



5-DAYS WORKSHOP ON

HPC Synergy: Elevating AI with High-Performance Parallel Computing

Sponsored by:



SERB, DST - GoI

July 22 to July 26, 2024

HYBRID MODE

ABOUT THE WORKSHOP

The primary objective of this workshop is to equip participants with practical skills in utilizing HPC for AI/ML applications. Through a hands-on approach, the workshop is designed to explore cutting-edge techniques and technologies driving advancements in artificial intelligence and machine learning through high-performance computing (HPC). Our sessions will cover a wide range of topics, from fundamental concepts to hands-on implementations, providing both theoretical knowledge and practical skills. Participants will gain insights into the compute-memory wall, GPU acceleration, parallel processing, and memory programming. The workshop covers state-of-the-art deep learning models, AI/ML frameworks, and performance optimization strategies. Hands-on sessions will enable practical implementation of deep learning models on CPUs and GPUs. Additionally, future trends in HPC for AI/ML will be discussed, offering a comprehensive understanding of the field's challenges and advancements. Exploring AI/ML frameworks within the context of HPC and parallel computing will be a focal point of the workshop.

Key Components

- **Enhance Understanding:** Provide a comprehensive understanding of high-performance computing (HPC) and its critical role in advancing AI and ML technologies.
- **Practical Skills Development:** Equip participants with hands-on experience in implementing and optimizing deep learning models on both CPU and GPU platforms.
- **Application Focus:** Participants will explore the practical applications of AI/ML frameworks across diverse fields, offering them valuable insights into the tangible, real-world impact of these technologies.

Outcome of the Workshop:

- Understanding the fundamentals of HPC and its relevance to AI/ML: Learn about the architecture and components of HPC systems, and why they are essential for AI and ML applications. Gain insights into current issues, emerging trends, and the future landscape of AI/ML in HPC.
- Gain hands-on experience: Engage in practical sessions where you will implement deep learning models on both CPU and GPU platforms. Gain a profound understanding of HPC technologies and their nuanced application in AI/ML.
- Acquire hands-on experience through practical exercises, fostering the development of practical skills in HPC for AI/ML applications

CHIEF PATRONS



Prof. M.V. Karthikeyan,
Professor,
Director
IIIT Sri City, Chittoor.

PROGRAM COORDINATORS

- **Dr. Bheemappa Halavar,**
Assistant Professor, IIIT SriCity
- **Dr. Annushree Bablani,**
Assistant Professor, IIIT SriCity

Target Audience

Researchers(PhD), PG, UG students, Faculties and industry persons, aiming to enhance their skills and knowledge in the development of parallel computing using AI/ML frameworks.

Registration

REGISTRATION FEE :

OFFLINE/ONLINE : 799 INR
(NON REFUNDABLE)

LAST DATE FOR REGISTRATION : 15/07/2024

- **Note: Limited accommodation available, on prior request.**
- **The expenses have to borne by participants- 250 per day for staying and Food (lunch and dinner).**

Organised by

SysAPC Group @IIITS

Dept. of CSE, IIIT SriCity

RESOURCE PERSONS



Prof Dhabaleswar K. (DK) Panda, Professor,
The Ohio State University



Dr. Rupesh Nasre, Professor,
Indian Institute of Technology Madras



Dr. Bharath Ramesh Professor,
Western Sydney University



Dr. Satish Puri, Associate
Professor, Missouri University of
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Sasank Chilamkurthy, Founder and
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Registration : [Click-here](#)

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