

Machine Learning in Electronic Design Automation for Next Generation Applications

KONGU ENGINEERING COLLEGE
(Autonomous)
Department of ECE
Perundurai, Erode – 638060

07.05.2022

No Registration fee.

Last date for Registration : 05.05.2022

Venue :Virtual Mode

Topics of the Seminar

- ❖ Introduction about Machine Learning for Next Generation Applications
- ❖ Machine Learning in Synchronous EDA Tools
- ❖ Asynchronous CAD and Machine Learning
- ❖ Hardware Support for Machine Learning in EDA
- ❖ Specific Opportunities for Machine Learning

Resource Persons

- ❖ Sessions will be handled by experts from reputed institutions and Industries.



**MeitY Sponsored One Day
National Level Seminar on
“Machine Learning in Electronic
Design Automation for Next
Generation Applications”**

[To register click here](#)

Convenor

Dr.D.Malathi (Professor)

Co-ordinators

Dr.K.Gavaskar (Assistant Professor)

G.Ravivarma (Assistant Professor)



**K.Gavaskar 9790004798
G.Ravivarma 8760296378**



General Instructions

- ❖ Confirmation of registration and “Google Meet” link will be sent through mail on or before 06.05.2022.
- ❖ Participants will receive e-certificate after successful completion of all sessions.
- ❖ Participants have to give feedback at the end of the session.



malathy@kongu.ac.in

gavaskar@kongu.ac.in

ravivarmasha@kongu.ac.in



About College

Kongu Engineering College was established in the year 1984. Approved by AICTE, New Delhi and affiliated to Anna University, Chennai. It offers 17 UG programmes, 15 PG programmes and 15 Research programmes in Engineering, Applied Sciences and Management imparting high quality value-added education in India. The college has got NBA accreditation for UG programmes, NAAC accreditation with A++ grade, Best Engineering College award and Best Principal award twice. In the survey conducted by MHRD in the name NIRF (National Institution Ranking Framework), the Institution is placed in the second rank at Tamilnadu level and fifth rank at National Level among all Self-financing Colleges. In the same survey, the Institution has bagged 164th rank among all Engineering institutions in India including premier institution like IITs, NITs, etc. The institution has established a Technology Business Incubator (TBI) supported by Department of Science and Technology, Government of India in its campus. TBI@KEC has won the National Award, for the Best TBI in India, presented by President of India on Technology Day in New Delhi on 11th May, 2013.



About Department

The Electronics and Communication Engineering department occupies a prominent place in the annals of its academic history. The department has been consistently producing illustrious engineering graduates of high caliber who occupy prestigious positions in the academic and industrial fields. The specialization of the faculty includes Telecommunication System Engineering, Computer Networks, Power Electronics, Control Systems, VLSI, Bio-Medical Engineering, Digital Signal Processing, Microwave Systems, Automation, Instrumentation and Control etc. The department has excellent laboratory facilities in the areas like Networking, Microprocessors, Electronics, Communication, VLSI, Digital Signal Processing, Microwave, RF, Multimedia, Fiber Optic Communication, Computer Hardware and Maintenance and Computer Centers with latest software. The department offers four year UG programme in ECE and two year PG programmes in VLSI Design, Communication Systems and Embedded Systems. The Department has accredited by NBA outcome based Tier-I scheme.

KONGU ENGINEERING COLLEGE PERUNDURAI, ERODE – 638052

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

**MeitY Sponsored One Day National Level Seminar on
Machine Learning in Electronic Design Automation for Next Generation Applications**

