

12-09-2016,

Hyderabad

To  
The Principal,  
GNITS,  
Hyderabad.

Sub: Request for advance amount of Rs. 25,000/- for conduct one week workshop on "Functional Approach to VLSI Design" during 17-09-2016 to 22-10-2016.  
Regd...

Respected sir,

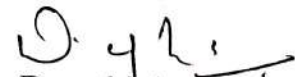
I, Dr.K.Ragini, Professor and Mrs.Deepthi Amuru, Assistant Professor of ECE Department have planned for a one week workshop on "Functional Approach to VLSI Design " from 17/10/2016 to 22/10/2016 for the teaching faculty of Engineering colleges in Technical collaboration with IETE Chapter, Hyderabad. We request to sanction an amount of Rs. 25,000/- as an advance from the budget amount of Rs.54,000/-. Kindly consider and do the needful.

Thanking you sir,

Yours faithfully,



Dr.K.Ragini,  
Course Coordinator



Mrs. Deepthi Amuru  
Co-Course Coordinator



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE  
(FOR WOMEN)**

**(SPONSORED BY G. PULLA REDDY CHARITABLE TRUST, HYDERBAD)**

**(APPROVED BY AICTE AND AFFILIATED TO JNTUNIVERSITY)**

**SHAIKPET, HYDERABAD - 500008. (AP)**

Dt: 04-10-16  
Hyderabad.

To  
**Dr.M.Satyam**  
Retd. Professor, IISC Bangalore  
& Professor, Vasavi College of Engineering  
Hyderabad.

Respected Sir,

**Sub:** Request to be the chief guest for the workshop on “**Functional Approach to VLSI Design**” organized by ECE dept, GNITS in collaboration with IETE, Hyderabad chapter-regarding.

The Electronics & Communication Engineering Department of G. Narayanamma Institute of Technology & Science is organizing an one week workshop on “**Functional Approach to VLSI Design**” during 17th to 22nd Oct -2016.

We earnestly request you to be the **Chief Guest** and deliver the **Key note address** from 9.45 to 11.00 AM on 17th October, 2016.

We would be grateful to you for sparing your valuable time to make our program a grand success.

Thanking you.

  
Dr. B. Venkateshulu  
HOD, ECE



2

Certified Institution

Phone : 040-23565648 / 49  
Fax: 040-23564187

# G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE

Accredited by NAAC of UGC upto 20-02-2019

(For Women)

(Sponsored by G. Pulla Reddy Charities Trust, Hyderabad.)

(Accredited by NBA (from May 2007 to April 2010) Approved by AICTE &amp; Affiliated to J N T U H)

# 8-1-297/2/I, Shaikpet, Hyderabad - 500 104. T.S. INDIA

E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
**Dr.G.Laxmi Narayana**  
IETE Chairman, Hyderabad chapter  
& Principal, Anurag College of Engineering  
Hyderabad.

Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Guest of honor** and delivering a lecture - "**Frequency consideration for chip design**" on 17/10/2016 for the one week workshop on "**Functional Approach to VLSI Design**" conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the very best. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.

With regards,



*[Handwritten Signature]*  
Dr.K.Ramesh Reddy, 11/11/16

Principal,  
GNITS**Principal**G. Narayanamma Institute of  
Technology & Science (for woman)  
Shaikpet, Hyderabad - 500 104.





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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
**Dr.P.A.Govindacharyulu,**  
Professor, Dept. of ECE,  
Vasavi College of Engineering,  
Hyderabad.


Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Resource person** and delivering a lecture - "**Analog Mixed signal design flow**" on 19/10/2016 for the one week workshop on "**Functional Approach to VLSI Design**" conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the very best. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.

With regards,

  
Dr.K.Ramesh Reddy  
Principal,  
GNITS



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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
**Dr.N.Siva Shankar Reddy,**  
Assoc.Professor, Dept. of ECE,  
Vasavi College of Engineering,  
Hyderabad.


Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Resource person** and delivering a lecture - "**Techniques for Low Power Design**" on 18/10/2016 for the one week workshop on "**Functional Approach to VLSI Design**" conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the very best and got an excellent feedback. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.

With regards,

  
Dr.K.Ramesh Reddy,  
Principal,  
GNITS



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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
Dr.N.S.Murthy,  
Professor, Dept. of ECE,  
Vasavi College of Engineering,  
Hyderabad.


Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Resource person** and delivering a lecture - "**System level power optimization**" on 21/10/2016 for the one week workshop on "**Functional Approach to VLSI Design**" conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the very best. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.

With regards,

  
Dr.K.Ramesh Reddy,  
Principal,  
GNITS



**Principal**  
G. Narayanamma Institute of  
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Shaikpet, Hyderabad - 500 104.



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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
**Dr.M.Satyam**  
Retd. Professor, IISC Bangalore  
& Professor, Dept. of ECE,  
Vasavi College of Engineering  
Hyderabad.

Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Chief guest** and delivering **Key note address** on 17/10/2016 for the one week workshop on "**Functional Approach to VLSI Design**" conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the very best. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.



