



## DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

### A TEDx TALK on “AI That Connects the Digital and Physical Worlds”

The Department of Information Science & Engineering, New Horizon College of Engineering has organized a **TEDx Talk** on “**AI That Connects the Digital and Physical Worlds**” on Friday, 11-04-25 in ISE Department, Chhatrapati Shivaji Block, NHCE at 9.00 am. The participants of the event was 8<sup>th</sup> semester students.

The brochure of the event :

**TEDx TALK**  
Department of  
Information Science and Engineering

**AI THAT CONNECTS  
THE DIGITAL AND  
PHYSICAL WORLDS**

11<sup>th</sup> April, 2025  
 9:00 AM to 10:00 AM  
 8<sup>th</sup> Sem

Faculty Coordinator  
**Mrs. Rama Dan**  
Senior Assistant Professor - ISE

Convener  
**Dr. Vandana C P**      **Dr. Manjunatha**  
HoD - ISE                      Principal, NHCE

**NEW HORIZON  
COLLEGE OF ENGINEERING**

**SPEAKER**  
**ANIMA ANANDKUMAR**  
Professor, AI and Science Innovator

Fig 1

In her TED Talk titled "*AI That Connects the Digital and Physical Worlds*", Anima Anandkumar, a professor at Caltech and Director of Machine Learning Research at NVIDIA, explores how artificial intelligence can bridge the gap between digital computations and real-world physical systems.

### **Key Highlights**

- **Limitations of Traditional AI:** Ms. Anandkumar emphasizes that while language models can generate ideas, they fall short in simulating complex physical phenomena.
- **Introduction of Neural Operators:** She introduces *neural operators*, AI models trained on detailed physical data, capable of simulating intricate systems like fluid dynamics and weather patterns.
- **Real-World Applications:**
  - *Weather Forecasting:* Development of AI-based high-resolution weather models that rival current standards.
  - *Medical Device Design:* Utilizing AI to simulate and optimize medical devices before physical prototyping.
  - *Energy Production:* Enhancing energy systems through accurate simulations of physical processes.
- **Vision for the Future:** Ms. Anandkumar envisions AI as a tool to accelerate scientific discovery, reduce costs, and create realistic digital twins for various applications.

This talk underscores the transformative potential of AI in understanding and simulating the physical world, paving the way for advancements across multiple scientific and engineering domains.

### **Glimpses of the event:**



**Faculty Coordinator**

**HOD-ISE**