07.05.2022

PARTICIPANTS LIST

S.No	Name	College Name
1.	Mrs.JASLIN J S	J. J. College of Engineering and Technology
2.	Dr.Dr. M. P. Revathi	J. J. College of Engineering and Technology
3.	Mrs.Harthi Ruby Priya S	J. J. College of Engineering and Technology
4.	Mr.Mrutyunjaya S Yalawar	CMREC HYDERABAD
5.	Ms.Ragavi.S	Cognizant Technology Solutions
6.	Mr.Vivek B	Kongu Engineering College
7.	Mrs.KEERTHANA G	J. J. College of Engineering and Technology
8.	Dr.Baluprithviraj K N	Kongu Engineering College
9.	Mrs.Arthi R	Muthayammal Engineering College
10.	Mr.Dinesh Kumar J R	Sri Krishna College of Engineering and Technology
11.	Mr.SHIVASWAMY M S	KONGU ENGINEERING COLLEGE
12.	Mrs.Deepa.G	Kongu Engineering College
13.	Dr.CHELLAMMAL P	J. J. College of Engineering and Technology
14.	Mrs.Pradeepa JB	J.J. college of engineering and technology
15.	Dr.SENTHILKUMAR C	Dr.N.G.P.Institute of Technology
16.	Mr.Nithyasai S	Kathir College of Engineering
17.	Dr.Madhan Mohan M	Kongu Engineering College
18.	Mr.JANARTHANAN S	Kongu Engineering College
19.	Mrs.Priyadharsini K	Sri Krishna College of engineering and technology
20.	Mr.Sheikdavood K	M.Kumarasamy College of Engineering
21.	Mrs.AMBIKA M	J. J. College of Engineering and Technology
22.	Ms.PUSHPARANI MK	AJiet, MANGALORE
23.	Dr.Gavaskar K	Kongu Engineering College
24.	Dr.Kalavathi Devi T	Kongu Engineering College
25.	Ms.Dharani N	Veltech Rangarajan Dr Sagunthala R & D Institute of
26.	Dr.J.PREETHA	MUTHAYAMMAL ENGINEERING COLLEGE
27.	Mr.Ravichandru T	K S R Institute for Engineering and Technology
28.	Mr.NITHYANANDAN M	JAYAM COLLEGE OF ENGINEERING AND
29.	Mr.BOOPATHY.S	KATHIR COLLEGE OF ENGINEERING
30.	Mr.KARTHI T	Kongu Engineering College
31.	Mr.GOVINDARAJ V	Narasu's Sarathy Institute of Technology
32.	Dr.S.Balambigai	Kongu Engineering College
33.	Mr.Anbumani V	Kongu Engineering College

34.	Ms.DHURGAPRIYA. R	KSR INSTITUTE FOR ENGINEERING AND
35.	Dr.KALAISELVI.T.C.	KONGU ENGINEERING COLLEGE,PERUNDURAI
36.	Mrs.Raja Rajeswari B	Muthayammal Engineering College
37.	Dr.D.Malathi	Kongu Engineering College
38.	Mr.G.Ravivarma	Kongu Engineering College
39.	Dr.D.Krithika Renuka	PSGR Krishnammal College for Women

KONGU ENGINEERING COLLEGE, PERUNDURAI, ERODE – 638 060
(Autonomous)
ECE Department

Date: 07.05.2022

**MeitY Sponsored One Day National Level Seminar on "Machine Learning in
Electronic Design Automation for Next Generation Applications"**

S.No	Time	Title	Name of the Speaker
1	9:00-10:30AM	An overview of Machine Learning algorithms for Electronic Design Automation	Dr.N.Kasthuri Professor, Kongu Engineering College
2	10:30-12:00PM	Evaluation of Manual annotation of Images using Deep Learning – Spatio Temporal models (STCN)	Dr. Kumar Rajamani Senior Scientist, Philips, Bengaluru
3	12:00-1:30 PM	Evolution of Technology for AI based applications	Mr.Abinash Presidio Cloud Solutions
4	2:00-3:30PM	Hardware for Artificial intelligence and Machine Learning	Dr.R.Sakthivel Associate Professor Grade 2 Department of Micro and Nanoelectronics Vellore Institute of Technology, Vellore, Tamilnadu
5	3:30-5:00 PM	Machine Learning in VLSI	Dr.D.Malathi Professor, Kongu Engineering College

Session -1 - Dr.N.Kasthuri

REC Dr N Kasthuri ECE is presenting

Machine Learning Lifecycle

- 1 Define ML use cases**
Define Specific ML use cases for the Project.
- 2 Data Exploration**
Perform exploratory data analysis to understand the data.
- 3 Select Algorithm**
Choose the right ML Algorithm for the Task.
- 4 Data Pipeline & feature engineering**
Create the right features from raw data for the ML Task.
- 5 Build ML Model**
Develop the first iteration of the ML Model.
- 6 Iterate ML Model**
Refine the ML Model to improve.
- 7 Present Results**
Present Results of the model in a way that demonstrates its value to stakeholders.
- 8 Plan for Deployment**
- 9 Model Deployment**
- 10 Monitor Model**

