



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

- 1. Name of the Staff Member : Dr./Mr./Ms. S. Nageswara Rao
- 2. Designation : Asst professor
- 3. Department : EEE
- 4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : 21<sup>st</sup> Century Teaching methodologies
- 5. Date & Duration of the Program : 24/10/2016 - 28/10/2016 & 5 days.
- 6. Associating Professional Body / Agency : JNTUK.
- 7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 21/10/16

S. Nageswara Rao  
Signature of the Staff Member

- 1. Recommendations of the HOD : [Signature]
- 2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108

Account Department  
Accountant: [Signature]  
Date: 22/10/16

No.

**VOUCHER**

Date.. 22/10/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.....

Paid to.. S. Nageswara Rao. EEE..... Cash/Cheque..... 300/-.....

the Sum of Rupees..... Three hundred rupees only.....

Towards..... Workshop.....

Prepared by

Approved by

*[Signature]*  
Audited by

₹ 300/-

*[Signature]*

S. Nageswara Rao  
Receiver Signature



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

UNIVERSITY COLLEGE OF ENGINEERING KAKINADA

KAKINADA - 533 003. ANDHRA PRADESH - INDIA

One Week National Workshop on

## "21<sup>st</sup> Century Teaching Methodologies"

Sponsored by TEQIP - II

### Participation Certificate



This is to certify that Ms. / Mr. / Smt. NAGESWARA RAO SIKHA

S/o, D/o, Smt. / Sri PAMULU SIKHA

a faculty of SRKIT, VIJAYAWADA.

has participated in the One Week National Workshop on "21<sup>st</sup> Century Teaching Methodologies", held from 24<sup>th</sup> to 28<sup>th</sup> October 2016, organized by the Department of Civil Engineering, Univeristy College of Engineering, JNTUK Kakinada.

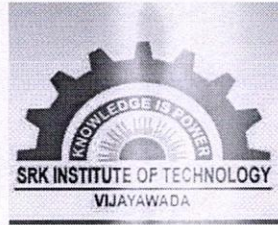
CO-ORDINATOR

ORGANIZING SECRETARY

PRINCIPAL

A. m. prasad  
PRINCIPAL

SRKIT, VIJAYAWADA  
ENIREPADU, VIJAYAWADA - 531 403



**SRK INSTITUTE OF TECHNOLOGY**  
**Enikepadu, Vijayawada 521108**  
 Approved by AICTE, Affiliated to JNTUK, Kakinada  
 (ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. B. Nava Jeevan Reddy
2. Designation : Asst professor
3. Department : ECE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : outcome Based Education
5. Date & Duration of the Program : 6/6/2016 - 11/6/2016 & (6 days)
6. Associating Professional Body / Agency : DIET
7. Financial support particulars :
  - i. Registration Charges : 300.
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 4/6/2016

G. Narayana  
Signature of the Staff Member

1. Recommendations of the HOD : [Signature]

2. Recommendations of the Principal : [Signature]

\*Sanctioned / Not Sanctioned

PRINCIPAL  
 SRK Institute of Technology  
 ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 4/6/2016

16-17

No.

**VOUCHER**

Date 4/6/2016

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... faculty development programme.....

Paid to B. Nava Tevan Reddy (EEE) Cash/Cheque..... 300/-.....

the Sum of Rupees..... Three hundred rupees only.....

Towards..... Work shop.....

Prepared by

**₹ 300/-**

Approved by

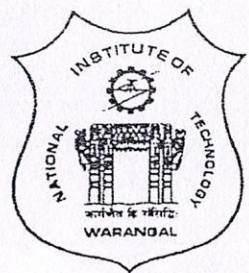
*Bm*

*testa*

Audited by

*GA*

Receiver Signature



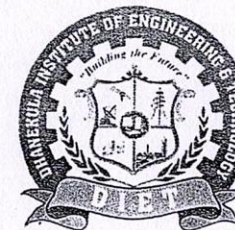
# Electronics & ICT Academy

(Initiative of DeitY, MCIT, GOI)

National Institute of Technology, Warangal  
and

Dhanekula Institute of Engineering & Technology

GANGURU, VIJAYAWADA





## Certificate

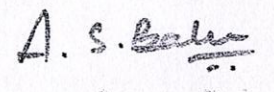
This is to certify that Prof. /-Dr. / Mr. / Mrs. B NAVA JEEVAN REDDY of  
SRKIT, VIJAYAWADA participated in Faculty Development Programme (FDP)


on "Outcome Based Education" jointly organised by Electronics & ICT Academy, NIT, Warangal  
& Dhanekula Institute of Engineering & Technology, Vijayawada, during 06-06-2016 to 11-06-2016.

