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20-04-2020

Webinar

on

"Fundamentals of Fuzzy Logic for Electronics Engineering"

Circular:

4/3/24, 2:21 PM

Mail - HOD-ECE - Outlook

ECE Webinar (2) on "Fundamentals of Fuzzy Logic for Electronics Engineering" on 20-04-2020 & 21-04-2020-Reg.

HOD-Department of Electronics and Communication Engineering < hod.ece@kluniversity.in> Sat 18-04-2020 18:44

To:ECE Faculty <ecefaculty@kluniversity.in>;deanengg@klh.edu.in <deanengg@klh.edu.in>;ecehod@klh.edu.in <ecehod@klh.edu.in>;koteswararao@klh.edu.in <koteswararao@klh.edu.in>;KLH Director <director@klh.edu.in>;ALL HODS <hods@kluniversity.in>;eceteaching@klh.edu.in <eceteaching@klh.edu.in>;All Deans <deans@kluniversity.in> Cc:Suman Maloji <suman.maloji@kluniversity.in>;PRINCIPAL - COE <pri>principal.coe@kluniversity.in>;Vice Chancellor - KLU <vc@kluniversity.in>;PRESIDENT president@kluniversity.in>

1 attachments (381 KB)

Webinar 2.jpg;

Respected Sir/Madam,

In the series of webinars, the second webinar is scheduled and the details are as follows.

Webinar: "Fundamentals of Fuzzy Logic for Electronics Engineering"

Speaker: Dr. N. Phalguni Singh, Assistant Professor, ECE Dept.

Expert Talk Series: 02

Date: 20-04-2020 & 21-04-2020

Time: 10 AM

Register Here:



https://forms.gle/5fi3YU6KS7vRLC8b9



Fundamentals of Fuzzy Logic for **Electronics Engineering**

Dr. N. Phalguni Singh Assistant Professor ECE Dept. KLEF

forms.gle

Interested faculty are requested to register using the above mentioned link. All HODs are requested to share the details in the respective department.

Thank You.



Poster:

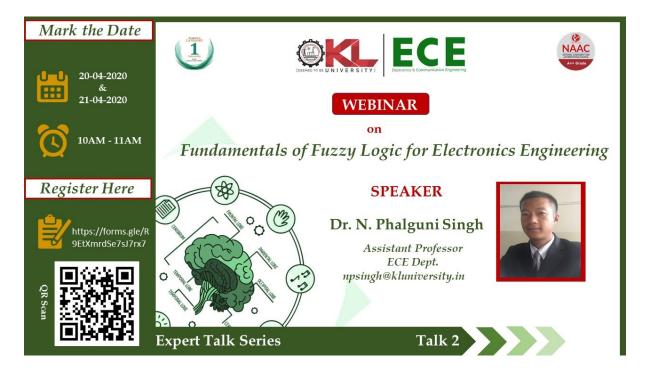


Fig. Poster of webinar

1. Objective and discussions:

Fuzzy logic is a branch of logic that deals with reasoning that is approximate rather than fixed and exact. It is used to handle the concept of partial truth, where the truth value may range between completely true and completely false. Fuzzy logic has numerous applications in various fields, including electronics engineering. Here's a brief overview of the fundamentals of fuzzy logic relevant to electronics engineering:

Membership Functions: In fuzzy logic, variables can have degrees of membership in a set. Membership functions define the degree to which an element belongs to a particular set. These functions can be triangular, trapezoidal, Gaussian, or any other shape depending on the application.

Fuzzy Sets: Unlike classical sets in traditional logic, which are binary (an element is either in the set or not), fuzzy sets allow elements to have partial membership. This makes fuzzy sets suitable for modeling uncertainty and imprecision.

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Fuzzy Logic Operations: Fuzzy logic operations include fuzzy AND, fuzzy OR, and fuzzy NOT, which operate on fuzzy sets. These operations are often defined using functions such as minimum, maximum, and complement.

Fuzzy Rules: Fuzzy logic systems use IF-THEN rules to make decisions. These rules are based on linguistic variables and use fuzzy logic operators. For example, "IF temperature is cold THEN increase the heater output."

