



# Short Term Course On Understanding Fundamental tradeoffs in Computer Design and organization (21<sup>st</sup> Nov 2016 to 25<sup>th</sup> Nov 2016)

## Overview:

In this course detailed discussion on need of computer system design and organization and its performance is to be carried out. Introduction to computer organization, evaluating performance of computer systems, instruction set design, computer arithmetic, processor design; data path and control, pipe lining, memory organization, interfacing processors and peripherals is also covered.

## Objectives:

The primary objectives of the course are:

- 1) Learn computer system needs, multiple different organizations and system performance tradeoffs
- 2) Design, architect, and understand the impact of an instruction set
- 3) Design/implement arithmetic logic units, data path, and control and understand tradeoffs
- 4) Learn memory hierarchy, cache, main memory, and storage, performance impact and tradeoffs in design

Modules	1) Machine Organization and Computing Arithmetic : Nov 21 2) Instruction Set Design and Tradeoffs : Nov 22 3) Building Blocks Design : Nov 23 4) Pipeline and Control Design, Tradeoffs : Nov 24 5) Memory Hierarchy - Cost/Performance Tradeoffs : Nov 25
You Should Attend if...	<ul style="list-style-type: none"><li>• You are executives, engineers and/or researchers in industry and/or R&amp;D labs.</li><li>• You are a B.E./B. Tech./M. Tech/Ph.D. student or a faculty from an academic institutions and/or technical institution and like analytical approach</li><li>• <b>Number of the participants for the course is limited to fifty only</b></li></ul>
Fees	The participation fee (nonrefundable) per person (include high-tea and Lunch) are: Industry / Research Organization : INR 5000/- Academic Institution Faculty : INR 2000/- Students and Host Institute Faculty : INR 1000/- <b>** Notes:</b> <b>No TA/DA will be provided to participants.</b> <b>No Accommodation is provided.</b>

## The Expert Faculty

Dr. Arun K. Somani is currently serving as Associate Dean for Research for College of Engineering (2013-Contd.) and Anson Marston Distinguished Professor (2007-Contd.) at Iowa State University, Ames, IA, USA.



Dr. Somani earned his M.S.E.E. and Ph.D. degrees in electrical engineering from the McGill University, Montreal, Canada, in 1983 and 1985, respectively. He also worked as Scientific Officer, Department of Electronics, Govt. of India, New Delhi during (1974-82), a faculty member at the University of Washington, Seattle, WA (1985-97), Chair of the Department of Electrical and Computer Engineering at Iowa State University (2003-2010), Ram Rajindra Malhotra Professor (2010-11), Indian Institute of Technology, Delhi, and the Chair of the HPC steering committee to develop a sustainable model to support high-performance computing (HPC) infrastructure, during 2012-2015.

Professor Somani's research interests are in the areas of dependable and high performance system design and architecture, wave-length-division multiplexing-based optical networking, and image-based navigation techniques in GPS denied environment.

Professor Somani designed and built a scalable multi-computer architecture termed Proteus, for U.S. Coastal Navy in 1990-92. This design was implemented for the Navy by Applied Physics Laboratory at the University of Washington, Seattle. The innovation in hierarchical design was realized using only two modules, a cluster of processors, and a specialized network board. Such designs are very common in today's chip multiprocessors, as well as today's clusters. Proteus was optimized for large granularity computing tasks for scientific and computer vision applications.

Professor Somani has received several accolades for his technical, research, and leadership contributions. He is a Fellow of IEEE, a Fellow of AAAS, and a Distinguished Engineer of ACM.

## Course Coordinator

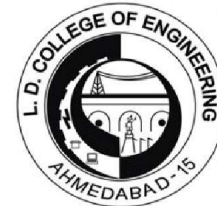
Prof. D. A. Parikh is an associate Professor in the Department of Computer Engineering at L. D. College of Engineering. His research areas includes computer network, wireless networking, and software engineering.

## Short Term Course On Understanding Fundamental tradeoffs in Computer Design and organization

21<sup>st</sup> to 25<sup>th</sup> NOVEMBER, 2016

at

L D College Of Engineering  
Ahmedabad



### Patron

Dr. G P Vadodariya  
Principal

L D College Of Engineering

### Course Coordinator

Prof. D. A. Parikh  
Associate Professor  
Department Of Computer Engineering  
L D College Of Engineering, Ahmedabad  
Phone : +91-9426310994  
Email : [daparikh@ldce.ac.in](mailto:daparikh@ldce.ac.in)

### Course Co-coordinator

Prof. H. B. Jethava  
Associate Professor  
Department Of Computer Engineering  
L D College Of Engineering, Ahmedabad  
Phone : +91-9998816300  
Email : [hbjethva@ldce.ac.in](mailto:hbjethva@ldce.ac.in)

### Registration (offline)

Download Registration form and  
Submit with DD in favor of  
"Principal, L D College of Engineering,  
Ahmedabad"

### Contact Information

Phone : +91-9998816300  
Email : [hbjethva@ldce.ac.in](mailto:hbjethva@ldce.ac.in)

## Registration Form



### **Short Term Course on Understanding Fundamental tradeoffs in Computer Design and organization**

**21<sup>st</sup> November- 25<sup>th</sup> November , 2016**

1. Name: \_\_\_\_\_

2. Qualification: \_\_\_\_\_

3. Designation : \_\_\_\_\_

4. Institute: \_\_\_\_\_

5. Address: \_\_\_\_\_  
\_\_\_\_\_

6. Mobile no: \_\_\_\_\_

7. E-mail Address: \_\_\_\_\_

8. Demand draft -Fee Details

Date :- \_\_\_\_\_ DD No. \_\_\_\_\_ Fee Rs. \_\_\_\_\_

Bank and branch name: \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Applicant

Place: \_\_\_\_\_ Signature of  
sponsoring authority & Seal

#### **Important Dates**

Last date for Registration **20/10/2016**

Declaration of the

Short-listed participants **02/11/2016**

**Course Date** **21/11/2016 to 25/11/2016**

#### **Fee:**

The participation fee (nonrefundable) per person is

Industry / Research Organization :Rs.5000/-

Academic Institution Faculty : Rs. 2000/-

Students and Host Institute Faculty : 1000/-

**No TA/DA will be provided to participants.**

**No Accommodation is provided.**

Interested participants are requested to download Registration form from college website [ldce.ac.in](http://ldce.ac.in) and Submit with DD in favor of "Principal, L D College of Engineering, Ahmedabad". It should reach us on or before 20<sup>th</sup> Oct 2016. Participant should send Hardcopy and dully filled scanned copy of the registration form and scanned copy of DD to [hbjethva@ldce.ac.in](mailto:hbjethva@ldce.ac.in) with subject line as "GIAN-STC". Apply early as soon as possible before the last date of the registration, because only 50 seats are available. **Selection will be based on first come first serve basis.**

#### **Venue :**

Upnishad Hall

Computer Department

L D College of Engineering

Navaranpura

**Ahmedabad-380015.**

Please send the Hard copy and scanned copy of completed application with DD to:

Prof. H. B. Jethva

Phone : +91-9998816300

Phone: +91-79-26306752, 26300735

Ext. 1236, 1234

Email : [hbjethva@ldce.ac.in](mailto:hbjethva@ldce.ac.in)

Computer Department

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