ADVISORY COMMITTEE

Prof. Saroj Kanta Misra,
Advisor,
Silicon University, Odisha

Prof. Manoranjan Behera
Dean (Research & Consultancy)
Silicon University, Odisha

Prof. Ranjan Kumar Dash
OUTR, Bhubaneswar

Prof. Bimal Kumar Meher
Silicon University, Odisha

PATRONS

Prof. Jaideep Talukdar,
Vice-Chancellor
Silicon University, Odisha

Prof. Chitaranjan Tripathy,
Advisor Research
Silicon University, Odisha

REGISTRATION DETAILS

For further information, please contact:

- Dr. Pradyumna K. Tripathy, 9437141874, e-mail: ptripathy@silicon.ac.in
- Mr. Rabinarayan Mohanty, 7377011045, e-mail: rabinarayan.mohanty@silicon.ac.in

CONVENOR

Prof. Ch. Sanjeev Ku. Dash
Dept. of MCA,
Silicon University, Odisha

ORGANIZING CHAIR

Prof. Sushri samita Rout

Dept. of CSE,
Silicon University, Odisha

Prof. Pragyan Paramita Das
Dept. of CSE,
Silicon University, Odisha

Prof. Samaleswari Prasad Nayak
Dept. of CSE,
Silicon University, Odisha

Prof. Ajit Kumar Behera
Dept. of CSE,
Silicon University, Odisha

ORGANIZING COMMITTEE

All faculty & staff members of CSE & MCA Department

WHO CAN APPLY

Registration is open to Faculties from all disciplines / Research Scholars / Industry Persons.

"No Charge for Registration, Course and Certification"

COORDINATOR

Prof. Pradyumna kumar Tripathy
HOD, Dept. of CSE, Silicon University
Experience: 19 years

CO-COORDINATOR

Prof. Rabinarayan Mohanty
Assistant Professor, Dept. of CSE, Silicon University
Experience: 8 years

AICTE TRAINING AND LEARNING (ATAL)

BASIC
FACULTY DEVELOPMENT PROGRAM (FDP)

ON

"Future Generation Computing with HPC and AI"

9th Dec 2024 to 14th Dec 2024

Organized by

Silicon University

Department of Computer Science & Engineering
Silicon University, Silicon Hills, Patia,
Bhubaneswar-751024

OBJECTIVES OF THE FDP

- Deep learning models, particularly those with large datasets or complex architectures, often require extensive computational resources for training. HPC systems can significantly speed up this process, enabling researchers and practitioners to train models faster and iterate more quickly.
- Industries such as healthcare, finance, and manufacturing, there's a need for scalable solutions to process and analyze large datasets. DL algorithms running on HPC infrastructure can efficiently handle massive volumes of data, extracting valuable insights and patterns.
- In scenarios where real-time decision-making is critical, such as autonomous vehicles, healthcare diagnostics, and financial trading, DL models running on HPC systems can provide rapid and accurate predictions, enabling timely responses to changing conditions.
- By providing researchers, engineers, and entrepreneurs with access to cutting-edge DL and HPC technologies, organizations can drive innovation, foster economic growth, and maintain competitiveness in a rapidly evolving global landscape.

AICTE TRAINING AND LEARNING (ATAL)

The objective of AICTE's Training and Learning (ATAL) is to impart quality training through Faculty Development Programmes (FDPs) for Faculty Members, Postgraduate students, Research scholars and Industry Professionals so that the participants:

1. will acquire a sound domain knowledge and associated skills set to apply in real life with industry connect.
2. are equipped with Institutional Leadership skills for academic leadership.
3. are understanding their roles in community wellbeing, national building and also their own career development.
4. can effectively communicate knowledge and skill sets to the students in an efficient manner and their teaching-learning effectiveness is assessed.

ABOUT THE UNIVERSITY

Silicon University (formerly known as Silicon Institute of Technology, Bhubaneswar) combines a commitment to providing the best engineering education with supporting India's development in science and technology through rigorous academic programs, promoting fundamental and applied research, and fostering innovation and entrepreneurship.

Founded in 2001 in the eastern state of Odisha, India, SiliconTech, the engineering institute of Silicon University is known for its community of reputed and dedicated faculty, bright and talented students, and effective administration and support staff.

CERTIFICATE

Certificate will be provided by ATAL Academy after successful completion of FDP. Minimum 80% attendance and 70% marks in assessment conducted at the end of the program are required to earn the certificate.

ABOUT THE DEPARTMENT

The Department of "Computer Science and Engineering" at the Silicon University was established in the year 2001 with the approval of AICTE. The UG program of the department was accredited in 2009 and subsequently in 2018. The department is concerned with the theory, design, development and application of computer systems and information processing techniques. Within a short span of time, the department has proved itself not only one of the best departments of the college but also among other private engineering colleges in Odisha. The research and teaching missions of the department encompass a wide range of areas, including networking, data science, IoT, block chain, cloud computing. The department possesses advanced laboratories for IoT, Robotics, Data Science, Cloud Services. A dedicated and enthusiastic team of faculty members of the department with high moral character organizes conferences, FDPs, seminars, workshops and short-term courses from time to time which usually get favorable responses from the faculties, students & researchers from national as well as international institutions.