With regards,

*[Handwritten Signature]*  
Dr.K.Ramesh Reddy,  
Principal,  
GNITS

**Principal**  
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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
**Dr.K.Subbarangaiah,**  
Director, VedaIIT,  
Hyderabad.

Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Resource person** and delivering a lecture - **“FinFets-The promises and the challenges”** on 18/10/2016 for the one week workshop on **“Functional Approach to VLSI Design”** conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the best. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.

With regards,

*[Handwritten Signature]*  
Dr.K.Ramesh Reddy, 03/11/16

Principal,  
GNITS



**Principal**  
G. Narayanamma Institute of  
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Shaikpet, Hyderabad - 500 104.





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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
Mr.Raja Bandi,  
Director,  
Lucid VLSI,  
Hyderabad .

Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Resource person** and delivering a lecture - **“Introduction to System Verilog Assertions”** on 19/10/2016 for the one week workshop on **“Functional Approach to VLSI Design”** conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the best and got an excellent feedback. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.

With regards,

*(Signature)*  
Dr.K.Ramesh Reddy,  
Principal,  
GNITS

Principal  
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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
**Usha Bandi**  
Staff Design Engineer,  
Xilinx, Hyderabad .

Respected Madam,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Resource person** and delivering a lecture - **“Introduction to VLSI Design Methodologies”** on 17/10/2016 for the one week workshop on **“Functional Approach to VLSI Design”** conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the best and got an excellent feedback. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.



With regards,

*(Signature)*  
Dr.K.Ramesh Reddy,

Principal,  
GNITS

**Principal**

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E-mail : principal@gnits.ac.in, Website : www.gnits.ac.in

Dt: 03-11-16  
Hyderabad.

To  
**Mr.Hirdesh Singal,**  
CEO, Seer Akademi  
Hyderabad .

Respected Sir,

G.Narayanamma Institute of Technology and Science(for women) whole heartedly appreciates your acceptance as **Resource person** and delivering a lecture - "**Low power Integrated sensors for IOT**" on 17/10/2016 for the one week workshop on "**Functional Approach to VLSI Design**" conducted in the Department of ECE from 17/10/2016 to 22/10/2016.

We are very happy to inform you that your lecture has been one of the very best. We thank you for your wonderful lecture and supporting us in knowledge sharing.

Wishing you all the best for future endeavors.

With regards,



*[Handwritten Signature]*  
Dr.K.Ramesh Reddy,  
Principal,  
GNITS

**Principal**  
G. Narayanamma Institute of  
Technology & Science (for woman)  
Shaikpet, Hyderabad - 500 104.

**Important Dates:**

Workshop dates: 17-10-2016 to 22-10-2016

Last date for registration: 10-10-2016

**Registration Fee:**

Academic Staff /Research Scholars/Delegates  
from Industry (non-IETE members): Rs. 1,000/-  
(IETE members) : Rs. 750/-

PG students : Rs. 500/-

**Address for Correspondence**

Dr. K. Ragini,  
Professor, Department of ECE,  
GNITS, Hyderabad  
Cell: 9849627161

M/s Deepthi Amuru

Asst. Professor, Department of ECE,  
GNITS, Hyderabad  
Cell: 9966437906

E-mail: [workshopvisi2016@gmail.com](mailto:workshopvisi2016@gmail.com)

**For more details visit the website**

[www.gnits.ac.in](http://www.gnits.ac.in)

**Chief Patron**

Sri P Subba Reddy, Chairman

**Patron**

Smt G Srividya Reddy, Joint Secretary

**Chairman**

Dr.K.Ramesh Reddy, Principal

**Convener**

Dr.B. Venkateshulu, HOD ECE

Advisory Committee Member

Dr.P.V.D.Somasekhara Rao, Dean Academics

Organizing Committee

All Associate and Assistant Professors

of ECE Department

**REGISTRATION FORM**

1. Name of the Applicant:.....  
(Block Letters) .....
2. Gender: (M/F): .....
3. Educational Qualifications:.....
4. Designation:.....
5. Department: .....
6. Name of the Sponsoring Institute/Organization:
7. Signature/Seal of the Sponsoring Authority:
8. Address for Correspondence :  
(Including E-mail, Fax, Cell / Landline)  
.....  
.....  
.....  
.....
9. Is a member of IETE? YES/NO  
IETE Membership No. : .....
10. Is Accommodation required ? YES / NO
11. Demand Draft Amount: Rs:  
Demand Draft No:.....  
Bank:.....  
Dated:.....

Signature of the Applicant with date

*A One Week Workshop on*  
**“Functional Approach to VLSI  
Design”**

(17-10-16 to 22-10-16)



**Organized by**

DEPT. OF ECE  
G. NARAYANAMMA INSTITUTE OF  
TECHNOLOGY & SCIENCE (FOR WOMEN)  
ISO 9001:2008 Certified, NAAC Accredited  
Shaikpet, Hyderabad, T.S.



