CS 916

Cloud Computing

Course Objective

This course intends to introduce you to the fundamentals of the cloud computing paradigm and to understand its enabling technologies. Since, cloud is an overshoot of the bigger umbrella of Parallel and Distributes Systems, this introduction to parallel and distributed computing the discussion covers the same in the beginning. Later, the cloud organization and provisioning schemes will be taken up. An insight into Amazon Web Services (AWS) aims to introduce this dominant cloud service provider. Various issues related to functioning of Cloud will be discussed. Grid computing being another important paradigm will also be discussed. In all, the course will provide a systems perspective of Cloud computing and peers.

The textbooks for this course are:

1. *Distributed and Cloud Computing*, Kai Hwang, Geoffrey Fox, Jack Dongarra, Elsevier, 2012.

2. *Cloud Computing for Science and Engineering*, Ian Foster and Dennis B. Gannon, PHI/MIT Press, 2019.

3. *Mastering Cloud Computing*, Rajkumar Buyya, Christian Vecchiola, and Thamarai Selvi ,

TMH, 2013.

4. *Cloud Computing: Theory and Practice*, Dan C. Marinescu, Elsevier, 2013.

Marks Distribution

The marks distribution for the course CS 916 (Cloud Computing) is as follows:

Quiz I-II: 15 Marks
Quiz I-II: 20 Marks
Assignments/Class Performance: 15 Marks
~~Lab Performance/Examination: 10 Marks~~
End Semester: 50 Marks

Self-Reading/Exposure Exercises:

- CloudSim Simulator using Eclipse

  https://www.youtube.com/watch?v=OZRbkkEuQMI&list=PLGe95EHDPn-X5Opz5xB-3rUnqr_PXOOnv

- Cloud4SciEng.org
- Amazon Web Services (AWS)
- Research Papers: Information to be given in the class