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# Faculty

**Konduri Aditya**, PhD (Texas A&M, USA)  
Assistant Professor

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**Anirban Chakraborty**, PhD (U of California, Riverside)  
Assistant Professor

Visual Computing Lab (VCL)

**Sashikumar Ganesan**, PhD (OvGU Germany)  
Associate Professor & Chair

Computational Mathematics Group (CMG)

**Jayant R Haritsa**, PhD (U of Wisconsin Madison)  
Professor

Database Systems Lab (DSL)

**Sekar K**, PhD (U Madras)  
Professor

Structural Biology and Bio-computing

**Debnath Pal**, PhD (Jadavpur University, Kolkata)  
Professor

Biomolecular Computation Laboratory

**Venkatesh Babu R**, PhD (IISc)  
Associate Professor

Video Analytic Laboratory (VAL)

**Soumyendu Raha**, PhD (U of Minnesota)  
Professor

Scientific Computing Laboratory (SCL)

**Nandy S K**, PhD (IISc)  
Professor

Computer Aided Design Laboratory (CADL)

**Yogesh Simmhan**, PhD (Indiana University )  
Assistant Professor

Distributed Research on Emerging Applications and  
Machines Lab (DREAM)

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**Deepak N. Subramani**, PhD (MIT, Cambridge)  
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Quantifying Uncertainty in Engineering, Science and  
Technology (QUEST)

**Partha Pratim Talukdar**, PhD (U of Pennsylvania,  
Philadelphia)

Assistant Professor

Machine And Language Learning Lab (MALL)

**Sathish S Vadhiyar**, PhD (U of Tennessee, Knoxville)

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Middleware and Runtime Systems Lab (MARS)

**Murugesan Venkatapathi**, PhD (Purdue)  
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Computational & Statistical Physics Lab (CSPL)

**Phaneendra Kumar Yalavarthy**, PhD (Dartmouth)  
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# Department of Computational and Data Sciences



**INDIAN INSTITUTE OF SCIENCE  
BANGALORE, INDIA**

## CDS at IISc

The Indian Institute of Science (IISc) is the premier research and teaching institute of higher education in India, and consistently ranks among the top 10 small universities globally. IISc is renowned for its focus on research excellence, academic freedom and ability to attract high quality students and faculty.

CDS is an interdisciplinary engineering department at IISc spanning the research areas of Computational Science & Engineering and Data Sciences. Besides pursuing cutting edge research, CDS faculty leads several national and international initiatives, and provides industrial consultancy and research services.

## Computational Science

deals with the development of computational models and methods to solve and understand complex problems using advanced numerical and computing capabilities. Further, efficient implementation of the numerical algorithms to harness the computing capabilities of massively parallel computers is a key focus.

Prominent research topics include Numerical Linear Algebra, Photonics, Condensed Matter, Uncertainty Quantification, Data Assimilation, Path Planning Computational and Statistical Methods, Computational Fluid Dynamics, High Performance Computing, Medical Imaging, Multi-modal Imaging, Diffuse Optical Tomography, Neuroimaging, Computational Biology, Control and Optimization of Constrained Dynamical Systems, Stochastic and Deterministic Differential-Algebraic Equation Systems, Finite Element Analysis, OpenMP and MPI based Hybrid Parallel Algorithms, Numerical Libraries.

## Computer & Data Systems

deals with the design, implementation and evaluation of high performance and scalable computer hardware and software systems.

Prominent research topics include Big Data Platforms and Applications, Computer Aided Design, VLSI CAD applications, Database Systems, Distributed Systems and Cloud Computing, High Performance Computing, Image and Video Analytics, Machine Learning, and Middleware & Runtime Systems.



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**M.Tech. (Computational and Data Science)** by course work at CDS is a unique two-year interdisciplinary degree program that brings together computational and data science aspects to address major scientific problems. It educates and trains students to 'model' problems or 'simulate' processes spanning across a wide spectrum of disciplines in science and engineering.

**Ph.D/M.Tech by Research:** Research activities at CDS are broadly categorised into two streams: Computational Science (CD-CP) and Computer & Data Systems (CD-CS) and research interviews are conducted separately for each stream.

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