**In Collaboration with**



Institution of Electronics &  
Telecommunication Engineers  
**IETE, Hyderabad Chapter**

and



**Core EL Technologies, Hyderabad**

**Coordinators**

Dr.G.Laxmi Narayana,

Chairman, IETE, Hyderabad chapter

Dr.K.Ragini,

Professor, ECE Dept., GNITS

M/s.Deepthi Amuru.

Assistant Professor, ECE Dept., GNITS



## ABOUT GNITS:

G. Narayanamma Institute of Technology & Science (for Women), was founded by Late Sri G. Pulla Reddy garu in 1997, with the objective of providing an excellent learning facility for women to pursue education in engineering and the institute aims to promote Technical Education among women to enhance and build-up a new generation of thinkers, innovators and planners in the technical realms of Science & Technology. It is today considered one of the best engineering colleges in Hyderabad. GNITS is affiliated to Jawaharlal Nehru Technological University Hyderabad (JNTUH), accredited by NAAC and is approved by All India Council for Technical Education (AICTE).

GNITS has recorded phenomenal growth in a short span of time. The college has five undergraduate programs in ECE, ETM, EEE, CSE, IT. In addition to UG, PG Programs in DECE, PEED, CSE, WMC and CNIS are offered.

## ABOUT ECE DEPARTMENT:

ECE Department was started in 1997 with an intake of 60 and in a short period, the intake was increased to 180. Department has conducted many state level short-term courses in Digital Image Processing, DSP, VLSI, Microprocessors & Micro controllers and paper presentations under IETE, ISTE and ECE associations. The department has well established labs, with state of art equipment like trainer kits such as DQPSK QAM, trellis coder and conv. encoder and decoder, FHSS software & advanced softwares like Active HDL, XILINX, Mentor Graphics tool in ECAD/VLSI lab, MATLAB, Multisim, P-Spice & KEIL. The department has highest student placements and Awards.

## Eligibility:

Faculty of Educational Institutions/ Research Scholars/ Persons working in R& D Organization/ PG students, in Electronics & Communication/ Electrical/ Computer Science and allied branches of Engineering, are eligible to apply.

## IETE Hyderabad Centre

IETE Hyderabad Centre started on 11th September, 1973 has completed 40 years and is growing up. It was declared as Best Centre Best Local Centre in India during the years 1992-93, 1994-95, 1995-96, 1996-97, 1999-2000, Best Performance Centre Award for the year 2003 – 2004 and 2nd Best Centre for the year 2012-2013. The IETE Hyderabad Centre has Corporate and Student Members. Hyderabad Centre has proudly undertaken to organize the Zonal Seminar-cum-National Symposium on 29th & 30th March, 2014.

## CorelEL Technologies

CorelEL Technologies is a Customer Application Specific Product & Solutions (CASPS) company offering innovative solutions, which ranges across Intellectual Property (IP) cores, Design & Development, Bespoke System Design & Prototype Development, Next-Gen Digital products, Integrated solutions, Low Volume Manufacturing, System Upgrades and Obsolescence management, EDA tools, COTS products, Semiconductor solutions and Technology Training. CorelEL is a leading developer of advanced electronic system level products

## About the Workshop:

VLSI Design has become an important domain in the field of Digital and Analog circuits. The aim of the course is to provide a basic knowledge on advanced design concepts in VLSI Design and motivate the faculty/students towards research in the field of VLSI. This workshop provides the knowledge on system Verilog, different techniques for Low Power Design, basics on Analog and mixed signal design and also provides hands on experience using Xilinx Zynq boards and mentor graphics for backend circuit design.

## COURSE CONTENT:

- Review of VLSI design methodologies
- Introduction to System Verilog Assertions
- Design promises and challenges for digital circuit design using FinFETs.
- Analog and mixed signal design flow

- Techniques for low power design and ultra-low power circuits
- Low power Integrated sensors for IOT
- Lab sessions using Xilinx Zynq board on Data motion networks and accelerators
- Lab sessions using mentor graphics on Semi-custom VLSI circuit backend design

## Resource Persons:

1. Dr. G.Laxmi Narayana, Chairman, IETE Hyderabad chapter
2. Dr. M.Satyam, Retd. Professor, IISC, Bangalore
3. Dr. K. Lal Kishore, Former vice chancellor, JNTUA
4. Dr. M.Madhavi Laha, JNTUH
5. Dr. P.A.Govindacharyulu, Yasavi Engineering College
6. Dr. K.Subbarangiah, Director, Veda IIT
7. Mr.Hirdesh Singal, Seer Akademi

Other resource Persons are drawn from industries such as – DRDL, AMD, Xilinx and LUCID VLSI.

## How to Apply:

Interested persons may apply in the prescribed format along with the Registration fee. Payments should be made through a Demand Draft drawn in favor of "The Principal, G Narayanamma Inst. of Technology & Science for Women payable at Hyderabad or by cash at the time of registration. The registration form can be downloaded from [www.gnits.ac.in](http://www.gnits.ac.in). The duly filled registration form along with scanned copy of the DD has to be sent to [workshopvlsi2016@gmail.com](mailto:workshopvlsi2016@gmail.com) on or before 10<sup>th</sup> October 2016. The DD must also be submitted at GNITS during registration. The participants are advised to register well in advance of the scheduled dates.