© Amit Mishra

You

Dr N Kasthuri ECE

31 others

9:51 AM | MeitY Sponsored Online Seminar

REC

Dr N Kasthuri ECE

Kumar Rajamani

D MALATHI ECE

Dr C Senthilkumar

T C KALAISELVI ECE

boopathy s

Karthi Thirumoorthi

Jaslinorito

Arthi Ram

Sherif H

G DEEPA ECE

Ambika Manoharan

Priyadharsini K

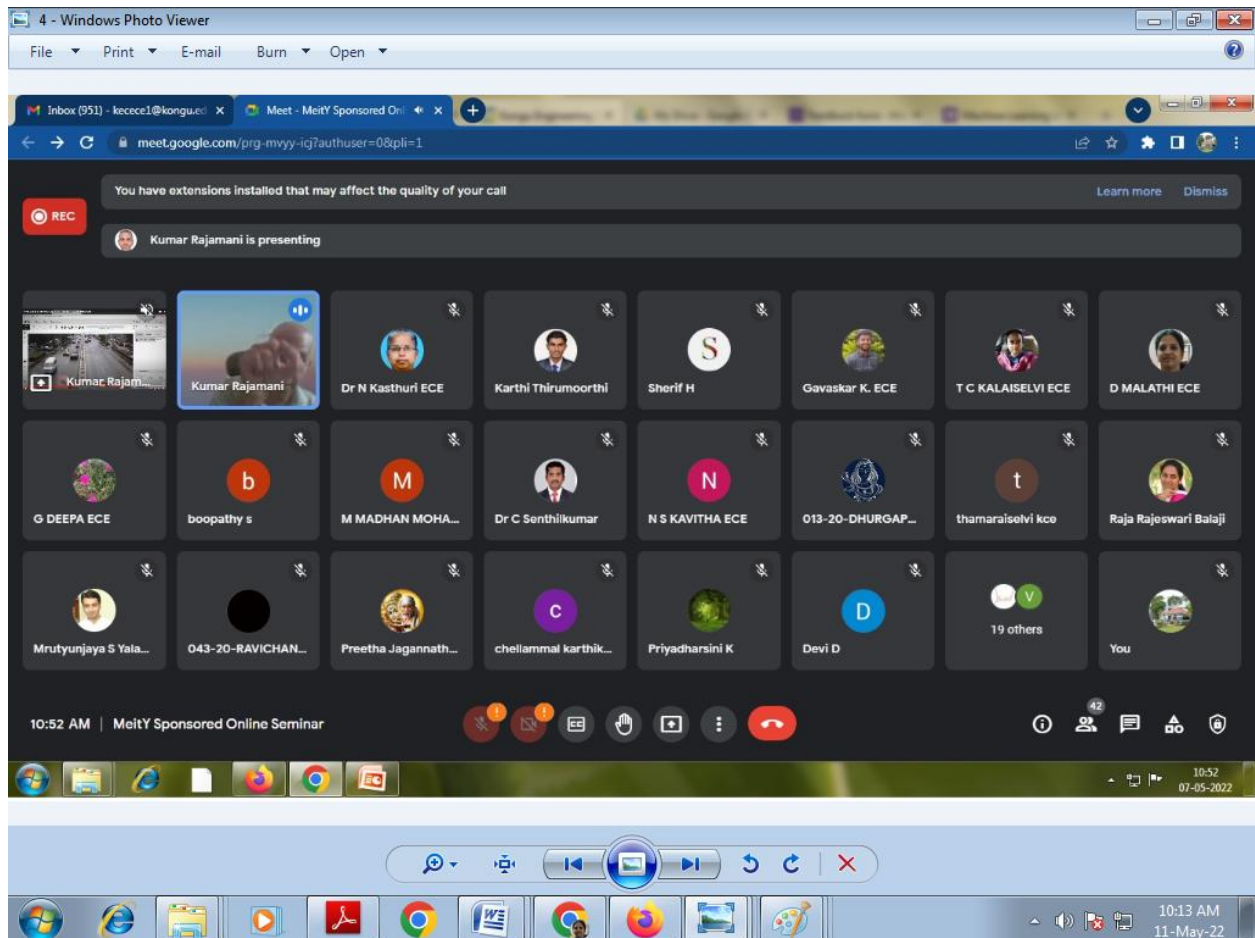
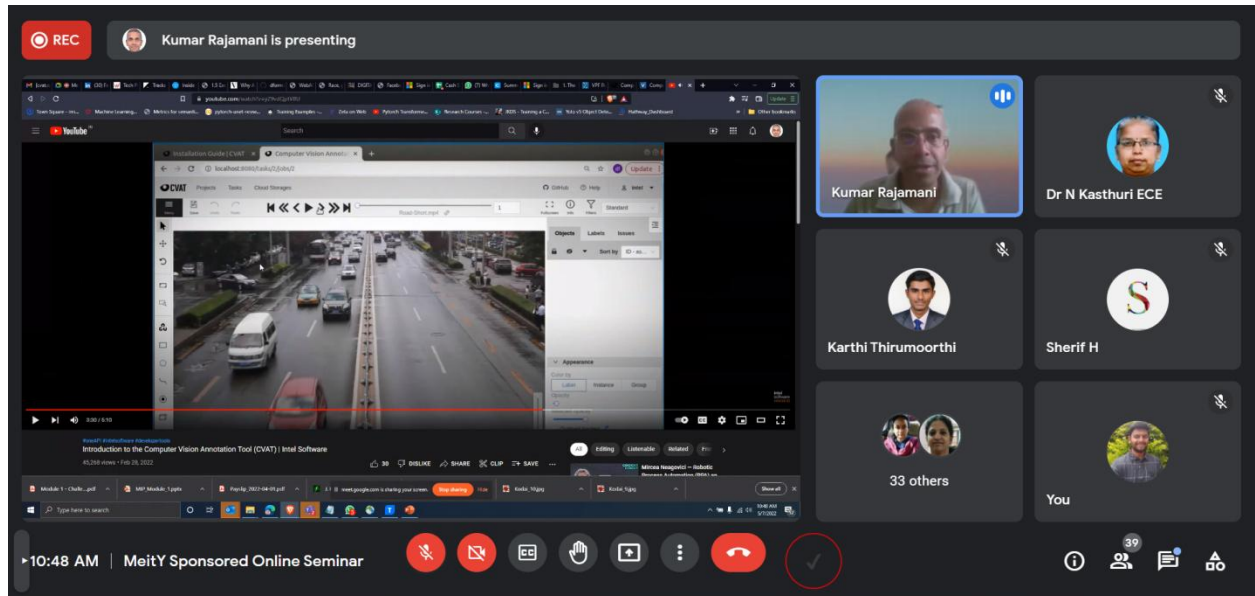
SHEIKDAVOOD K

