



## Registration Form

Name (s): \_\_\_\_\_ Designation (s): \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

### Payment Details: A) If paid by DD

Draft Enclosed No.: \_\_\_\_\_ Date: \_\_\_\_\_

Amount: \_\_\_\_\_ Bank & Branch: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**B) If paid online** Transaction id: \_\_\_\_\_ Date: \_\_\_\_\_

Amount: \_\_\_\_\_ Bank & Branch: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please mail this registration form (photo copy is also acceptable) to the following address so as to reach us on or before **August 31 (Friday), 2012** along with the registration fee.

The Coordinator, Dept. of ECE, UCE, OU, Hyderabad 500007  
Attention: Mr. B. Rajendra Naik, Cell: 9441222226

OR

The Coordinator, Dept. of CSE, UCE, OU, Hyderabad 500007  
Attention: Mrs K Shyamala, Cell: 9490219882

E-mail: ouamdfusion@gmail.com Website: www.uceou.edu

## Speakers

The speakers are drawn from industry and academia.

Keynote speaker- Mr Shiva Gowni, VP R&D, AMD

Dr K Srinidhi, Director, Product Application Engineering, AMD

Dr Prakash Raghavendra, Principal Member of Tech. Staff, AMD

Prof R Govindarajulu, IIIT-Hyderabad

Mr Rajesh Mahapatra, Senior Engineering Manager,  
Analog Devices

Mr Prushothaman Palanichamy, Senior Product Marketing  
Engineer, Xilinx

Dr K Pramod Kumar, Division Head HPC, Dept. of Space, ADRIN,  
ISRO, India

Mr K Ananda Babu, Scientist E, ANURAG, DRDO, India

Prof S Ramachandram, Mr LK Suresh Kumar and  
Mrs. K Shymala, all from Dept. of CSE, UCE

Dr P Chandrasekhar, HOD, Dept. of ECE, UCE

## Program Schedule

### Day 1 (Friday, August 31)

8:30-10:00	REGISTRATION
10:00-11:00	INAUGURAL SESSION
11:00-11:15	TEA BREAK
11:15 -11:55	A NEW ERA OF COMPUTING Mr Manohar Bommena, Senior Director, AMD
11:55-12:35	PROGRAMMING IN A HETEROGENEOUS WORLD Dr K Srinidhi, Director, Product Application Engineering, AMD
12:35 -1:15	FELICITATION FUNCTION (Felicitation of Prof Rameshwar Rao, VC, JNTU-H)
1:15 -2:00	LUNCH (SERVED)
2:00 -3:15	OVERVIEW OF OPEN COMPUTING LANGUAGE (OpenCL) Dr P Chandrasekhar & Prof S Ramachandram, UCE
3:15-3:35	TEA BREAK
3:35-5:15	PARALLEL PROGRAMMING w/ OpenCL AND AMD APP SDK TOOLS Mr Sushant Kumar & Mr Srinivasulu Charupally, AMD

### Day 2 (Saturday, September 1)

9:00- 10:00	HETEROGENEOUS COMPUTING PLATFORMS USED IN SATELLITE DATA PROCESSING TO ACHIEVE HIGH PERFORMANCE Dr K Pramod Kumar, Scientist & Division Head HPC, Dept. of Space, ADRIN, India
10:00- 10:55	RECONFIGURABLE COMPUTING PLATFORM FOR EMBEDDED SYSTEMS Mr K Ananda Babu, Scientist E, ANURAG, DRDO, India
10:55- 11:15	TEA BREAK
11:15-12:15	EFFICIENT HARDWARE SOFTWARE PARTITION- ING USING ADI DSP Mr Rajesh Mahapatra, Senior Engineering Manager, Analog Devices
12:15-1:15	OPEN SOURCE SOLUTIONS FOR THE ZYNQ- ALL PROGRAMMABLE SOC Mr Prushothaman Palanichamy, Senior Product Marketing Engineer, Xilinx
1:15-2:00	LUNCH (SERVED)
2:00-2:50	GROWTH IN COMPUTING PERFORMANCE Prof R Govindarajulu, IIIT-H
2:50-3:35	Aparapi FOR Java DEVELOPERS Dr Prakash Raghavendra, PMTS, AMD
3:35-4:15	C++ AMP FOR C++ DEVELOPERS Mr LK Suresh Kumar & Mrs K Shyamala, UCE
4:15- 5:15	VALEDICTORY SESSION
5:15	HIGH TEA



## A Two Day National Symposium on Heterogeneous Computing: Platforms, Tools and Applications

in felicitation of

**Prof Rameshwar Rao, VC, JNTU-Hyderabad**

**August 31 and September 1, 2012**

Organized  
by

**Dept. of Electronics and Communication Engineering  
(ECE) & Dept. of Computer Science and Engineering (CSE)  
University College of Engineering (UCE)  
Osmania University, Hyderabad – 500007  
(Under TEQIP)**

Supported by

**OU ECE Alumni Association**

In collaboration with:

**AMD (India)**

**Venue: Mekaster Hall, IETE Building, adjacent to  
Center for Distance Education, OU Campus**

Coordinator: Mr B Rajendra Naik, ECE Dept./Cell: 9441222226  
Coordinator: Mrs K Shyamala, CSE Dept./Cell: 9490219882  
E-mail: ouamdfusion@gmail.com  
Website: www.uceou.edu



## A Two Day National Symposium on Heterogeneous Computing: Platforms, Tools and Applications

### About The Symposium

Heterogeneous Computing is emerging as one of the hottest areas in the fields of both Electronics and Computer Science. Gone are the days where technology scaling allowed performance and programmability. The traditional way of programmability and serial execution has almost reached its limits. The new trend is not only programmability but also parallelism to meet the growing demands of high performance computing applications in audio, video, gaming, control systems, network computing applications, and network security (encryption/decryption). A heterogeneous computing system uses variety of processors- CPU, DSP/GPU or co-processor (ASIC) or FPGA. The current heterogeneous architectures offer price/performance and performance/energy tradeoffs for different applications. They are beginning to show up in servers and even in supercomputers.