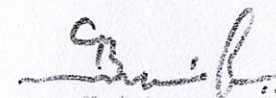
He/ She is awarded A+ grade in the test conducted.


  
Professor & HOD, CSE  
DIET, Vijayawada

  
Principal  
DIET, Vijayawada

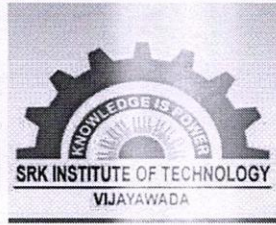
  
Co-ordinator  
NIT, Warangal

  
Chair, E&ICT Academy  
NIT, Warangal

  
Director  
NIT, Warangal

  
PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

16-17



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. N. E. K. chandra
2. Designation : Asst-prof
3. Department : EEE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : photovoltaic system and power Electronics
5. Date & Duration of the Program : 29/1/2016 - 30/1/2016 & 2days
6. Associating Professional Body / Agency : JNTUK
7. Financial support particulars :
  - i. Registration Charges : 800/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 27/1/2016

N.E.K. Chandra  
Signature of the Staff Member

1. Recommendations of the HOD : [Signature]
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

**PRINCIPAL**  
**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 28/1/2016

No.

**VOUCHER**

Date...28/01/2016

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c.....Faculty development programe.....

Paid to...N.E.K.Chandra (EEE)...Cash/Cheque.....300/-.....

the Sum of Rupees.....Three hundred rupees only.....

Towards.....Work shop.....

Prepared by

Approved by

*[Signature]*

Audited by

₹ 300/-

*[Signature]*

N.E.K.Chandra  
Receiver Signature



Two Day National Workshop on  
**“PHOTOVOLTAIC SYSTEMS AND POWER ELECTRONICS”**

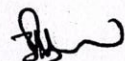


**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**  
University College of Engineering Kakinada  
Jawaharlal Nehru Technological University Kakinada

## Certificate of Participation

This is to certify that ..... N.E.K. CHANDRA .....

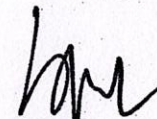
has participated in the Two Day National Workshop on “PHOTOVOLTAIC SYSTEMS AND POWER ELECTRONICS”  
during 29th and 30th of January 2016 at University College of Engineering, JNTUK, Kakinada

  
Workshop Co-ordinator

**T. MURALI MOHAN**  
Assistant Professor

  
Convenor

**Dr. V.V.N. MURTHY**  
Associate Professor &  
Head of the EEE Department

  
Chairman

  
**Dr. V. RAMACHANDRA RAJU**  
Principal

**PRINCIPAL**  
SRK Institute of Technology



16-17 6

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. K. Satyanarayana
2. Designation : Asst. professor
3. Department : BEE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : photovoltaic systems and power electronics
5. Date & Duration of the Program : 29/7/2016-30/7/2016 & 2 days
6. Associating Professional Body / Agency : JNTUK
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 27/7/2016

K. Satyanarayana  
Signature of the Staff Member

- 
1. Recommendations of the HOD : [Signature]
  2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 28/7/2016

No.

VOUCHER

Date. 28/7/2016

# SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 0866 - 2843839

Name of A/c..... Faculty development programme

Paid to k. Satyanarayana (EEE) Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred rupees only

Towards..... Workshop

Prepared by

Approved by

Audited by

₹ 300/-

Bm.

