

# Short Term Course on *Neuroevolution-based Advanced Semiconductor Devices (NASD-2024)*

(07<sup>th</sup> - 11<sup>th</sup> March 2024 at BIT, Mesra, Ranchi)

(Hybrid Mode)

Coordinators: *Dr. P. P. Dash and Dr. Deepti Gola*

## Tentative Course Schedule

9:30 AM-11:00 AM		11:30 AM-1:00 PM		2:30 PM-4:00 PM		4:30 PM-6:00 PM	
7/03/2024 Thursday	<b>Inaugural Session</b> <b>Dr. Deepti Gola (BIT, Mesra)</b> Topic: <i>Introduction to the Short-Term Course</i>	<b>Dr. S. S. Sahu (BIT, Mesra)</b> Topic: <i>Introduction to AIML and Applications</i>	<b>Dr. K. P. Pradhan (IITDM, Kanchipuram)</b> Topic: <i>Mimicking of Biological Behaviour through CMOS and Beyond CMOS based Devices</i>	<b>Dr. Satyabrata Jit (IIT BHU)</b> Topic: <i>History and Development of Transistor Technology</i>			
8/03/2024 Friday	<b>Dr. P. P. Dash</b> <b>Dr. Deepti Gola (BIT, Mesra)</b>	<b>Dr. Balraj Singh (BBAU, Lucknow)</b> Topic: <i>FET based biosensors</i>	<b>Dr. M. K. Mukul (Delhi University)</b> Topic: <i>Machine Learning in Semiconductor Devices</i>	<b>Dr. P. P. Dash (BIT, Mesra)</b> Topic: <i>Introduction to Artificial Neural Networks</i>	TEA BREAK LUNCH BREAK TEA		
9/03/2024 Saturday	<b>Dr. P. K. Tiwari (IIT, Patna)</b> Topic: <i>FET based Neural Networks</i>	<b>Dr. Avirup Dasgupta (IIT, Roorkee)</b> Topic: <i>Machine Learning Augmented Device Modeling</i>	<b>Dr. Amit Saini (Cadre Design Systems)</b> Topic: <i>Hands-on Training Session on Advanced MOS Devices using TCAD</i>	<b>Dr. Amit Saini (Cadre Design Systems)</b> Topic: <i>Hands-on Training Session on Advanced MOS Devices using TCAD</i>			
10/03/2024 Sunday	<b>Dr. Subham Sahay (IIT Kanpur)</b> Topic: <i>Neuromorphic Computing: Mapping Neural Networks to Hardware</i>	<b>Dr. Sandip Mondal (IIT, Bombay)</b> Topic: <i>Biological learning in semiconductor devices</i>	<b>Dr. Srivastava (K.K. Wagh Institute of Engineering Education And Research)</b> Topic: <i>Lecture-cum-Training session on Exploratory Data Analysis using MATLAB and PYTHON</i>	<b>Dr. Srivastava (K.K. Wagh Institute of Engineering Education And Research)</b> Topic: <i>Lecture-cum-Training session on Exploratory Data Analysis using MATLAB and PYTHON</i>			
11/03/2024 Monday	<b>Dr. K. P. Pradhan (IITDM)</b> Topic: <i>Hands-on Session on Leaky Integrate and Fire Neuron for SNN from scratch in PYTHON</i>	<b>Dr. Debanjan Bhowmik (IIT, Bombay)</b> Topic: <i>Spintronics-Based Neuromorphic and Ising Computing</i>	<b>Course Review, Feedback, Valedictory Session, Certificate Distribution and Vote of Thanks by Course Coordinators</b>				