



# Nehru College of Engineering and Research Centre

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Approved by AICTE, New Delhi

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**DE**

Criterion	Description
6.3.2	Average percentage of teachers provided with financial support to attend conferences /workshops and towards membership fee of professional bodies during the last five years

Sl.no	Academic Year Total No. of	Total No. of programs attended with financial support
1.	2015-'16	5

Sl.	Description	Page No
1	List of Faculty members	1
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**PRINCIPAL**

Nehru College of

Engineering and Research Centre

Pampady, Thiruvilwamala, Thirissur Dt

Pin - 680 597 Kerala

(Sponsors : Nehru College of Educational and Charitable Trust)

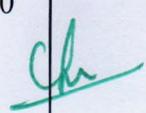
College Campus : Nila Gardens, Pampady, Near Lakkidi Rly. Station, Thiruvilwamala, Thirissur (Dist), Kerala - 680 588  
Tel / Fax : +91 4884 - 282070, 284000. E-mail : office@ncerc.ac.in, admissions@ncerc.ac.in, web : www.ncerc.ac.in



**6.3.2 Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years**

Year	Name of teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is	Amount of support
2015-'16	Ms.SAJITHA S	3rd INTERNATIONAL CONFERENCE ON RECENT TRENDS IN ENGINEERING SCIENCE AND MANAGEMENT HELD AT VEDANT COLLEGE OF ENGINEERING AND TECHNOLOGY,KOTA, RAJASTHAN		1000
2015-'16	Ms ARCHANA M C	IEEE SPONSORED 2nd INTERNATIONAL CONFERENCE ON INNOVATIONS IN INFORMATION, EMBEDDED AND COMMUNICATION SYSTEM(ICHECS) 2015. (1st		1000
2015-'16	Ms REMYA RAMACHANDRAN	IEEE SPONSORED 2nd INTERNATIONAL CONFERENCE ON INNOVATIONS IN INFORMATION, EMBEDDED AND COMMUNICATION SYSTEM(ICHECS) 2015. (2nd Author)		2000
2015-'16	Mr. MATHIVANAN B	INSTITUTE OF DOCTORS ENGINEERS AND SCIENTISTS (IDES) JOINT INTERNATIONAL CONFERENCES 2016. (1st Author)		1000
2015-'16	P. SUNDARAMOORTI	IEEE SPONSORED 2nd INTERNATIONAL CONFERENCE ON INNOVATIONS IN INFORMATION, EMBEDDED AND COMMUNICATION SYSTEM(ICHECS) 2016. (1st		1000



  
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2015-16



3rd International Conference on Recent Trends in Engineering Science and Management



R-81-932074-4-4

Vedant College of Engineering and Technology, Approved by (AICTE), New Delhi  
Affiliated to Rajasthan Technical University, Kota, Rajasthan

# Certificate

This certificate acknowledges and honours

*Sajitha.A.S*

for presenting his/her paper on

*A New Topology for Tumour and EDEMA Segmentation Using Artificial Neural Network*

in

3rd International Conference on Recent Trends in Engineering Science and Management  
held on 10th April 2016

Principal VCET

Conference Coordinator

Conference Convener



VCET & Conference World Team Wishes All the Best for your Bright Future

Associated  
Journal

International Journal of Science Technology  
& Management  
(IJSTM, ISSN-2294-1127)  
www.ijstm.com

International Journal of Innovative Research in Science  
and Engineering  
(IJIRSE, ISSN-2434-9445)  
www.ijirsa.com

International Journal of Advanced Technology in  
Engineering and Science,  
(IJATES, ISSN-2348-7150)  
www.ijates.com

International Journal of Electrical & Electronics  
Engineering  
(IJEEE, ISSN-2221-2033)  
www.ijeeepublication.com

International Journal of Advance Research  
In Science And Engineering  
(IJARISE, ISSN-2219-4234)  
www.ijarise.com



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# Power Analysis of Various Modes of Multimode Architecture

Archana M C

Electronics and Communication Department  
Nehru College of Engineering and Research Centre  
Thrissur, India  
archanaswathi11@gmail.com

Remya Ramachandran

Electronics and Communication Department  
Nehru College of Engineering and Research Centre  
Thrissur, India  
rremya471@gmail.com

**Abstract**— Power consumption is one of biggest challenges in VLSI design. In the past, power has mainly been a concern for chips used in battery-powered devices. During long periods of inactivity, multi-threshold CMOS is very effective for reducing leakage power. There are many techniques to reduce static power. However, they are very much sensitive to process variations which affect manufacturability. Reducing leakage power remains to be one of the key design goals in the mean time. So, a new multi-mode power switch architecture with SPST adder as logic core is proposed. It offers greater power reduction and delay degradation and also requires less design effort. It also assures low leakage power and high tolerance to process variations. To achieve further static power reduction benefits, it can be combined with the existing techniques. Hence it is clear that the total power consumption can be decreased to a great extent using intermediate power off modes.

