ABOUT HOST INSTITUTE

SKN Sinhgad College of Engineering is housed in beautiful campus of 20 acres and is developed under dynamic leadership of Hon'ble Prof. M. N. Navale. The Institute offers Six B. Tech, four M. Tech. and Three Ph. D degree courses in Engineering and Technology under Punyashlok Ahilyadevi Holkar Solapur University, Solapur. Since its establishment, the institute has made worthwhile progress in the field of Engineering education and research. As the result of this, the institute is accredited by NBA(Civil, Mech, ENTC Dept.) and with 'A+' grade by NAAC. The institute ensures the overall development of students and faculty through well-defined teaching learning process and skill-based activities. Students will have an exposure for experiential learning. The team of faculty members of SKNSCOE are committed to prepare their students tomorrow's leaders to match the need of fast changing world under the guidance of Dr. Kailash J. Karande, Principal, SKNSCOE. All the laboratories of each departments have modern and state-of-art equipment's with all required hardware's and softwares. The library is fully fledged with all required reference books, Journals, periodicals. The institute has well equipped hostel facilities, computer center, hygienic mess and canteen, dispensary, ATM, Gymnasium, etc. within the campus.

CHIEF PATRONS

- Dr. S. S. Rathod, Director, WCE Sangli
- **Dr. K. J. Karande**, Principal, SKNSCOE, Pandharpur.
- Mr. Amol Chavan, Administrative member, WCE Sangli.
- **Dr. S.G. Kulkarni**, Vice Principal, SKNSCOE, Pandharpur.



NSM Sponsored Faculty Development Program on High Performance Computing and AI

Organised by

Department of Computer Science & Engineering, SKNSCOE, Korti, Pandharpur

85

CDAC Pune

Under the aegis of National Supercomputing Mission, Government of India

In association with

Walchand College of Engineering, Sangli

(NSM Nodal Centre)

Dates:17/11/2025 to 21/11/2025 (Offline) & 6/12/2025 (Online) Convenors:

Prof. Dr. D. B. Kulkarni, Head, NSM Nodal Centre WCE Sangli.

Coordinators:

Dr. U.B. Chavan, WCE, Sangli. Dr. S.V. Pingale, SKNSCOE, Pandharpur.



ABOUT COLLABORATORS

Centre for Development of Advanced Computing (C-DAC) is implementing the National Super-computing Mission(NSM), a capacity building initiative of Ministry of Electronics and Information Technology (MeitY). Government of India. Walchand College of Engineering Sangli (WCE) was established in 1947 and aided by the Govt. of Maharashtra, is one of the oldest and premier engineering institutions in India with a beautiful campus of over 90 acres. WCE offers 6 UG programs in Civil, Electrical. Mechanical. Electronics. Information Technology and Computer Science & Engineering, 10 PG programs and Ph.D. programs. The institute is also given autonomous status by UGC since 2007.

ABOUT COURSE

The programme will introduce several parallel programming models, including Open Multiprocessing (OpenMP) for memory machines, Message shared Passing Interface (MPI) for distributed memory machines, and Compute Unified Device Architecture (CUDA), a parallel computing platform developed by NVIDIA for exploiting GPU. It will also include hands-on practise on these programming models. It is primarily intended for professors who presently teach or plan to teach HPC-related courses. Researchers who use or plan to use parallel programming are also welcome to attend.

COURSE CONTENTS

- Understanding Multicore and Manycore architectures
- Shared Memory Parallelism with OpenMP
- CUDA Programming
- Distributed Memory Parallelism with MPI
- Parallel Computing Patterns: Reduction, Matrix multiplication, convolution etc.
- Profiling sequential and parallel codes
- Performance measures in parallel computing
- LLM & Gen AI /Parallel Programming with OpenMP.
- HPC & AI, Slurm Content.
- Deep learning, HPC for NLP & Industry 4.0

PROGRAM BENIFITS

- Interaction with eminent speakers from industry and academia
- Industry certifications of worth 21,000/for FREE
- Access to HPC resources during the FDP
- Travelling Fare (max Rs. 2000), Food and accommodation will be provided in campus.

TARGET AUDIENCE

The workshop is open for all faculty members, research scholars working in CSE, IT and Electronics and allied departments in universities and engineering colleges of Maharashtra. Preference will be given to the applicants from nearby institutes of SKNSCOE, Korti, Pandharpur. The registration is on a 'first come first serve' basis.

SPEAKER

- Mr. Ashish Kuvelkar, Senior consultant, CDAC Pune.
- Dr. Medha Shah, WCE Sangli.
- Dr. Pramod Bide, SPIT, Mumbai.
- Dr. Nileshchandra Pikle, IIIT Nagpur.
- Mr. Mandar Gurav, Parallel computing consultant.
- Ms. Aprupa Pawar, WCE Sangli.
- Mr. Shailesh Patil, WCE Sangli.

COURSE OBJECTIVES

- To Introduce the fundamentals of parallel computing including parallel architectures, programming models and commonly used parallel programming constructs / libraries / languages.
- To deliver hands-on sessions to provide experience applying HPC tools on both CPU and GPU platforms.
- To help faculties to include HPC course in the curriculum.

IMPORATNAT DATES

- · Registration Open: 4/11/2025
- Last Date of Registration: 14/11/2025
- **Duration:** 17/11/2025 to 21/11/2025 (Offline) & 6/12/2025 (Online)
- **Registration Fees:** 1000 (Refundable)
- For Registration
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