K. Satyanarayana  
Receiver Signature

Two Day National Workshop on  
**“PHOTOVOLTAIC SYSTEMS AND POWER ELECTRONICS”**



**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**  
University College of Engineering Kakinada  
Jawaharlal Nehru Technological University Kakinada

## Certificate of Participation

This is to certify that ..... K. SATYANARAYANA .....

has participated in the Two Day National Workshop on “PHOTOVOLTAIC SYSTEMS AND POWER ELECTRONICS”  
during 29th and 30th of January 2016 at University College of Engineering, JNTUK, Kakinada

Workshop Co-ordinator

**T. MURALI MOHAN**  
Assistant Professor

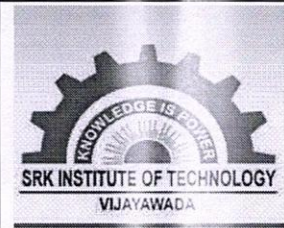
Convenor

**Dr. V.V.N. MURTHY**  
Associate Professor &  
Head of the EEE Department

Principal  
ENIKEPADU, VIJAYAWADA-521 108.

Chairman

**Dr. V. RAMACHANDRA RAJU**  
Principal



16-17 40

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. K. Satyanarayana
2. Designation : Asst. prof.
3. Department : EEE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : smart Instrumentation system with solar power and advanced signal processing
5. Date & Duration of the Program : 30/12/2016 - 31/12/2016 & 2 days
6. Associating Professional Body / Agency : LBRCE
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 28/12/2016

K. Satyanarayana  
Signature of the Staff Member

1. Recommendations of the HOD : [Signature]

2. Recommendations of the Principal : [Signature]

\*Sanctioned / Not Sanctioned

PRINCIPAL

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 29/12/2016

No.

**VOUCHER**

Date... 29/12/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program

Paid to..... K. Satyanarayana (EEE) Cash/Cheque..... 200/-

the Sum of Rupees..... Two hundred rupees only.

Towards..... WORKSHOP

Prepared by

Approved by

Audited by

₹ 200/-

12m

[Signature]

K. Satyanarayana  
Receiver Signature



Jointly Organised by : Departments of EIE & ECE

**Lakireddy Bali Reddy College of Engineering (Autonomous)**

Approved by AICTE New Delhi, Affiliated to JNTU Kakinada

Accredited by NAAC with "A" Grade & ISO 9001 : 2008 Certified,

**MYLAVARAM-521 230.**

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

**Two Day Workshop**

**SISSPASPT - 2K16**

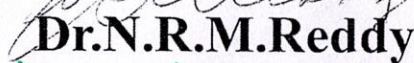
**30<sup>th</sup> & 31<sup>st</sup> Dec. 2016**

## Certificate


*This Certificate is awarded to Mr/Ms/Dr/Prof.....K.....Satya Narayana.....  
of SRK Institute of Technology.....has Participated in Two Day Workshop  
on " Smart Instrumentation System with Solar Power and Advanced Signal Processing  
Techniques " held at Lakireddy Bali Reddy College of Engineering*

  
**Dr. T. Satyanarayana**  
Convener

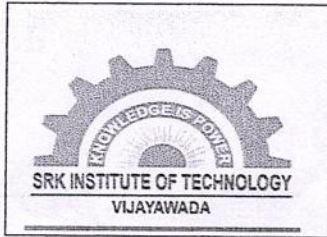
  
**Mr. R. Anjaneyulu Naik**  
Head of the Department

  
**Dr. N. R. M. Reddy**  
Principal

**Dr. E. V. Prasad**  
Director

  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

2016-17



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. P. B. Lavanya
2. Designation : Asst professor
3. Department : MBA
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : one week National workshop on 21st Century Teaching methodology
5. Date & Duration of the Program : 20th to 28th October 2016
6. Associating Professional Body / Agency : JNTUK Kakinada (University)
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 18/10/2016

Lavanya  
Signature of the Staff Member

1. Recommendations of the HOD : [Signature]
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

**PRINCIPAL**  
**SRK Institute of Technology**  
**ENIKEPADU, VIJAYAWADA-521 108.**

Account Department  
Accountant: [Signature]  
Date: 20/10/2016



16-12

No. 1

VOUCHER

Date 20/10/16

SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program

Paid to..... P.B. Lavanya (MBA) Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred rupees only -

Towards..... work shop

Prepared by

Approved by

Added by

₹ 300/-

12m

Lavanya  
Receiver Signature



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

UNIVERSITY COLLEGE OF ENGINEERING KAKINADA

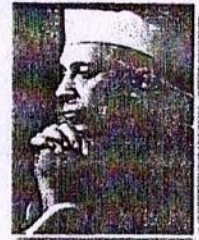
KAKINADA - 533 003. ANDHRA PRADESH - INDIA

One Week National Workshop on

## "21<sup>st</sup> Century Teaching Methodologies"

Sponsored by TEQIP - II

### Participation Certificate



This is to certify that Ms. / Mr. / Smt. LAVANYA P. B.