**Index Terms**— Multi-threshold CMOS (MTCMOS), Threshold Voltage ( $V_t$ ), Leakage Current (IL), Spurious Power Suppression Technique (SPST), Most Significant Part (MSP), Least Significant Part (LSP).

## I. INTRODUCTION

According to Moore's law, as chip density increases, power consumption is becoming a major problem for the contemporary systems [1]. There are two types of power: static and dynamic. Dynamic power can be reduced by the reduction of supply voltage level, since it is proportional to the square of supply voltage. But the execution time is adversely affected by this reduction. So, transistor threshold voltage is reduced, to maintain system performance. When threshold voltage is decreased, sub-threshold leakage current increases exponentially. So, for technologies below 90 nm, static power is so high that it is comparable in magnitude to dynamic power consumption.

A structure with intermediate power-off mode, which reduces the time required for recovering from idle mode at the expense of reduced leakage current suppression, is proposed. Similar structures were proposed by different authors. They extended this tradeoff between wake-up overhead and leakage power savings into multiple power-off modes. Hence the circuit is put into an intermediate power-off mode (i.e., low-power state), instead of consuming power by remaining in the

active mode during the short periods of inactivity, which is determined by the length of the idle period and the wake-up time. The higher are the power savings achieved when the period of inactivity is longer

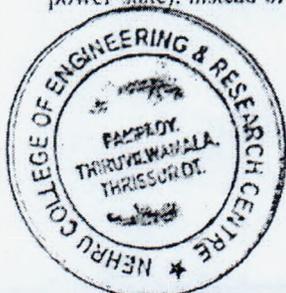
## II. BACKGROUND

There are many techniques evolved for reducing leakage power. MTCMOS technology is effective for reducing the same. It is a variation of CMOS chip technology which has transistors with multiple threshold voltage to reduce delay and power. An approach is to use dual  $V_t$  libraries [3]. It suppresses leakage current, but reduces the performance.

Use of high  $V_t$  power switches between the circuit and power supply or ground rail can be used to decrease power [2], [3], [5]. During idle mode, these switches are turned off, there by suppressing leakage current. Its drawback is the large current rush during core reactivation and wakeup time. This limitation of power switches can be overcome by using intermediate power of modes. Wakeup time is the time required for recovering from idle mode. So, the circuit is put into a low power state or appropriate power of mode; instead of consuming power by remaining in the active mode [4]. Higher power savings can be achieved when the period of inactivity is longer, by using most aggressive power-off modes.

The previous architectures have several drawbacks. First, it cannot be easily extended to support more than two intermediate power-off modes and thus it cannot be used for high-performance circuits since the power reduction potential cannot be fully exploited. Next, a significant amount of power is consumed by the architecture and this reduces the advantages offered by the power switches. They are also very sensitive to process variations, which can affect its manufacturability and predictability adversely. Also, as it consists of analog components, it is not easily testable.

In this paper, we present an effective and robust multimode power-gating architecture that has none of the above drawbacks of the previous architectures. The proposed structure requires minimal design effort since it is very simple. It is considerably smaller and offers greater power savings for similar wake-up times.

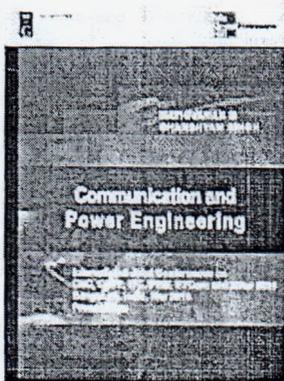
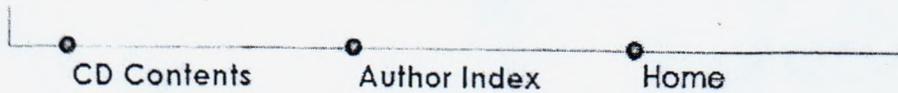


  
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Institute of Doctors Engineers and Scientists



Mathivanan B  
Ghanshyam Singh (Eds.):

**Communication and Power Engineering**

IDES Joint International Conferences 2016

Held on : 12-13/03/16

place : Bangalore

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*This is to certify that*

Dr. /Mr. /Ms. ..... P. SUNDARAMMURTHI.....

