NITs)/IITs and Central Universities) in concerned field are invited to deliver in the Program and speakers from industries also will deliver expert lectures. The FDP is open to faculty members, research from industry and Development scholars, officials other Research organizations..

CHIEF PATRON

Er.K.Satyanarayana, Chancellor, KLEF

PATRONS

Sri K L Havish, Vice-President, KLEF
Sri K Raja Harin, Vice-President, KLEF
Dr. G.Pardha Saradhi Varma, Vice-Chancellor, KLEF
Dr.N.Venkatram, Pro-Vice Chancellor, KLEF
Dr.A. Jagadeesh, Registrar, KLEF
Dr. T.K.Rama Krishna Rao, Principal, KLCoE
Dr.A.Srinadh, Dean, Skill Development, KLEF
Dr.B.J.K Singh, Dean (R&D), KLEF

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Dr.Nareen Das

Organized by **Microelectronics Research Group (MERG) Department of ECE**

Chairperson
Dr.M.Suman

HOD, Department of ECE

Technical Chair

Dr.K.Srinivasa Rao

Head-Microelectronics Research Group

Coordinator

Dr. B Balaji

Associate Professor, Dept of ECE

Co-Coordiators

Dr.K.Girija Sravani

Assoc. Prof, Dept of ECE

Registration : <https://forms.gle/ufXTS4TBGJhcyCrD7>

Contact

Dr. B BALAJI

Associate Professor Department of ECE

Mobile:9989148826 E-mail: balaji@kluniversity.in

Microelectronics Research Group (MERG) Dept of ECE

*Koneru Lakshmaiah Education Foundation
 (Deemed to be University) Green Fields, Vaddeswaram,
 Guntur(dist), AP, INDIA-522502.*

Science and Engineering Research Board
(a statutory body of the Department of Science & Technology, Government of India)

5 & 5A, LGF,
Vasant Square Mall
Sector-B, Pocket-5, Vasant Kunj,
New Delhi – 110 070

Brief report of the organized event
(Financial Assistance to Seminar / Symposia)

Date:24.11.2022

SERB Sanction / File No: SSY/2022/ 000512

- 1. Name of Academic Institution / University / Society etc. under whose auspices the Seminar / Conference / Workshop / Symposium etc. was organized:**

KL University

- 2. Title of the Seminar / Conference / Workshop / Symposium etc.: Machine Learning and Deep Learning Techniques for VLSI**

- 3. Duration / Period of the organized event: 24.10.2022 to 28.11.2022**

- 4. Summary of the event (Max. 1000 Words):**

The inauguration was held on 24th Oct 2022 online at 9:30 am. Chief Guest of the program was Dr A.Srinadh, Dean Skill Development, KLEF, Dr. Dr. T.K.Rama Krishna Rao, Principal, KL, Principal, College of Engineering, KLEF and Dr.M.Suman, HOD,ECE,KLEF were also present with the participants.

Dean Skill Development addressed the participants about online FDP and various initiatives by SERB. And Dr.T.K Ramakrishna Rao ,Principal, College of Engineering,KLEF Given Responsibility in technical education and the importance of Workshop, Coordinator proposed the Vote of Thanks.

Outcome of FDP: Participants can be able to:

- 1) Solve practical and state of the art Machine Learning (ML) & Deep Learning (DL) problems to serve VLSI & MEMS industries.
- 2)Apply ML & DL design approaches to solve energy efficient VLSI Circuits and devices
- 3)Develop ML & DL algorithms compatible with Advanced VLSI

Some screenshots of the inaugural function are as below.



Photographs Section: Please paste high resolution photographs in given spaces below or may be submitted directly on online / email in JPEG format.

1. Inaugural Session



WELCOME To

SERB Sponsored National Workshop
On

Machine Learning and Deep Learning Techniques for VLSI
(24th to 28th Oct, 2022)

Organized by
Microelectronics Research Group (MERG)
Department of Electronics & Communication Engineering
Koneru Lakshmaiah Education Foundation (KL Deemed University), Vaddeswaram
Andhra Pradesh, India.



KL Deemed to be University

Electronics & Communication Engineering

40th Anniversary Leadership

NAAC A Grade

1st Rank

SERB Sponsored Faculty Development Program
On

Machine Learning and Deep Learning Techniques for VLSI
Organized by
Microelectronics Research Group (MERG)
Department of Electronics & Communication Engineering
(DST - FIST Sponsored Department)
Koneru Lakshmaiah Education Foundation

24th to 28th Oct, 2022

Dr. Balawindar Raj, NITTTR Lucknow

Topic: AI Applications in VLSI Memories Design

Koneru Lakshmaiah Education Foundation
Vaddeswaram
522 302



Electronics &
Communication
Engineering



SERB Sponsored Faculty Development Program
On

Machine Learning and Deep Learning Techniques for VLSI

Organized
by

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Department of Electronics & Communication Engineering
(DST - FIST Sponsored Department)
Koneru Lakshmaiah Education Foundation

