

**Tutorial : Grid Computing - Applications Enablement Perspective**  
**Duration : A half day tutorial (4 hrs)**

The current day applications have interrelated demands of data storage, computing, instrumentation-intensive services, and with a higher need for collaborations. Several grand challenge applications of today such as radio astronomical research using Giant Metrewave Radio Telescope(GMRT), Bioinformatics, high energy physics research such as the Large Hadron Collider (LHC), are based on to the advancements in Distributed computing and Web technology.

The use of distributed systems by enterprises and academic organizations ranges from co-located homogeneous clusters to global-scale grids, made up of an assortment of heterogeneous environments. Several advances in Technologies and programming paradigms have led to the realization of many worldwide Grid Computing environments. This tutorial provides participants an exposure to:

- ♦ An Overview of grid computing - architecture, taxonomy, middleware, and popular grids
- ♦ Web Services & Service Oriented Architecture
- ♦ Types of applications, and case studies of popular applications
- ♦ Application Analysis
- ♦ Programming paradigms for grid computing
- ♦ Types of application enablement techniques on grids
- ♦ Application as a Service
- ♦ Tools and utilities to aid application enablement on grid
- ♦ Next Gen Grid Computing

This tutorial will be beneficial to application developers, academicians, scientists, researchers and engineers working in diverse domains such as Life Science, Earth Science, Material Science. It is also useful to the students and researchers who wish to get exposed to Grid Computing, and enable applications on Grid computing infrastructures.

**Dr. Prahlada Rao B B**

Programme Coordinator – SSDG  
C-DAC (KP), Bangalore – 560038  
Ph: +91-9880677045



Email: [prahladab@cdacb.ernet.in](mailto:prahladab@cdacb.ernet.in)  
B.Tech JNTU, Kakinada(1979), M.Tech IIT-Kharagpur (1981), and Ph.Din Comp Science & Automation, from IISc, Bangalore (1995).

Served as Advisory R&D Engineer, Deputy General Manager for Software at IBM Global Services, GroupLeader-ST Microelectronics, Technical lead at Agere Systems, Project Lead at Mentor Graphics-Hyderabad, Dy. Design Engineer at HAL-Hyderabad,. Served as a Nominated member, Technical Experts Council IBM, and a Member of Task forces: P-CMM, FPGA, ISO, and SW-CMM. Served as Program Committee member and Reviewer for Intl. Conferences- e-Science, VLSI Design, EC, SPDP and ICPP. Ext. Faculty to BITS, Pilani.. My Areas of interest are Grid Computing, Cluster Computing, Tools Development, Optimization Algorithms in VLSI, and GA. And Academic Interactions, Authored/co-authored 30+ papers in International Conferences & Journals, and holds 1-US Patent.

**Ms Mangala N**

Group Coordinator – SSDG  
C-DAC(KP), Bangalore – 560038  
Ph: +91-80-66116400/1/2



Email: [mangala@cdacb.ernet.in](mailto:mangala@cdacb.ernet.in)  
BE Comp Sc & Engg - Bangalore University - 1994  
ME Comp Sc - Bangalore University (1<sup>st</sup> rank) -1996  
Presently working as Group Coordinator of System Software Development Group in CDAC, leading and managing System Software projects in Grid Computing and High Performance Computing. Worked in several domains which include system software, compilers, debuggers, real time systems - SCADA, and Grid Computing.  
Authored/co-authored 10+ papers in International Conferences. Reviewer for Intl Conf.  
Presented a tutorial in E-Science 2007.  
Areas of interests include Distributed Computing and Virtual Reality.