COURSE CONTENT

After successful completion of the FDP, participants will be familiar with :

- ✓ Fundamentals of Neural Networks
- ✓ Emerging Research Area in Deep Learning and HPC
- ✓ Fundamentals of High-Performance Computing (HPC)
- ✓ Introduction to Parallel Programming Models
- ✓ Fundamentals of Deep Learning Frameworks
- ✓ Deep Learning Frameworks: Tensor Flow, Pytorch, Keras
- ✓ Parallel and Distributed Training
- ✓ High-Performance Computing (HPC) for Deep Learning
- ✓ Parallel Programming in HPC Environment
- ✓ Distributed Training Using HPC
- ✓ CUDA using HPC
- ✓ Scalability of DL Models with HPC
- ✓ AI Accelerators and Hardware for HPC

REGISTRATION

Program will be in **online**. Registration must be done only through AICTE-ATAL academy. The interested members must visit **https://www.aicte-india.org/atal**, register themselves by providing all their personal and student/ employment details. This procedure requires uploading of color photo, Signature, ID Card (for students), and Consent letter (for employees) from their employers in JPEG format.

STEPS TO REGISTER

- ➢ **Registration can be done only through AICTE-ATAL portal. Visit: https://www.aicte india.org/atal "Sign Up" and create a login as "participant".**
- ➢ **Login using your newly created login credentials, update your profile and click on "FDPs" Link. You can register by clicking on the "+" sign on FDP.**
- ➢ **Press Ctr+F , enter 1730874447 as Application Number and find FDP on "Future Generation Computing with HPC and AI".**

OUR EXPERTS

Prof. (Dr.) Sudarshan Padhy
Ex-Director, IMA, Bhubaneswar,
Experience: 40 years

Mr. Shantipriya Parida
Senior AI Scientist,
Silo AI, Finland,
Experience: 19 years

Dr. Prabhat kumar Santi
Senior Data Scientist, TCS, Bhubaneswar,
Experience:20 years

Mr.OM JADHAV
Scientist-D, from C-DAC, Pune

Prof. (Dr.) Saraju Mohanty
Professor, University of North Texas,
Denton, Texas, Experience:20 years

OUR EXPERTS

Dr. Hemanta Rath
Senior Data Scientist, TCS,
Bhubaneswar, Experience:20 years

Dr. Sibaram Panigrahi
Assistant Professor, NIT, Rourkela
Experience: 10 years

Dr. Suvendu Rup
Associate Professor, NIT, Raipur
Experience: 15 years

Mr. Abhishek Patel
Project Engineer, from C-DAC, Pune

Mr. Harikesh Shinde
Senior Project Engineer ,
from C-DAC, Pune

Dr. Vamshi Krishna
HPC Applications and Optimization
Expert, from C-DAC, Pune

Session Details:

Session-01 : "Fundamentals of Neural Networks",
by Prof. (Dr.) Sudarshan Padhy.

Session-02 : "Introduction to parallel programming models:
shared-memory (OpenMP), distributed-memory (MPI)"
by Mr.OM JADHAV .

Session-03 : "Fundamentals of High-Performance Computing (HPC)"
by Mr. Shantipriya Parida

Session-04 : "Emerging Research Area in Deep Learning and HPC"
by Prof. (Dr.) Saraju Mohanty.

Session-05 : "Fundamentals of Deep Learning Frameworks",
by Dr. Hemanta Rath.

Session-06 : "AI Accelerator and Hardware for HPC"
by Dr. Suvendu Rup.

Session-07 : "Parallel and Distributed Traning",
by Mr. Harikesh Shinde.

Session-08: "High Performance Computing (HPC) for Deep Learning",
by Mr. Abhishek Patel.

Session-09 : "Parallel Programming in HPC Environment",
by Mr. Harikesh Shinde.

Session-10 : "Distributed Training Using HPC",
by Mr. Abhishek Patel.

Session-11 : "CUDA Using HPC",
by Dr. Vamshi Krishna.

Session-12 : "Scalability of Deep Learning Models with HPC"
by Dr. Sibaram Panigrahi.

Session-13: "Deep Learning Frameworks: TensorFlow, PyTorch, Keras"
by Dr. Prabhat kumar Santi.

AICTE TRAINING AND LEARNING (ATAL)

Basic Faculty Development Programme (FDP)

on

"Future Generation Computing with HPC and AI"

PROGRAM SCHEDULE

ATAL ONLINE 6 Days FDP 2024-25 (6:00 PM to 9:00 PM)

Day 1 (09/12/2024)	Day 2 (10/12/2024)	Day 3 (11/12/2024)	Day 4 (12/12/2024)	Day 5 (13/12/2024)	Day 6 (14/12/2024)
6:00PM to 6:30PM Inauguration	6:00PM to 7:30PM Session 3	6:00PM to 7:30PM Session 5	6:00PM to 7:30PM Session 7	6:00PM to 7:30PM Session 9	2:00PM to 3:30PM Session 11
6:30PM to 8:00PM Session 1	7:30PM to 9:00PM Session 4	7:30PM to 9:00PM Session 6	7:30PM to 9:00PM Session 8	7:30PM to 9:00PM Session 10	3:30PM to 5:00PM Session 12
8:00PM to 9.30PM Session 2					5:00PM to 7:30PM Session 13
					7:30PM to 8:30PM Online test & feedback
					8:30PM to 9:00PM Valedictory Session