Fuzzy Inference Systems: Fuzzy inference systems (FIS) process fuzzy rules to generate appropriate output based on input variables. There are various methods for fuzzy inference, such as Mamdani and Sugeno models.

Defuzzification: The output of a fuzzy inference system is typically in fuzzy form. Defuzzification is the process of converting this fuzzy output into a crisp value that can be used for control or decisionmaking.

In electronics engineering, fuzzy logic finds applications in areas such as:

Control Systems: Fuzzy logic controllers (FLCs) are used in systems where precise mathematical modeling is difficult or impractical. They are particularly useful in systems with nonlinearities and uncertainties.

Signal Processing: Fuzzy logic can be used for tasks such as noise reduction, signal classification, and pattern recognition.

Embedded Systems: Fuzzy logic can be implemented in embedded systems for tasks such as temperature control, motor control, and power management.

Fault Diagnosis: Fuzzy logic systems can analyze sensor data to detect and diagnose faults in electronic systems.

Overall, fuzzy logic provides a flexible framework for dealing with imprecise and uncertain information, making it a valuable tool in electronics engineering.

Online Link

https://us02web.zoom.us/j/2345465456?pwd=dngGNNrYTREOp07

Number of student participants: 75

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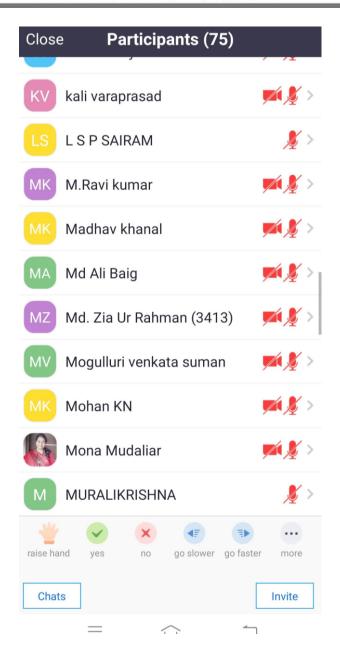


Fig. List of students

List of the Participated Students: 34

S. No.	Roll No	Name
1	180040130	DESINEEDI SAI RAGHAVENDRA
2	180040452	BHAVIRISETTY RAJITHA
3	180040488	CHOKKARA TULASI POORNA CHANDU
4	180040381	MADDURI PRAVALLIKA
5	180040636	JALADANKI YOSHITHA
6	180049009	KILARU SAI PRASANTH





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7	180040006	B LEELADHAR
8	180040099	AKULA SAI BALA SIVA JYOTHIKA
9	180040582	JALDU VENKATA NAGA SASIDHAR
10	180040170	ROHITH JATLA
11	180040189	KOMMURU SRAVANI ANNAPURNA
12	180040191	NIDUMUKKALA LASYA SRI
13	180040196	MANEPALLI BHAVYA TEJASWI
14	180040192	NANDYALA VAISHNAVI DEVI
15	180040413	CH JAYA TEJA
16	180040010	BOLLA VENKATA MAHESH
17	180040085	SOMISETTY ANIL KUMAR
18	180040447	BOLLARAM SREEHARSHA
19	180040590	POLURU JEEVAN REDDY
20	180040681	KODALI BRAHMANI
21	180040483	THUMMALACHARLA RAKESH
22	180040493	CHILAKAMARTHI DATTA SANTHOSH
23	180040362	JETTI TEJA
24	180040081	TADIBOYINA MOUNIPRAVALLIKA
25	180040131	.GADAMSETTI LAKSHMI AISHWARYA
26	180040133	PUSHADAPU HIMA SINDHUJA
27	180040254	ADITYA GOKUL REDDY BHIMAVARAPU
28	180040668	VISINIGIRI V N ADITYA VISHAL
29	180040072	YARRABBOTULA SUNANDHA
30	180040474	VINJAMURI MOHANA VAMSI
31	180040697	KAMMELA MANASA
32	180040011	PRASHANTHKUMAR DILEEPKUMAR
33	180040450	DEBBADI BHANU TEJA
34	180040130	DESINEEDI SAI RAGHAVENDRA
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