of NEHRU COLLEGE OF ENGINEERING & RESEARCH CENTRE

*has presented a paper entitled*

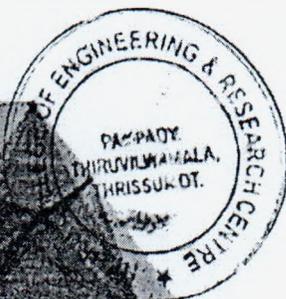
PI CONTROLLER BASED NEW SOFT SWITCHING BOOST  
 CONVERTER WITH A COUPLED INDUCTOR in

*IEEE Sponsored 3<sup>rd</sup> International Conference on  
 Innovations in Information, Embedded and  
 Communication Systems (ICIIECS '16)*

*held on 17<sup>th</sup> & 18<sup>th</sup> March, 2016*

*organised by*

*the Department of Electronics and Communication Engineering,  
 Karpagam College of Engineering, Coimbatore, Tamilnadu, India.*



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Nehru College of  
 Engineering and Research Centre  
 Panipady, Thiruvilvamala, Thiruvallur Dt.  
 Pin - 640 597 Kerala

Secretary



7<sup>th</sup> Apr 2016  
Pampady

From

MsSajitha.A.S.  
Department of Electronics & Communication  
Nehru College of Engineering & Research Centre,  
Pampady.

To

The Principal  
Nehru College of Engineering & Research Centre,  
Pampady.

Sub: Request to attend 3rd international conference on recent trends in engineering science and management.

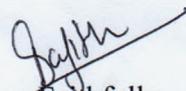
Dear Sir,

I wish to present a paper in 3rd International Conference 'On Recent Trends In Engineering Science And Management' held at Vedant College Of Engineering And Technology, Kota, Rajasthan

So I humbly request you to give me permission for the same and kindly provide all necessary support for the same.

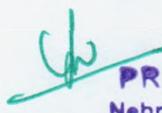
Kindly do the needful.

Thanking You

  
Yours Faithfully

Ms. Sajitha A S  
Asst. Professor



  
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Engineering and Research Centre  
Pampady, Thiruvilwamala, Thirissur Dt  
Pin - 680 597 Kerala

10<sup>th</sup> July 2015  
Pampady

From

Ms Archana M C  
Department of Electronics & Communication  
Nehru College of Engineering & Research Centre,  
Pampady.

To

The Principal  
Nehru College of Engineering & Research Centre,  
Pampady.

Sub: Request to attend IEEE sponsored 2<sup>nd</sup> International Conference on Innovations in information, Embbed and Communication System (ICHECS)

Dear Sir,

I wish to present a paper in IEEE sponsored 2nd International Conference on Innovations in information, Embbed and Communication System (ICHECS).

So I humbly request you to give me permission for the same and kindly provide all necessary support for the same.

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Thanking You

Yours faithfully

Ms Archana M C  
Asst. Professor

*Archana*



*Cds*  
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Nehru College of  
Engineering and Research Centre  
Pampady, Thiruvilwamala, Thrissur Dt  
Pin 688 597 Kerala

10<sup>th</sup> July 2015  
Pampady

From

MsRamyaramachandran  
Department of Electronics & Communication  
Nehru College of Engineering & Research Centre,  
Pampady.

To

The Principal  
Nehru College of Engineering & Research Centre,  
Pampady.

Sub: Request to attend IEEE sponsored 2<sup>nd</sup> International Conference on Innovations in information, Embbed and Communication System (ICHECS)

Dear Sir,

I wish to present a paper in IEEE sponsored 2nd International Conference on Innovations in information, Embbed and Communication System (ICHECS).

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Thanking You

Yoursfaithfully

MsRamyaramachandran  
Asst.Professor



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Pin - 686 561, Kerala

8<sup>th</sup> Mar2016  
Pampady

From

Mr.Mathivanan  
Department of Information Technology  
Nehru College of Engineering & Research Centre,  
Pampady.

To

The Principal  
Nehru College of Engineering & Research Centre,  
Pampady.

Sub: Request to attend and present paper in Institute of Doctors Engineers and Scientists (IDES) joint International Conferences 2016.

Dear Sir,

I wish to present a paper in Institute of Doctors Engineers and Scientists (IDES) joint International Conferences 2016.

So I humbly request you to give me permission for the same and kindly provide all necessary support for the same.

Kindly do the needful.

Thanking You

Yours Faithfully



Mr. Mathivanan B  
Asst. Professor



  
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Pampady, Thiruvilwamala, Thirissur Dt  
Pin 680 597 Kerala

From

Mr.P. Sundarmoorthi

EEE

Nehru College of Engineering & Research Centre,  
Pampady.

