**DMACS**

Department of Mathematics and Computer Science (DMACS) at Sri Sathya Sai Institute of Higher Learning (SSSIHL) is a place where teaching and research in Mathematics and Computer Science is carried out by an energetic faculty.

Computer vision, Machine Learning, Image Processing, High Performance Computing, Differential Equations are some of the areas in which DMACS has contributed well. To know more about DMACS, SSSIHL following links may be used:

- Academics
- Research

Head of Department: Dr. P K Baruah (hoddmacs@sssihl.edu.in)

**SPEAKERS**

The symposium will be composing of tutorials by reputed speakers from academia and industry. A number of invited talks and paper presentations by leading researchers from India and abroad are planned. Probable list of speakers includes:

- Prof R Govindarajan IISc
- Prof B Jayaram, IITD
- Prof Rahul Garg IITD
- Prof Mahendra Verma IITK
- Prof V Nataraj, IITB
- Prof P Sunil Kumar, IITM
- Dr Kishore K, IIITH
- Prof P Sadyappan, Ohio State Univ.
- Prof Dhabaleswar Panda, Ohio State Univ.
- Prof Rajkumar Buyya, Univ. of Melbourne
- Prof Ashok Srinivasan, Florida State Univ.
- Prof Vipin Chaudhary, U C Buffalo
- Dr Sudhakar Pamidighantham, Indiana
- Prof Sartaj Sahni, Univ. of Florida
- Prof Rakesh Nagi, UIUC
- Dr Manish Gupta, XRCI, India
- Dr Devi Sudheer, IBM Res. Delhi
- Rama Govindaraju Google, CAL
- Dr Pradeep Gupta NVIDIA Singapore

Computational Science is the study of addressing problems that are impossible to solve (or difficult to solve) without computing support. The field is interdisciplinary by nature and includes the use of advanced computing capabilities to understand and solve complex problems. In short, Computational Science is the science of using computers to do science.

Computational techniques enable simulation of natural phenomena at different scales. Such multi-scale, multi-level simulations have enabled many recent discoveries leading to better understanding of nature. There is a strong need to pursue this path of doing science, the third pillar of scientific investigations. Computational Science also involves the application of data-analytics tools and algorithms, mathematical modelling and simulation techniques to the study of natural phenomena.

Computational Intelligence is the study of computational methods in ways that exhibit intelligence and methods that adapt to changing environments and changing goals is another area of interest to do Computational Science. High performance computing (HPC) and High Throughput computing (HTC) along with evolutionary and adaptive algorithmic techniques are the enablers of computational science.

Considering the above broad outline, the International Symposium on Computational Science- ISCS’15 is being organized from 12 to 15 December 2015 at SSSIHL to dwell on some of the topics and practices. The objective is to bring interested individuals, active researchers, patrons and practitioners together in one platform to deliberate on the recent happenings in some of these areas. The symposium also includes a few tutorials to impart knowledge, experience and exposure to the participants on some of the important areas that influence computational science.

Going by the philosophy of our Institution, participants will not be charged for registration and accommodation.
TUTORIALS

There will be two streams of tutorials on 12 and 13 December.

STREAM 1: PERFORMANCE OPTIMIZATION
» Code Optimization on GPUs: Prof P Sadayappan, Ohio State Univ. and Dr Devi Sudheer, IBM Research, Delhi
» Parallel Graph Algorithm: Prof Kishore Kothapally, IIIT, Hyderabad
» Developing Deep Learning applications on the GPU platform: Pradeep Kumar Gupta, NVIDIA, Singapore

STREAM 2: CGPD
» Computational Genomics, Proteomics and Drug Design: Prof B Jayaram (& Team), Supercomputing facility for Bio Informatics and Computational Biology, IIT Delhi

Participants may register for only one of the streams.