High level programming abstractions or open APIs are developed by industry consortiums so that programmers do not have to worry too much about the underlying hardware details for taking advantage of heterogeneous processors resources. Opportunities exist for both industry and academia to collaborate on the open API standards and projects.

The objective of the symposium is to understand latest trends in heterogeneous computing, and hardware platforms available from different vendors, and get familiar with industry standard APIs (OpenCL, Aparapi, and C++ AMP) for software developers that will enable them to take advantage of the hardware acceleration by programming at high level languages - C, C++, and Java. Tutorials on OpenCL, Aparapi and C++ AMP are covered in this symposium so that participants familiar with any of the above high level languages can start as quickly as possible on his/her project.

### Who Should Attend?

Open for anyone from industry, research organizations and academic institutes. Prior knowledge of any micro processor architecture and any programming language is highly recommended.

See Registration Details for fee information.

### About Dept. of ECE

The Department of Electronics & Communication Engineering (ECE) was established in the year 1959 with only two faculty members. It bears the indelible stamp of its Founder Head of the Department, late Prof KK Nair. He exhorted ECE Department to become a byname for Excellence, Creativity and Enterprise. In the span of over 50 years, the Department has grown to a complement of 21 members of teaching staff and about 400 students at UG and PG. The current research activities of the Department are in VLSI design, Signal Processing, Image Processing, GPS and RF Communications, and Embedded Vision.

### About Dept. of CSE

The Department of Computer Science & Engineering came into being in the year 1988 offering the most sought after courses in the field of Computer Science & Engineering, both at undergraduate and graduate level. The department has well qualified staff specializing in various disciplines. Apart from regular academic work, the department is actively involved in industrial training, research, consultancy for software development firms and R&D establishments. Research activities of the Dept. are in Cloud Computing and Security, Data Analytics and Mining and Mobile Ad-hoc Network (MANET).

### About Prof Rameshwar Rao

Prof. Rameshwar Rao, who is currently the VC, JNTU-H is an alumnus of the ECE Dept., UCE and also served as a faculty member and Dean, at UCE. This symposium is organized in honor of his retirement from OU on August 31st, 2012.

### About AMD India

AMD India plays a significant role in the design of microprocessors, Fusion SoCs, graphics and media solutions. The AMD Fusion™ Family of Accelerated Processing Units (APUs) enable premium, immersive PC experiences on virtually any form factor.

AMD has two design centers in India, located in Hyderabad and Bengaluru. With top-tier engineering talent, state of the art facilities, and world class management, AMD India has been delivering world-class, cost-effective System-On-Chips (SOCs), Hardware and Software platforms and high quality Intellectual Property. Please go to AMD Developer Zone for more details: <http://developer.amd.com/india>.

### About OU ECE Alumni Association

The OU ECE Alumni Association came into being in its Golden Jubilee year, 2009 with the goals of having a forum for the alumni so that they can stay connected to advance their desires for the alma mater and be the link between the past, the present and the future.

### Advisory Committee

Dr VM Pandharipande, VC, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Dr Sudhakar M Reddy, Distinguished Prof., Dept. of ECE, University of Iowa, Iowa City, USA

Prof V Kamakoti, Dept. of CSE, IIT-Chennai

Prof DVR Vithal (Retd.), Former Director, University Computer Center, OU

Prof VSS Kumar, Principal, UCE(A), OU, Hyderabad

Prof P Premchand, Dean, UCE(A), OU, Hyderabad

Prof S Sameen Fatima, HOD, Dept. of CSE, UCE

Prof P Ananth Raj, Dept. of ECE, UCE

Prof L Pratap Reddy, Dept. of ECE & Director R&D Cell, JNTU-H

Mr Navin B Rao, Adviser & Board Member, CipherCloud India

### Registration Details

The registration fee is: **Rs 1,000/-** per head for students and faculty members from **educational institutes**. And **Rs.2,000/-** per head for participants from **industry and research organizations**. The fee will cover the costs for:

- ◆ Registration Kit
- ◆ Lunch/Tea for both days and
- ◆ Text Book on Heterogeneous Computing with OpenCL by Benedict Gaster et al., Indian Edition.

The fee can be paid by either **DD**:

In favour of - **Head, Department of ECE (AMD)**

Payable at SBH, Osmania University, Hyderabad-500007

Branch: Engineering College Extension Counter Or

### Online payment:

Name of the A/c: **Head, Department of ECE (AMD)**

A/c No: **62206813911**; SBH, OU, Hyderabad-500007, AP

IFSC CODE: **SBHY0020071**