S/o, D/o, Smt. / Sri \_\_\_\_\_

a faculty of SRM INSTITUTE OF TECHNOLOGY

has participated in the One Week National Workshop on "**21<sup>st</sup> Century Teaching Methodologies**", held from 24<sup>th</sup> to 28<sup>th</sup> October 2016, organized by the Department of Civil Engineering, Univeristy College of Engineering, JNTUK Kakinada.

CO-ORDINATOR

PRINCIPAL

ORGANIZING SECRETARY

*A. m. m. m. m.*  
PRINCIPAL



5 16-17 115

**SRK INSTITUTE OF TECHNOLOGY**

**Enikepadu, Vijayawada 521108**

**Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)**

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. B.V.S. S Subbar Rao
2. Designation : Assistant professor
3. Department : NBA
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Journey of woman from home to Board Room
5. Date & Duration of the Program : October 2016
6. Associating Professional Body / Agency : Vrinda Publishing House, Hyderabad
7. Financial support particulars :
  - i. Registration Charges : 1500
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 19/10/2016

B.V.S. S Subbar Rao  
Signature of the Staff Member

- 
1. Recommendations of the HOD : [Signature]
  2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

Account Department

Accountant: [Signature]

Date: 20/10/2016

107

No. 10

VOUCHER

Date 20/10/16

SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c Faculty development programme.

Paid to B.V.S.S. Subba Rao (MBA) Cash/Cheque 1500/-

the Sum of Rupees One thousand five hundred rupees only

Towards Conference.

Prepared by

Approved by

Audited by

₹ 1500/-

13/11/16

B.V.S.S. Subba Rao  
Receiver Signature

## Changing Paradigm of Women in 21st Century

Dr. K. Krishnaiah Choudary<sup>1</sup>, B.V.S.S. Subba Rao<sup>2</sup>

<sup>1</sup> Associate Professor & HOD, Department of MBA, Sir C.R. Reddy College of Engineering,  
Eluru- 534 007. E-mail: drkc.kodali@gmail.com

<sup>2</sup> Research Scholar, Department of Commerce & Management, Krishna University, Machilipatnam,  
Andhra Pradesh. E-mail: bvss\_rao@yahoo.co.in

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**Abstract:** "Women represent fifty per cent of population, make up thirty per cent of the official labour force, perform sixty per cent of all working hours, and receive ten per cent of the world's income and caretakers of household affairs. Women constitute around half of the total world population and also in India. They are regarded as the better half of the society. Today's Indian women are enjoying the fruit of globalization marking an influence on the domestic and international sphere. They have carved a niche for themselves in the male dominated world. Indian women well manage both burden of work in household front and meeting the deadlines at the work place. But change in position, technological innovation and modern way of thinking can reduce the disparity between man and women, and bring about equality and equity between them, the need of the hour in women empowerment both through provision of employment and enterprise creation. Despite some basic changes in the status and role of women in the society, no society treats its women as well as its men. Consequently, women continue to suffer from diverse deprivations from kitchens to key-boards, from the cradle to the grave across Nations. The present study deals with changing role of Woman in International Business while climbing up the corporate ladder.

**Keywords:** Working Women, Role in India, Corporate World, International Business.

### 1. INTRODUCTION

*"You can tell the condition of a nation by looking at the status of its women"*

*- Pt. Jawaharlal Nehru*

Woman, as mother, as wife, and as daughter plays a vital role in giving a shape to the society. When we observe the position of women in India is very low. Once upon a time, in Vedic period women were not given due respect and freedom except in few occasions. Woman being the central figure of the family she had to submit herself to all members of the family. In some cases women were given freedom to participate in the administrative duties beyond their domestic activities. For example, Rani Rudrama Devi, Jhansi Lakshmi Bai etc., were participated in the administration of their kingdoms and areas.