## Accommodation:

Working lunch and snacks will be provided for all the participants and limited accommodation would be provided free of cost to the ladies.



## WEEK WORKSHOP ON "FUNCTIONAL APPROACH TO VLSI DESIGN"

(17.10.2016-22.10.2016)

G. Narayanamma Institute of Technology &amp; Science,

Shaikpet, Hyderabad – 500008

## Agenda:

Review of VLSI design methodologies

Introduction to system Verilog assertions

Design promises and challenges for digital circuit design using FinFETs

Analog and mixed signal design flow

Techniques for low power design and ultra low power circuits

Low power integrated sensors for IOT

Lab sessions using Xilinx Zynq board on Data motion networks and accelerators

Lab sessions using Mentor graphicson semi custom VLSI circuit backend design

## Day 1:

## Session 1:

Dr.M.Satyam sir, Retd Professor, IISC, Bangalore spoke about "FUNCTIONAL APPROACH TO VLSI DESIGN". He taught about the different approaches to integration and miniaturization. Before entering into the actual topic he had explained the evolution of VLSI, and then the constraints and features of different approaches, the hierarchical approach to Functional design.

## Session 2:

Dr.G.Laxmi Narayana, Chairman, IETE, Hyderabad.

His topic was "FREQUENCY CONSIDERATION FOR CHIP DESIGN". He explained about the pre requisites for chip design, and spoke about the history of electronics and technology requirement. Under the technology requirement he explained in detail about the fabrication technology, semiconductors and doping and basic design methodology, VHDL Hierarchy, Various interconnect such as metal interconnect, copper interconnect. And finally he explained about the frequency consideration for VLSI Chip design.

## Session 3:

Mrs. B.Usha, design engineer from Xilinx spoke about "VLSI Design Methodologies".

She explained in detail about Front end and back end VLSI design flow. She included many more subtopics in design flow. She shared her experience in attending the Embedded system conference 2016. She suggested how to overcome the gap between the industry and academics. Faculty should become the bridge between these two. She explained the importance of IOT and its application areas.

## Session 4:

Mr.Hirdesh Singal, CEO, Seer Akademi spoke about "Low power Integrated sensors for IOT".



From Core El Technologies given an Overview of SDSoC design flow and Zynq architecture, Data motion networks

Session 3:

Lab session participants understood the importance of creating hardware accelerators, Pragmas and data motion networks

Day 5:

Session 1:

Sharath from Core EL technologies explained explained "FPGA Architecture", ASIC and FPGA design flow and its comparisons. He explained the difference between Full custom design and semi custom design tool.

Session 2:

N.S.Murthy, professor from Vasavi college of engineering spoke about "System Level power optimization".

He concentrated on explaining the need of low power and how to obtain it in various stages of design flow.

Session 3:

Participants generated a circuit layout, DRC, Design verification and simulation using mentor graphics.

Day 6:

Participants were Familiarized with Semi-custom design tools to generate circuit layout, DRC, Design verification and simulation.

The major focus of the workshop is to upgrade the research skills of teachers, especially those teachers who have not had an opportunity to acquaint themselves with recent developments in research methods .The workshop was a grand success with total participants of 44.Among this .23 faculty are from different colleges,10 faculty from GNITS, and 11 PG students from other colleges like TKRCET-9,Osmania university -1 NMREC-1.The valedictory function was held on 22-10-16 and certificates were issued for all participants.

K. Ragini  
23/10/16

Dr.K.Ragini

Workshop Coordinator

**One Week Workshop on "Functional Approach to VLSI Design"**  
(17-10-2016 to 22-10-2016)

S.No/Date	9.30 AM to 11.00AM	11.15 AM to 12.45 PM	1.45 PM to 3.15 PM	3.30 PM to 5.00 PM
17-10-2016	Registration & Inaugural Session	Keynote Address Dr. M. Satyam Redd, Professor, IISc, Bangalore	Introduction to VLSI design Methodologies Dr. M. Madhavi Latha, Professor, JNTUJH	Introduction to System Verilog Assertions Mr. Raja Bandi, Director, Lucid VLSI
18-10-2016	FinFets-The promises and the challenges Dr. K. Subbarangiah, Director, Vedant	RFCMOS design Mrs. Nalini, DRDL	7-Series FPGA Architecture Mr. Mukesh Director, Technoleves	
19-10-2016	A lecture on "Analog Mixed signal design flow" Dr. Govindacharyulu, Professor, Vasavi Engg. College	Techniques for Low Power Design Dr. Lal Kishore, Former vice-chancellor, JNTUA	Low power Integrated sensors for IOT Mr. Hirdesh Singal, Seer Akademi	Leakage and Power Reduction at Architecture Level Mr. J. Kiran Kumar, Xilinx
20-10-2016	Overview on SDSoc design flow and Zynq AP SOC Architecture Core EL, Technologies	Data motion networks Core EL, Technologies	Lab session on VLSI Circuit design using Pragmas and data motion networks Core EL, Technologies	Lab session on Profiling application and create accelerators Core EL, Technologies
21-10-2016	Ultra Low power Subthreshold digital circuits Dr. K. Ragini, GNITS Core EL, Technologies	Full custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL, Technologies	Lab session on Full custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL, Technologies	Lab session on Full custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL, Technologies
22-10-2016	Semi custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL, Technologies	Lab session on Semi custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL, Technologies	Lab session on Semi custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL, Technologies	Valedictory Session Core EL, Technologies