To

The Principal

Nehru College of Engineering & Research Centre,  
Pampady.

Sub: Request to present paper in International Conference.

Dear Sir,

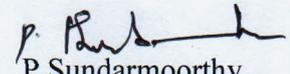
I wish to present a paper in IEEE sponsored 2nd International Conference on Innovations in information , Embedded and Communication System(ICHECS' 16) held on 17<sup>th</sup> & 18<sup>th</sup> March 2016 organized by Karpagam College of Engineering, Coimbatore.

So I humbly request you to give me permission for presenting the paper and provide necessary support for the same.

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P.Sundarmoorthy  
Asso. Professor

Pampady  
27/02/2017.



  
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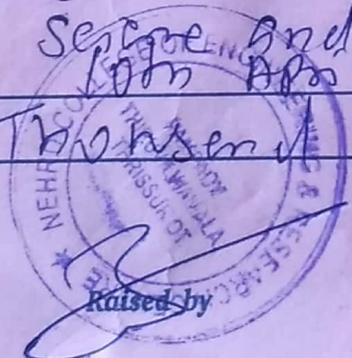
No. 473

Date. 12/04/2016

Debit..... Sajitha A.S

Particulars	Amount	
	Rs.	Ps.
Ms. Sajitha A.S towards attendy 3rd International Conference on recent trends in Engineering and Management held on 10th Apr 2016	1000	00
<b>Total</b>	1000	00

in words One Thousand only



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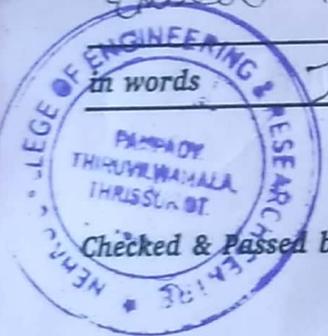
Date. 2/7/15

Debit. Ms Archana M C

Particulars	Amount	
	Rs.	Ps.
Ms Archana. towards article in International Journal as <sup>1st Author</sup> 1st Author sponsored. 2nd International Conference on Innovation in Information, Embedded and Communication System, (ICNECS) 2015	3000	
<b>Total</b>	3000	/

in words

Three thousand. only.



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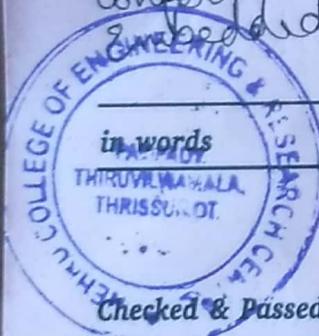
No. 530

Date. 10/7/15

Debit. Ms. Remya Rameshchandran

Particulars	Amount	
	Rs.	Ps.
Ms Remya Rameshchandran towards article in International Journal as 2nd Author IEEE Sponsored 2nd International Conference on Innovation in Information Embedded and Communication Systems (ICECS) 2015	2000	/-
<b>Total</b>	2000	/-

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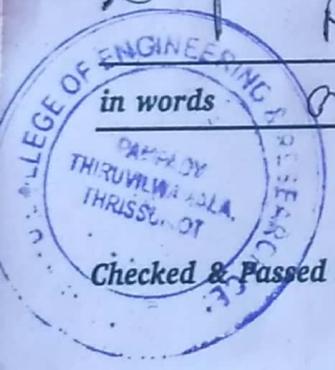
No. 429

Date. 16/8/16

Debit. Mathivagan B

Particulars	Amount	
	Rs.	Ps.
Mr. Mathivagan B towards Institute of Doctors Engineers & Scientists (IDES) Joint International Conference 2016 Registratory fees (1st Author)	1000	-
<b>Total</b>	<b>1000</b>	<b>-</b>

in words one thousand only.



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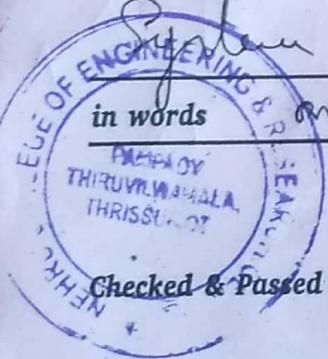
Date. 21/3/16

Debit. P. Sundaramoorthy

Particulars	Amount	
	Rs.	Ps.
P- Sundaramoorthy towards IEEE Sponsored 2nd International Conference on Innovation in Information Embedded and Convergence Systems (ICIEES) 2016 (1st Author)	1000	/-
<b>Total</b>	1000	/-

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