13 16/17 82

**SRK INSTITUTE OF TECHNOLOGY**

**Enikepadu, Vijayawada 521108**

**Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)**

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. J. Sai Sudheekumar
2. Designation : Asst professor
3. Department : MBA
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : New Horizons in business management  
A Gateway of opportunities for business innovations
5. Date & Duration of the Program : 28-01-17
6. Associating Professional Body / Agency : Ramabai Amte DAV college, Mumbai
7. Financial support particulars :
  - i. Registration Charges : 1500/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 25/01/2017

J. Sai  
Signature of the Staff Member

1. Recommendations of the HOD: [Signature]

2. Recommendations of the Principal : [Signature]

\*Sanctioned / Not Sanctioned

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 27/01/2017

No. 17

VOUCHER

Date 27/01/17

SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme

Paid to..... J. Sai Sudheer Kumar (MBA) Cash/Cheque 1500/-

the Sum of Rupees..... One thousand five hundred rupees only.

Towards..... Conference

Prepared by

Approved by

Audited by

₹ 1500/-

JSM

J. Sai  
Receiver Signature



## SHARAYU PRAKASHAN

B-71501, Vijay Park, Katar Vadavali, Ghodbander Road, Thane (West) - 400615

### Certificate of Appreciation

Awarded to

Mr./Ms./Dr./Prof. Sudbeer Kumar J.S  
of S.P.K Institute of Technology, Vijayawada  
Andhra Pradesh for the article  
published in the (ISSN 2319-2429) peer reviewed journal of management  
research 'Management Guru' and also for the valuable contribution to the  
intellectual discussion on "New Horizons in Business & Management -  
A Gateway of Opportunities for Business Innovations" in the National  
conference held on 28th January 2017 at Ramanand Arya D.A.V. College.

*Chaitanya*  
Chairperson

Peer Reviewed Committee





## SRK INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108

Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

### Financial Support Request Letter

1. Name of the Staff Member : Dr./Mr./Ms. B. V. S. S. Subba Rao
2. Designation : Assistant professor
3. Department : MBA
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Overview of Intellectual property right International journal of Scientific Research
5. Date & Duration of the Program : March and Development October 2017
6. Associating Professional Body / Agency : IJSRD
7. Financial support particulars :
  - i. Registration Charges : 1200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 08/2/2017

B. V. S. S. Subba Rao  
Signature of the Staff Member

1. Recommendations of the HOD : [Signature]
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

PRINCIPAL  
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Date: 10-3-2017

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Date 10/3/17

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Towards..... Paper Publication.

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BVS Subba Rao  
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## Overview of Intellectual Property Rights (IPR)

Dr. M. Veerabhadra Rao<sup>1</sup> B.V.S.S. Subba Rao<sup>2</sup>

<sup>1</sup>Professor & Head <sup>2</sup>Research Scholar

<sup>1</sup>Department of MBA <sup>2</sup>Department of Structural Engineering

<sup>1</sup>SRK Institute of Technology, Vijayawada <sup>2</sup>Krishna University, Machilipatnam, Andhra Pradesh

**Abstract**— Intellectual property rights are a bundle of exclusive rights over creations of the mind, both artistic and commercial. The former is covered by copyright laws, which protect creative works such as books, movies, music, paintings, photographs, and software and gives the copyright holder exclusive right to control reproduction or adaptation of such works for a certain period of time. This paper focuses on the basic concepts of Intellectual Property, its types and issues involved in IPR.

**Key words:** Intellectual Property, Trademarks, Copyrights, Patents, Trade Secrets

### I. INTRODUCTION

Intellectual property (IP) is a legal field that refers to creations of the mind such as musical, literary, and artistic works; inventions; and symbols, names, images, and designs used in commerce, including copyrights, trademarks, patents, and related rights. Under intellectual property law, the holder of one of these abstract "properties" has certain exclusive rights to the creative work, commercial symbol, or invention by which it is covered.

Intellectual property rights are a bundle of exclusive rights over creations of the mind, both artistic and commercial. The former is covered by copyright laws, which protect creative works such as books, movies, music, paintings, photographs, and software and gives the copyright holder exclusive right to control reproduction or adaptation of such works for a certain period of time.