L U N C H  
B R E A K

*[Signature]*  
Dr. B. Venkateshulu  
HOD, ECE

*[Signature]*  
2. A. Deepthi  
Asst. Professor, ECE, GNITS

*[Signature]*  
1. Dr. K. Ragini,  
Professor, ECE, GNITS

Coordinators





**G. Narayana Murthy Institute of Technology & Science (for women)**  
**Department of Electronics & Communication Engineering**  
**One Week Workshop on "Functional Approach to VLSI Design"**  
**(17-10-2016 to 22-10-2016)**



**CoreEL**  
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S.No/Date	9.45 AM to 11:00AM	11.15 AM to 12.30 PM	1.45 PM to 3.00 PM	3.15 PM to 4.30 PM
17-10-2016	Registration & Inaugural Session	Keynote Address Dr. M. Satyam Retd. Professor, IISC, Bangalore	Frequency consideration for chip design Dr. G. Laxmi Narayana, IETE Chairman, Hyderabad Principal, Anurag group of Institutions	Low power Integrated sensors for IOT Mr. Hirdesh Singal, CEO, Seer Akademi
18-10-2016	FinFets-The promises and the challenges Dr. K. Subbarangaiah, Director, VedaiIT	Techniques for Low Power Design Dr. N. Siva Shankar Reddy, Assoc. Professor, Vasavi College of Engg.		Introduction to Power Aware Verification: A step towards keeping up with the low power trends.
19-10-2016	Ultra Low power Subthreshold digital circuits" Dr. K. Ragini, Professor, GNITS	A lecture on "Analog Mixed signal design flow Dr. P. A. Govindacharyulu, Professor, Vasavi College of Engg.	Application Engineer Functional Verification, Mentor Graphics Introduction to System Verilog Assertions Mr. Raja Bandi, Director, Lucid VLSI	
20-10-2016	Overview on SDSoc design flow and Zynq AP SOC Architecture Core EL Technologies	Data motion networks Core EL Technologies	Lab session on VLSI Circuit design using Pragmas and data motion networks Core EL Technologies	Lab session on Profiling application and create accelerators Core EL Technologies
21-10-2016	Full custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL Technologies	System level power optimization N.S. Murthy, Professor Vasavi college of Engineering	Lab session on Full custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL Technologies	Lab session on Full custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL Technologies
22-10-2016	Semi custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL Technologies	Lab session on Semi custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL Technologies	Lab session on Semi custom design tools to generate circuit layout, DRC, Design verification and simulation Core EL Technologies	Valedictory Session Core EL Technologies

**Chief Patron**  
Sri P. Subba Reddy, Chairman

**Patron**  
Smt G. Srividya Reddy, Joint Secretary

**Chairman**  
Dr. K. Ramesh Reddy, Principal

**Convener**  
Dr. B. Venkateshulu, HOD ECE

**Advisory Committee Member**  
Dr. P. V. D. Somasekhar Rao, Dean Academics

**Coordinators**  
Dr. G. Laxmi Narayana, Chairman, IETE, Hyderabad chapter  
Dr. K. Ragini, Professor, ECE Dept., GNITS

M/s. Deepthi Amuru, Assistant Professor, ECE Dept., GNITS

**Organizing Committee**  
All Associate and Assistant Professors of ECE Department

Dr. B. Venkateshulu  
HOD, ECE

2. A. Deepthi  
Asst. Professor, ECE, GNITS

1. Dr. K. Ragini,  
Professor, ECE, GNITS

Coordinators



7

ed Institution

☎ : 040-23566803  
040-23565648  
Fax: 040-23564187



## G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE

Accredited by NAAC of UGC upto 20-02-2019 (For Women)

(Sponsored by G. Pulla Reddy Charities Trust, Hyderabad.)

(Accredited by NBA (from May 2007 to April 2010) Approved by AICTE & Affiliated to J N T U - H)

# 8-1-297/2/I, Shaikpet, Hyderabad - 500 008. T.S. INDIA

E-mail : principalgnits97@gmail.com, Website : www.gnits.ac.in

Date:12/09/2016

To

Respected Principal/Sir/Madam,

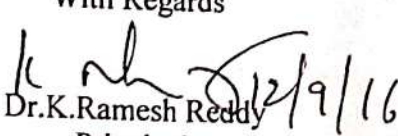
Subject: One Week workshop on "Functional Approach to VLSI Design" being organized during 17<sup>th</sup> Oct to 22<sup>nd</sup> Oct 2016 at GNITS jointly with IETE, Hyderabad chapter – Regarding.