20 others

You

10:36 AM | MeitY Sponsored Online Seminar

Session -2 - Dr. Kumar Rajamani



Session -3- Mr.Abinash

This screenshot shows a Google Meet window with a presentation slide titled "Jovi" by Team Abinash S and Ajay R. The slide content includes the Jovi logo, the text "Evolution of Technology for AI based Applications", and the team names. The meeting interface shows a 3x3 grid of participants, with ABINASH.S 18CSR002 as the active speaker. The bottom status bar indicates the time is 12:02 PM on 07-05-2022.

REC

You have extensions installed that may affect the quality of your call

ABINASH.S 18CSR002 is presenting

Jovi

Evolution of Technology for AI based Applications

Team:
Abinash S
Ajay R

ABINASH.S 18CSR002

Dharani N

Karthi Thirumoorthi

keerthana gurumoor...

Sherif H

chellammal karthikey...

Dr N Kasthuri ECE

25 others

You

12:02 PM | MeitY Sponsored Online Seminar

12:02 07-05-2022

This screenshot shows the same Google Meet window in gallery view, displaying a 4x4 grid of 16 participants. The active speaker, ABINASH.S 18CSR002, is in the top right corner. The bottom status bar shows the time as 12:57 PM on 07-05-2022.

11 - Windows Photo Viewer

File Print E-mail Burn Open

REC

ABINASH.S 18CSR002

Dharani N

Karthi Thirumoorthi

keerthana gurumoor...

Harthy S

Sherif H

chellammal karthik...

AJAY R 18CSR007

Ravivarma G. ECE

M MADHAN MOHA...

Dr C Senthilkumar

D MALATHI ECE

O13-20-DHURGAPR...

boopathy s

O25-19- Keerdhana K

Raja Rajeswari Balaji

Mrutyunjaya S Yala...

Preettha Jagannath...

Priyadharsini K

VIVEK B. ECE

Ambika Manoharan

Priyadharsini K

Arthi Ram

G DEEPA ECE

Anbumani V. Assist...

S JANARTHANAN EIE

Shivasamy MS. mss...

K N BALUPRITHVIR...

T KALAVATHI DEVI ...

Swathi Swathi

4 others

You

12:57 PM | MeitY Sponsored Online Seminar

12:57 07-05-2022

10:11 AM 11-May-22

Session -4- Dr.R.Sakthivel

REC sakthivel ramachandran is presenting

Video is the Biggest Big Data

Over 70% of today's Internet traffic is video
Over 300 hours of video uploaded to YouTube every minute
Over 500 million hours of video surveillance collected every day

Energy limited due to battery capacity

Power limited due to heat dissipation

Need energy-efficient pixel processing!

meet.google.com is sharing your screen Stop sharing Hide

2:53 PM | prg-mvyy-icj

Participants: Harthy S, Sherif H, Dharani N, sakthivel ramac..., Pradeepa Balag..., keerthana guru..., D MALATHI ECE, 23 others, You

REC

Participants: D MALATHI ECE, sakthivel ramachandran, PUSHPARANI MK, chellammal karthikeyan, keerthana gurumoorthy, Ambika Manoharan, Ravivarma G. ECE, 24 others, You

3:48 PM | prg-mvyy-icj

Session -5 –Dr.D.Malathi

REC D MALATHI ECE is presenting

SYNAPTIC NETWORK BASED ON NAND FLASH MEMORY

KONGU ENGINEERING COLLEGE

Synapse → Conductance pair

Synaptic device

- Multilayer perceptron in which synapse can be implemented using NAND flash memory
- This synaptic reduces ground wires and bitlines and allows denser layout and greater storage capacity per chip and improve the conductance

4:01 PM | prg-mvyy-icj

SHEIKDAVOOD K Pradeepa Balag... D MALATHI ECE

keerthana guru... Harthy S chellammal kart...

Sherif H 19 others You

REC

D MALATHI ECE D MALATHI ECE chellammal karthikeyan keerthana gurumoorthy Harthy S

Sherif H Ambika Manoharan 18 others You

4:07 PM | prg-mvyy-icj

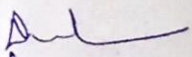
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Dr.N.Kasthuri, Professor, Kongu Engineering College started the seminar on the topic “An overview of Machine Learning algorithms for Electronic Design Automation”. She gave an overview about machine learning algorithms and how it is applied for real time applications. Next, Dr. Kumar Rajamani, Senior Scientist, Philips, Bengaluru, discussed about the “Evaluation of Manual annotation of Images using Deep Learning – Spatio Temporal models (STCN)” with some real time demos. Mr.Abinash, Presidio Cloud Solutions, discussed “Evolution of Technology for AI based applications” with a project he had developed.

Dr.R.Sakthivel, Associate Professor Department of Micro and Nanoelectronics, Vellore Institute of Technology, Vellore, discussed about the “Hardware for Artificial intelligence and Machine Learning”. He gave a wide knowledge about the different hardwares which can be used for Artificial intelligence and Machine Learning. Lastly, Dr.D.Malathi, Professor, Kongu Engineering College discussed how machine learning used in VLSI with some projects. About 38 participants from various institutions across India participated. Each session had a discussion at the end. Participants gave a feedback that the seminar is so useful and they have learnt some new topics.


(Dr. D. Malathi)