The second category is collectively known as "industrial properties", as they are typically created and used for industrial or commercial purposes. A patent may be granted for a new, useful, and non-obvious invention, and gives the patent holder a right to prevent others from practicing the invention without a license from the inventor for a certain period of time. A trademark is a distinctive sign which is used to prevent confusion among products in the marketplace.

An industrial design right protects the form of appearance, style or design of an industrial object from infringement. A trade secret is an item of non-public information concerning the commercial practices or proprietary knowledge of a business. Public disclosure of trade secrets may sometimes be illegal.

The term "intellectual property" denotes the specific legal rights described above, and not the intellectual work itself.

The importance of intellectual property in India is well established at all levels- statutory, administrative and judicial. India ratified the agreement establishing the World Trade Organization (WTO). This Agreement, inter-alia, contains an Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) which came into force from 1st January 1995. It lays down minimum standards for protection and enforcement of intellectual property rights in

member countries which are required to promote effective and adequate protection of intellectual property rights with a view to reducing distortions and impediments to international trade. The obligations under the TRIPS Agreement relate to provision of minimum standard of protection within the member countries legal systems and practices.

The Agreement provides for norms and standards in respect of following areas of intellectual property:

- Copyrights and related rights
- Trade Marks
- Geographical Indications
- Industrial Designs
- Lay out Designs of Integrated Circuits
- Protection of Undisclosed Information (Trade Secrets)
- Patents
- Plant varieties

Intellectual Property (IP) is the information and original expression that brings its original value from creative ideas with a commercial value. Intellectual property allows the people to have fully independent ownership for their innovations and creativity like that for their own physical property. By safeguarding such innovations, can lead to the owner of IP can be encouraged for further innovations to the benefit of the society in general. It may not be possible to protect IP and obtain intellectual property rights unless they have been applied for the sanction obtained.

Most of the countries having large number of local industries with innovative designs have specific laws to safeguard the innovations by some regulations with respect to copying of inventions, identifying symbols and creative slogans. As in other developing countries, India too showed for quick enforcement of intellectual property right protection laws. India has to comply being a member of WTO for such implementation of laws at least by 2005. India's IPR scene is no deterrent to foreign companies. These laws consist of distinct types of intangible properties.

### II. ESSENTIAL ELEMENTS OF INTELLECTUAL PROPERTY RIGHTS

IPR is a broad term for covering –

- 1) Patents for inventions
- 2) Copyrights for material
- 3) Trademarks for broad identity and
- 4) Trade secrets.

In general these properties are termed as "Intellectual Property". Intellectual Property is an asset that can be bought or sold, licensed and exchanged. But of course unlike other properties, intellectual property is intangible; rather it cannot be identified by its specific parameters. These properties are protected on a national basis.

PRINCIPAL



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5. Date & Duration of the Program : March 2017
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 1500/-
  - ii. Travelling Allowances :
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# Members Perception on the Impact of SHG's: A Case Study of Income Generating Women in W.G. District

Prof. D. Surya Chandra Rao <sup>1</sup>, Vice Chancellor (I/C), Krishna University, Machilipatnam, Email: profdsrao@gmail.com, Ph: 9440149149

Dr. N. Subramanyam <sup>2</sup>, Professor & Head, Dept. of MBA, SRK Institute of Technology, Vijayawada. Email: nsm.subramanyam@gmail.com, Ph: 9440109226

Mr. B.V.S.S. Subba Rao <sup>3</sup> Research Scholar Department of Commerce & Management, Krishna University, E-mail: bvsss\_rao@yahoo.co.in, Ph: 098499 76199,

## Abstract

*Microfinance has garnered significant worldwide attention as being a successful tool to meet this substantial demand for financial services by low-income micro entrepreneurs. It has evolved over the past quarter century across India into various operating forms and to a varying degree of success. Today, Self-Help Groups and Micro Finance Institutions are the two dominant form of microfinance in India. Microfinance in India is currently being provided by three sectors: the government, the private sector and charities. The vital function of the Self Help Group (SHG) programme is to provide access to credit in the context of poverty reduction and empowerment of women. With the aim to meet the millennium development goals and microfinance programme's role in supporting it, there has been an increasing expectation on their impact on women empowerment. However, the perception and expectations of the members of the SHGs vary from person to person. This paper explains the perceptions of the sample women members in West Godavari District who are engaged in different income generating activities, in terms of economic impact.*