We take pleasure to inform you that ECE dept. is organizing one week workshop on "Functional Approach to VLSI Design" to provide an opportunity for faculty members to improve their research and technical skills in the domain of VLSI.

In this context we have immense pleasure in inviting your faculty to participate in the workshop with great zeal and enthusiasm. An informative brochure is attached for your kind perusal. It is requested that the same may please be prominently displayed on the notice boards of your institution for wide and effective publicity. Applicants may look for more details at [www.gnits.ac.in](http://www.gnits.ac.in) and also can download the registration form from the college website.

Thanking You.

With Regards

  
Dr.K.Ramesh Reddy  
Principal,  
GNITS



Principal  
G. Narayanamma Institute of  
Technology & Science (for woman)  
Shaikpet, Hyderabad - 500 104.









## STUDENTS

One Week Workshop on "Functional Approach to VLSI Design"

## List of Participants

S No.	Name	Dept.	College	Mobile	Mail ID	DD No.	Amount	Sign
1	G. Praveen	ECE	UCE, DU	9989296048	08601A0439@gmail.com	✓	500/-	GP
2	T. Sadhana	ECE	TKRCET	8464049355	sadhana.thudimilla@gmail.com	✓	500/-	Sf
3	A. Shankarajiah	ECE	TKRCET	9291011227	shankarajiah29@gmail.com	✓	500/-	A. Shankarajiah
4	Sagarika	ECE	TKRCET			✓	500/-	Sf.
5	M. Teja	ECE	TKRCET	9603881569	mizyala teja@gmail.com	✓	500/-	Teja
R 6	K. Sujana	ECE	TKRCET	7801042639	sujana.kannan27@gmail.com	✓	500/-	Sujana
<del>7</del>	<del>A. Divya Sree</del>	<del>ECE</del>	<del>TKRCET</del>	<del>8331933751</del>			<del>500/-</del>	<del>Divya Sree</del>
R 7	S. Dattatreya Reddy	ECE	TKRCET	9952275758	dattatreya.reddy@gmail.com	✓	500/-	SDR
X 2	<del>U. Ganesh Kumar</del>	<del>ECE</del>	<del>TKRCET</del>				<del>500/-</del>	<del>SKR</del>
R 8	B. Soumya Sree	ECE	TKRCET	7893029904	balspqrils.soumyasree94@gmail.com		500/-	Soumya
9	A. Divya Sree	ECE	TKRCET	8331933751	divya.sree102910@gmail.com		500/-	Divya
10	G. Sandeep Yadav	ECE	TKRCET	9866363677	sandeep364@gmail.com		500/-	G. Sandeep
11	V. Krishna Kishore	ECE	NAREC	8886455513	Krishnakishore.ece@gmail.com		500/-	Kishore
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TKR-9

**Important Dates:**

Workshop dates: 17-10-2016 to 22-10-2016

Last date for registration: 10-10-2016

Registration Fee:

Academic Staff / Research Scholars/Delegates from Industry (non-IETE members): Rs. 1,000/-

(IETE members) : Rs. 750/-

PG students : Rs. 500/-

Address for Correspondence

Dr. K. Ragini,  
Professor, Department of ECE,  
GNITS, Hyderabad  
Cell: 9849627161

M/s Deepthi Amuru  
Asst. Professor, Department of ECE,  
GNITS, Hyderabad  
Cell: 9966437906

E-mail: [workshopvisi2016@gmail.com](mailto:workshopvisi2016@gmail.com)

For more details visit the website

[www.gnits.ac.in](http://www.gnits.ac.in)

Chief Patron

Sri P Subba Reddy, Chairman

Patron

Smt G Srividya Reddy, Joint Secretary

Chairman

Dr.K.Ramesh Reddy, Principal

Convener

Dr.B.Venkateshulu, HOD ECE

Advisory Committee Member

Dr.P.V.D.Somasekhar Rao, Dean Academics

Organizing Committee

All Associate and Assistant Professors  
of ECE Department

**REGISTRATION FORM**

1. Name of the Applicant: **KUNDA SATEESH**  
(Block Letters)

2. Gender: (M/F): **M**

3. Educational Qualifications: **M.Tech**

4. Designation: **Assistant Professor**

5. Department: **ECE**

6. Name of the Sponsoring Institute/Organization:

**TKR COLLEGE OF ENGINEERING & TECHNOLOGY**

7. Signature/Seal of the Sponsoring Authority:  
**Dr. D.V. Ravi Shankar**  
M.Tech., Ph.D.

PRINCIPAL

8. Address of the Sponsoring Authority:  
(Including E-mail, Fax, Cell/Landline)  
**TKR College of Engineering & Technology,  
Meddyvitla, Medhyat, Hyderabad,  
N.No. 14-202/61, R.V.Reddy  
Nagar, Hebbalpet, Hyderabad.**

9. Is a member of IETE? YES/NO  YES

10. Is Accommodation required? YES / NO  NO

11. Demand Draft Amount: Rs.

Demand Draft No.: .....

