MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY & MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
NAAC Accredited Institution with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

<u>Proceedings and Completion Report</u>

With reference to AICTE sanction order 34-66/90/FDC/STTP/Policy-1/2019-20, dated 10-Aug-20, the short term training program on Artificial Intelligence: Devices to Circuits was conducted at Marri Laxman Reddy Institute of Technology and Management, Hyderabad from 1st February 2021 to 6th February 2021 in physical mode. To conduct this program a Program Monitoring Committee was constituted with the following members

S.No.	Name	Designation
1	Dr. K. Venkateswara Reddy, Principal	Chairperson
2	Dr. Shijin Kumar P. S. Coordinator	Member Secretary
3	Dr. Srinivas Bachu HoD-ECE	Member
4	Dr. Vinod Adla HoD-EEE	Member
5	Dr. G. Amarnath Subject Expert	Member

The program was started with inauguration by the PMC members and Dr. Amit Acharyya from IIT Hyderabad. The first session of day 1 (01-02-2021) was handled by Dr. Amit Acharyya. This session focused on Low Power Chips for Artificial Intelligence devices. The second Session of day 1 was handled by Dr. G. Manisha from IARE, Hyderabad. She discussed about Hybrid CMOS-emerging memory circuits for neuromorphic computing.

The first session of day 2 (02-02-2021) was handled by Dr. T.R. Lenka of NIT Silchar. This session focused on Wide bandgap Semiconductor Devices for Emerging AI Nanoelectronics. The second Session of day 2 was handled by Dr. G. Amarnath of MLRITM, Hyderabad. This Session focused on Compact Modelling of GaN HEMTs for High Frequency and Power Applications using AI algorithms. The third session of day 2 was a hands on session

focused on device simulation using artificial intelligence. This session was handled by Dr. G. Amarnath of MLRITM, Hyderabad.

The first session of day 3 (03-02-2021) was handled by Dr. Sanket Goel of BITS, Hyderabad. He discussed about the Development of Miniaturized Sensors for Diverse Artificial Intelligence Applications. The second session was handled by Dr. M. Krishnasamy of JITS, Narsampet. This session covered the topic "Powering AI sensors through Piezoelectric Energy Harvesting Systems". The third session was a hands on session about "Piezoelectric Energy Harvester". This hands on session was handled by Dr. M. Krishnasamy of JITS, Narsampet.

The first session of day 4 (04-02-2021) was handled by Mr. B. Nagendra of CoreEL Technologies, Hyderabad. He discussed about the Introduction and VLSI Architectures in AI-Different Architectural Features. The second session was also handled by Mr. B. Nagendra of CoreEL Technologies, Hyderabad. This session covered the topic "Custom IP Design and Validation for VLSI Designs in AI". The third session was a hands on session about "on IP Design and Validation". This hands on session was handled by Dr. S. Kishore of MLRITM, Hyderabad.

The first session of day 5 (05-02-2021) was handled by Mr. B. Nagendra of CoreEL Technologies, Hyderabad. He discussed about the Writing python code and implementation using *pynq* framework tool. The second session was also handled by Mr. B. Nagendra of CoreEL Technologies, Hyderabad. This session covered the topic "Python Framework for AI in VLSI Applications". The third session discussed about "Machine learning based VLSI interconnects modeling". This session was handled by Dr. M. Kavicharan of NIT, Silchar.

The first session of day 6 (06-02-2021) was handled by Mr. E. Sai Kiran of MAXIM INTEGRATED, Hyderabad. He discussed about Algorithms for supervised &unsupervised classification &their hardware implementation. The second session was also handled by Dr. G. Amarnath of MLRITM, Hyderabad. He discussed about "Analog hardware neural networks with silicon transistor & spintronic devices".

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The final session of day 6 was utilized for conducting Test, Feedback and Valedictory Function. An objective question based test was conducted and 40 participants obtained more than 60% marks and were eligible for certificate. Certificates were distributed by Dean (Academics), Dean (R&D) and HOD-ECE during the valedictory function.

Photographs

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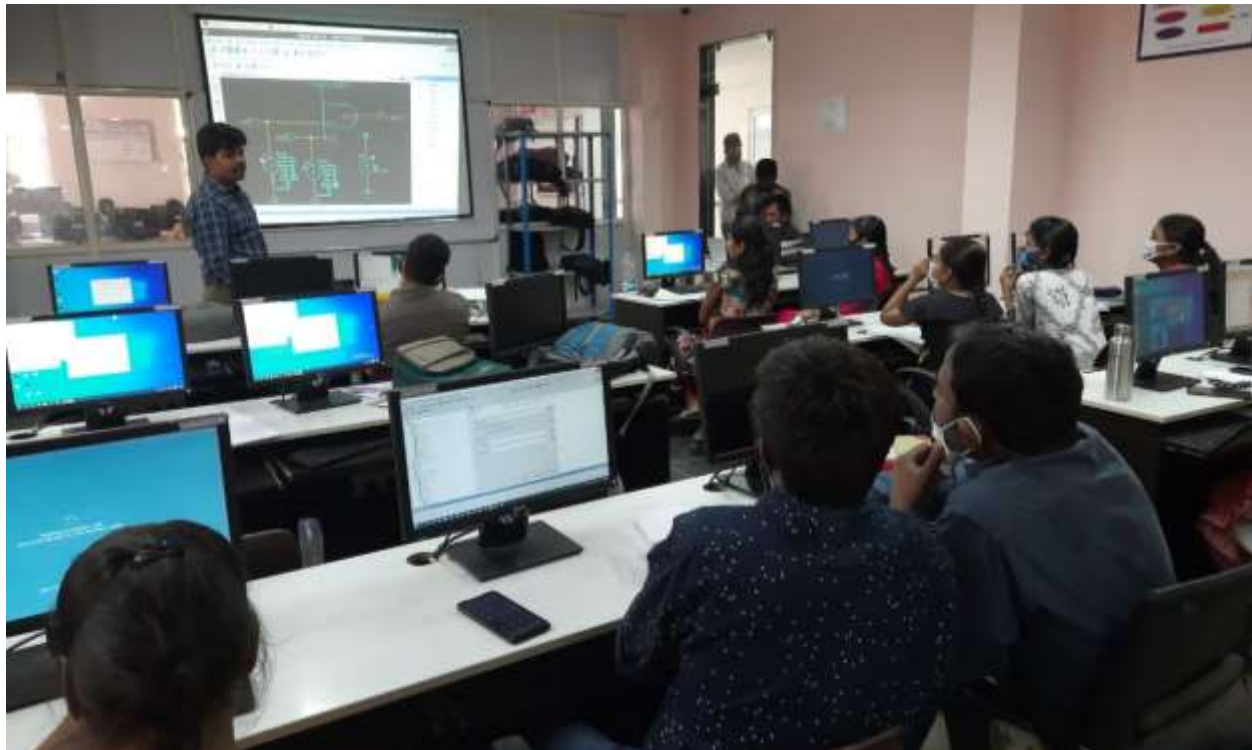## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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Member	Member	Member	Member Secretary	Chairperson
(Dr. G. Amarnath)	(Dr. Vinod A)	(Dr. Srinivas B)	(Dr. Shijin Kumar P S)	(Dr. K. Venkateswara Reddy)