REGISTRATION

DEADLINE: 15 November 2015

Interested candidates may apply by emailing events.dmacs@sssihl.edu.in. A brief CV of the applicant is to be attached. Registration may be sought for any ONE of the following three categories. Candidates must mention the category clearly.

Tutorial: for any one of the streams (above) on 12 & 13 Dec 2015
Symposium: Invited talks on 14 & 15 Dec 2015
General: to one of the Tutorials (mention the particular stream) and the symposium (all four days)

Information to Participants

The event is open to young faculty members, research scholars from Indian universities and colleges, R&D labs, industry and also for delegates from outside India.

There will be no Registration Fee for attending the event. Registration includes tea and snacks during breaks and lunch. Accommodation will be provided in the ashram campus, free of cost.

The participants will have to bear the travel and other related expenses for themselves. There will be no TA/DA provided to the participants.

Dress Code: Prasanthi Nilayam has provided accommodation to all participants inside ashram and as such those visiting the ashram, both Men and Women are expected to dress in a modest manner down to their ankles. Avoid wearing tight or see-through dresses, short skirts or shorts. The same code applies in the university during the workshop.

PAPER SUBMISSIONS

DEADLINE: 15 November 2015

All the applicants seeking to attend the event are encouraged to submit short papers containing original work, work in progress, proposed work having reasonable degree of innovative ideas, critical survey of topics of interest, to the Symposium Program Committee. The submissions will be reviewed by a team of at least three members of the Technical Program Committee. Selected papers will be permitted as posters for the symposium. Papers with outstanding quality will be considered for oral presentations in the symposium. The duration for oral presentations will be 15 minutes. Selected participants will be informed by 1 December 2015.

The subject areas for paper submission may include the following areas related to Computational science but not limited only to these.

» Computational Science
» Scientific Computing
» Computational Intelligence
» Education Technology
» Internet of Things & Internet of Everything
» Big Data and Data Science
» High Performance Computing
» Embedded computing
» Cloud Computing
» Heterogeneous Computing
» Signal and Image Processing,
» Computer Vision and Pattern Recognition
» Artificial Intelligence
» Parallel and Distributed Computing
» Mobile Computing
» Wireless Networks, and Security
» Health Informatics and Medical Systems

Papers should not exceed five A4 (8.27 × 11.69 inches) pages, in 11 or 12 point font, single spaced, with 1” margins on all sides.

All papers are to be submitted online by clicking here.
ORGANIZING COMMITTEE

» Dr P K Baruah, SSSIHL
» Prof Krishna Sivalingam, IITM
» Prof B V Ratish Kuma, IITK
» Prof. Ashok Srinivasan, FSU
» Dr. Sudhakar P, Indiana Univ.

TECHNICAL PROGRAM COMMITTEE

» Prof Ashok Srinivasan (Chair)
» Dr Pradeep Gupta, NVIDIA,
» Dr Suresh Marru, Apache Airavat, Indiana Univ.
» Dr Venkatesh, SSSIHL
» Dr S Subramanian, SSSIHL
» Dr Venky Krishnana, TIFR CAM
» Dr Kumar Rajamani, BoSCH
» Dr Raghunath Sarma, SSSIHL
» Dr S Balasubramanian, SSSIHL
» Dr Devi Sudheer, IBM
» D Manoj IBM
» B Krishna Moorthy, HP
» N Subramanaian, VMware
» Lalitha Krishna Kishore, IBM
» M Chadrakshar, JPMC
» Dr. Easwar N, TCS
» Dr. S Sriram, Microsoft
» Dr Phanindra Y, SERC IIsc
» Dr N B Vineeth, IITH
» Dr C K Narayan, IITR
» Dr Jagannathan,
» B Kali Udaya
» Neelakandan R
» Sairam Menon
» Dr. Pramod Kumar K
» All members of the Advisory and Organizing Committee

(TPC is being updated on a weekly basis)

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» Mr. C Lalith Srikanth

SSSIHL WORKSHOPS & CONFERENCES 2015/16