24th to 28th Oct, 2022

Visiting Research Fellow,
Cyber Security Research
Center, NTU, Singapore



Topic: Reconfigurable Computation
with machine learning methods



Electronics &
Communication
Engineering



SERB Sponsored Faculty Development Program
On

Machine Learning and Deep Learning Techniques for VLSI

Organized
by

Microelectronics Research Group (MERG)
Department of Electronics & Communication Engineering
(DST - FIST Sponsored Department)
Koneru Lakshmaiah Education Foundation

24th to 28th Oct, 2022

Dr. Sangeeta Singh
NIT, Patna



Topic: AI/ML Algorithms and
Applications in VLSI Design and
Technology



Electronics &
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Engineering



SERB Sponsored Faculty Development Program
On

**Machine Learning and Deep Learning
Techniques for VLSI**

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Dr. Vadthiya Narendar
NIT, Warangal

**Topic: Recent Nanoelectronic
Devices for Future Applications**



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**Machine Learning and Deep Learning
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24th to 28th Oct, 2022



Dr. Ramesh Vaddi
SRM, University, AP

**Topic: Circuits and Architecture
energy efficiency Approximation
computing techniques**





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**Machine Learning and Deep Learning
Techniques for VLSI**

24th to 28th Oct, 2022

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Dr.Kavicharan.M
NIT,Silchar



Topic: Machine Learning based
modelling and optimization of VLSI
interconnects and power
distribution networks



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Engineering



SERB Sponsored Faculty Development Program
On

**Machine Learning and Deep Learning
Techniques for VLSI**

24th to 28th Oct, 2022

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Dr.Reshmi maity
Mizoram University



Topic: MEMS/NEMS Micromachined
Ultrasonic Transducers(FEM CAD
Modeling)



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**Machine Learning and Deep Learning
Techniques for VLSI**

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Dr. Sangeeta Nakhate
MANIT, Bhopal



Topic: Design of Machine Learning
Resistant Physical Unclonable
Functions

(Convener Signature)

PRINCIPAL
ACADEMIC STAFF COLLEGE
Koneru Lakshmaiah Education Foundation
(Deemed to be University)
Green Fields, VADDESWAREM-522 302

REGISTRAR
Koneru Lakshmaiah Education Foundation
(Deemed to be University)
Green Fields, VADDESWAREM-522 302,
Guntur District, Andhra Pradesh.



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2	3858	DR.TIRU VEEDHU LA SAJANA	ASSOC.P ROF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV
3	5141	DR.NALL EBOYINA VIJAYA	ASSOC.P ROF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV
4	6127	DR.KANI KE RAGHAV ENDRA KUMAR	ASSOC.P ROF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV
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7	7196	Dr.ASHW IN M	ASSOC.P ROF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV



8	7535	Dr.SUNIT HA PACHALA	ASSOC.P ROF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV
9	3908	MR.NICH ENAMET LA RAJESH	ASST.PR OF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV
10	4712	MS.MAN DAPATI PRAVEE NA	ASST.PR OF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV
11	5458	MS.ARPI TA ROY	ASST.PR OF.	ARTIFICI AL INTELLIG ENCE AND DATA SCIENCE	KLV
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20	Dr.KOND AVEETI GIRIJA SRAVANI	Ph.D.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLV
21	MR.SHA K AHMAD SAIDULU	M.TECH	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLV



22	2462	DR.PENK E SATYAN NARAYA NA	PROFES SOR	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLV
23	3914	DR.PORU RI GOPI KRISHNA	ASSOC.P ROF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLV
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34	6634	DR. THIRUPA THAIAH KOLA	ASST.PR OF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLH
35	6663	MR. AMIT VERMA	ASST.PR OF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLH



36	6697	DR. ASHWINI KUMAR VARMA	ASST.PR OF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLH
37	6719	MR. HITESH TEKCHA NDANI	ASST.PR OF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLH
38	6720	MR. SRAVAN KUMAR GUNTURI	ASST.PR OF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLH
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40	6730	DR. ADITYA JAPA	ASST.PR OF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLH
41	6937	DR. VIJAY RAO KUMBHA RE	ASST.PR OF.	ELECTR ONICS AND COMMUN ICATION ENGINEE RING	KLH
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43	5155	DR.BUKY A BALAJI	ASSOC.P ROF.	Faculty	KLV



44	5395	DR.ASWI N KUMAR	ASSOC.P ROF.	Faculty	KLV
45	5439	DR.CHEL A SANTHO SH	ASSOC.P ROF.	Faculty	KLV





This is to certify that

DR. BUKYA BALAJI

Has participated in the

Five-day Faculty Development Program on

"Machine Learning and deep Learning Techniques for VLSI"

15.11.2022 to 19.11.22

During _____.


Principal
ASC