Bank: .....

Dated: .....

*Handwritten signature*

Signature of the Applicant with date

*A One Week Workshop on*  
**“Functional Approach to VLSI Design”**  
(17-10-16 to 22-10-16)



Organized by

DEPT. OF ECE

G. NARAYANAMMA INSTITUTE OF  
TECHNOLOGY & SCIENCE (FOR WOMEN)  
ISO 9001:2008 Certified, NAAC Accredited  
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In Collaboration with



Institute of Electronics &  
Telecommunication Engineers  
IETE, Hyderabad Chapter  
and

**S COREEL**  
Enabling Excellence  
Technologies

Core EL Technologies, Hyderabad

Coordinators

Dr.G.Laxmi Narayana,

Chairman, IETE, Hyderabad chapter

Dr.K.Ragini,

Professor, ECE Dept., GNITS

M/s. Deepthi Amuru,

Assistant Professor, ECE Dept., GNITS





**G. Narayana Murthy Institute of Technology & Science (for women)**  
**Department of Electronics & Communication Engineering**  
**One Week Workshop on "Functional Approach to VLSI Design"**  
**(17-10-2016 to 22-10-2016)**



**Coreel**  
Technologies  
Enabling Excellence

Name:

FEEDBACK FROM PARTICIPANTS

College Address:

Date & Time	Name of the Resource person	Topics	Presentation/Content			Any other Remarks
			Below Average	Good	Excellent	
17-10-2016	Dr. M. Satyam Reid, Professor, IISC, Bangalore	Keynote Address		✓		Not available at that time
17-10-2016 (11.15 AM to 12.30 PM)	Dr. G. Laxmi Narayana, IETE Chairman, Hyderabad Principal, Anurag group of Institutions	Frequency consideration for chip design			✓	
17-10-2016 (1.45 PM to 3.00 PM)	Mrs. B. Usha, Xilinx	Introduction to VLSI Design Methodologies		✓		
17-10-2016 (3.15 PM to 4.30 PM)	Mr. Hirdesh Singal Seer Akademi	Low power Integrated sensors for IOT		✓		
18-10-2016 (9.45 AM to 11:00AM)	Dr. K. Subbarangaiah Director, VedallIT	FinFets-The promises and the challenges			✓	
18-10-2016 (11.15 AM to 12.30 PM)	Dr. N. Siva Shankar Reddy, Assoc. Professor, Vasavi College of Engg.	Techniques for Low Power Design			✓	
18-10-2016 (1.45 PM to 4.30 PM)	Rakshith Rangaswamiah Application Engineer Functional Verification, Mentor Graphics	Introduction to Power Aware Verification: A step towards keeping up with the low power trends.			✓	

Valuable Suggestions:

25-10-2016

To  
The Principal,  
GNITS,  
Shaikpet,  
Hyderabad-08.

// Through proper channel //

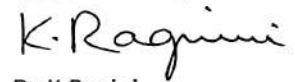
Sub: Submission of statement of expenditure for **One week workshop on "Functional Approach to VLSI"** during 17-10-2016 to 22-10-2016. Regd...

Respected sir,

I, Dr.K.Ragini, Professor and Mrs.A.Deepthi, Asst. Prof., of ECE department have planned and organized an One week workshop on "Functional Approach to VLSI Design" during 17-10-2016 to 22-10-2016 in collaboration with IETE, Hyderabad chapter. We are here by submitting the statement of expenditure along with bills enclosed.

Thanking you sir,

Yours faithfully,



Dr.K.Ragini,

Professor, Dept. of ECE.



Mrs. A. Deepthi,

Asst.Prof., Dept. of ECE.





G. NARAYANAMMA INSTITUTE  
OF TECHNOLOGY AND SCIENCE

Core



सह वायं कर्यायह  
Institution of Electronics &  
Telecommunication Engineers

**One Week Workshop on "Functional Approach to VLSI Design"**

(17-10-16 to 22-10-16)

In collaboration with  
IETE, Hyderabad chapter

**Statement of Expenditure towards Honorarium & Transportation of Resource Persons**

Sl.No	Particulars	Amount (Rs.)
<b>Honorarium to Resource Persons</b>		
1.	Dr. M. Satyam Retd. Prof, IISC Bangalore. Professor, Vasavi College of Engineering, Hyderabad.	3000.00
2.	Dr.G.Laxmi Narayana Chairman, IETE, Hyderabad Chapter. Principal, Anurag College of Engineering, Hyderabad.	3000.00
3.	Mrs.B.Usha Staff Design Engineer, Xilinx Pvt. Ltd., Hyderabad	3000.00
4.	Dr.HirdeshSinghal CEO, Seer Akademi, Hyderabad	3000.00
5.	Dr.K.Subbarangaiah Director, VedaIIT, Hyderabad	3000.00
6.	Dr.N.Siva Shankar Reddy Assoc.Prof., Vasavi College of Engineering, Hyderabad	3500.00
7.	Mr.RajaBandi Director, Lucid VLSI, Hyderabad	6000.00
8.	Dr.P.A.Govindacharyulu, Professor, Vasavi College of Engineering, Hyderabad	3500.00
9.	Dr.N.S.Murthy Professor, Vasavi College of Engineering, Hyderabad	3000.00
<b>Transportation to Resource Persons</b>		
10.	M/s. Ola/Uber Travels, Hyderabad	2400.00
<b>Total:</b>		<b>33400.00</b>

## Income and Expenditure statement

25-10-2016

Income and Expenditure statement of the One week workshop on "Functional Approach to VLSI Design" during 17<sup>th</sup> October to 22<sup>nd</sup> October, 2016.

Sl.No.	Particular	Amount (Rs.)
1.	Advance Amount take from College	54,000 /-
2.	Amount collected from participants (deposited at office)	36,500 /-
	Total amount credited	90,500 /-

Amount Spent:

Sl.No.	Particulars	Amount (Rs.)
1.	Honorarium	31000
2.	Transport	2400
3.	Canteen	26500
4.	Banners	800
5.	Certificates	1000
6.	Stationary(folders)	1485
7.	Postal Charges	950
8.	Shawls + Bouquets+ Sweet Packets	1760
9.	Decoration for inaugural	200
10.	Miscellaneous	2265
	Total amount spent	68,360 /-

Balance amount need to be sanctioned =  $68360 - 54000 = \text{Rs. } 14360 /-$

Final balance amount left after the conduction of workshop:

$90500 - 68360 = \text{Rs. } 22,140 /-$

Enclosed: 1. Sanction letter

2. Bills

54,000  
36,500  
-----  
17,500

K. Ragini

Dr.K.Ragini,  
Professor, Dept. of ECE.

Mrs. A. Deepthi  
Asst.Prof., Dept. of ECE



Date: 06-09-16

Budget Estimation for One week workshop on "Functional Approach to VLSI Design"

(17-10-2016 to 22-10-2016)

The following are the details of budget estimate for one-week workshop –Regd.

1.	Honorarium for Resource persons (Rs. 3000 per session, 12*3000)	Rs. 36,000	
2.	Transportation for Resource persons (1000 * 12)	Rs. 12,000	
3.	Working Lunch (expecting 30 participants, 6*90*40)	Rs. 21,600	
4.	Amount to be collected from participants (Rs.1000 for non-IETE members) and (Rs.750 for IETE members) (1000*20+750*10 approx.)		Rs. 27,500
5.	Stationary for the Participants	Rs. 800	
6.	Brochure and Postal charges	Rs.5600	
7.	Certificates	Rs.500	
8.	Miscellaneous	Rs.5000	
		Rs.81,500	Rs. 27,500
	Total estimated expenditure	Rs. 54,000	

Approximately budget of Rs. 54,000 is the estimate for the one week workshop.

Dr.B.Venkateshulu

HOD, ECE

Sincerely,

*K. Ragini*

Dr. K.Ragini  
Course Coordinator

*D. Y. L.*  
Deepthi Amuru

Co-Course Coordinator

G. Narayanamma Institute of Technology & Science,

Shaikpet, Hyderabad – 500008

Academic Year-2016-17

**REPORT OF ONE WEEK WORKSHOP ON  
“FUNCTIONAL APPROACH TO VLSI DESIGN”**

(17.10.2016-22.10.2016)

A one week Workshop on “Functional Approach to VLSI Design “is organized by Department of ECE in COLLABORATION with IETE,Hyderabad Chapter and Core EL Technologies,Hyderabad from 17-10-16 to 22-10-16.The coordinators for the workshop are Dr.K.Ragin,Professor ECE Department and Mrs.Deepthi Amuru,Assistant Professor,Department of ECE.

VLSI Design has become an important domain in the field of Digital and Analog circuits. The aim of the course is to provide a basic knowledge on advanced design concepts in VLSI Design and motivate the faculty/students towards research in the field of VLSI. This workshop provides the knowledge on system Verilog, different techniques for Low Power Design, basics on Analog and mixed signal design and also provides hands on experience using Xilinx Zynq boards and mentor graphics for backend circuit design. The major focus of the workshop is to upgrade the research skills of teachers, especially those teachers who have not had an opportunity to acquaint themselves with recent developments in research methods .The workshop was a grand success with total participants of 44.Among this ,23 faculty are from different colleges,10 faculty from GNITS, and 11 PG students from other colleges like TKRCET-9,Osmania university -1 NMREC-1.The valedictory function was held on 22-10-16 and certificates were issued for all participants.

The following topics were discussed in the workshop.

- Introduction to system Verilog assertions
- Design promises and challenges for digital circuit design using FinFETs
- Analog and mixed signal design flow
- Techniques for low power design and ultra low power circuits
- Low power integrated sensors for IOT
- Lab sessions using Xilinx Zynq board on Data motion networks and accelerators
- Lab sessions using Mentor graphics on semi custom VLSI circuit backend design

Co-Ordinator

Dr.K.Ragini