**Key Words:** *Self Help Groups, Micro Finance, Empowerment, Economic Impact.*

## Introduction

It has been estimated that there are more than five hundred million economically active poor people in the world operating micro enterprises and small businesses. Most of them do not have access to adequate financial services. Microfinance has garnered significant worldwide attention as being a successful tool to meet this substantial demand for financial services by low-income micro entrepreneurs. It has evolved over the past quarter century across India into various operating forms and to a varying degree of success. India now occupies a significant place and a niche in global microfinance through promotion of the self-help groups (SHGs) and the home grown SHG-Bank Linkage

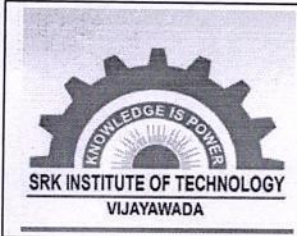
(SBL) model. The Indian model offers greater promise and potential to address poverty as it is focused on building social capital through providing access to financial services through linking with the mainstream.

The Self Help Group is considered as a viable organisation of the rural poor particularly women, who are the marginalised groups of our society due socio-economic constraints in the rural areas, for delivering micro credit in order to undertake entrepreneurial activities. If adequate self-employment can be generated for women in compatible with their roles in home-keeping, it will help increasing their economic, social and physical well-beings and ultimately free them from the clutches of subjugation. Undoubtedly necessary vehicle for the purpose is supplied by institution of women SHGs which help improving economic status of women, protecting their relevance to and significance in the society and above all, effectively implementing the employment support practices of the government for women.

The Self Help Group is considered as a viable organisation of the rural poor particularly women, who are the marginalised groups of our society due to socio-economic constraints in the rural areas, for delivering micro credit in order to undertake entrepreneurial activities.

## Need for Women Empowerment

Women represent 50% of the world's population, produce half the world's food supply, account for 60% of the working force, contribute up to 33.3% of the official labour force, perform nearly 66.6% of all working hours, receive 10% of world economy but, surprisingly own less than 1% of world's real estate. These data apparently justify that there is a need for Women Empowerment which shall be achieved only through providing opportunities and rights to basic civic amenities, education, equal wages, right to question, fight against violence and injustice, make decision and express themselves. Hence, there is an urgent necessity to improve the status of women by well-



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VISHNU  
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Vishnupur, BHIMAVARAM-534 202, A.P.


One Week National Level Faculty Development Program on  
**CYBER SECURITY AND FORENSICS**

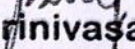
16<sup>th</sup> – 20<sup>th</sup> August 2016



Organized by DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
Under TEQIP – II

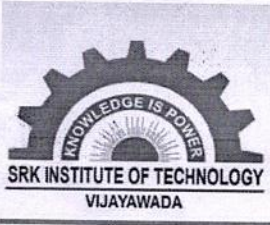
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This is to certify that Dr./<sup>✓</sup>Mr./Ms./Mrs. T. Ganesh Kumar of  
SRK Institute of Technology has participated in One week  
National Level Faculty Development Program on “Cyber Security and Forensics” held  
at Shri Vishnu Engineering College for Women, Bhimavaram during 16<sup>th</sup> – 20<sup>th</sup> August 2016.

  
Prof. V. Purushothama Raju  
Convener

  
Dr. P. Srinivasa Raju  
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5. Date & Duration of the Program : 6<sup>th</sup> - 10<sup>th</sup> Sep 2016
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(Andhra Pradesh State Skill Development Corporation)  
Department of Skill Development,  
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## Faculty Improvement Program (FIP)

on

# Google

## Android Developer Fundamentals

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from Srk Institute Of Technology Krishna

participated in the Google Android Developer Fundamentals Workshop from

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*Jocelyn Becker*  
for Google

*Subbarao Shankar*  
for APSSDC



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4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : A Secure & Dynamic Multi-Keyword Ranked Search Scheme over Encrypted Cloud Data
5. Date & Duration of the Program : 9 Sep 2016
6. Associating Professional Body / Agency : IJAASG
7. Financial support particulars :
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  - iii. Membership Fee :
  - iv. Others (if any) :

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## A Secure and Dynamic Multi-keyword Ranked Search Scheme over Encrypted Cloud Data

J.Niranjani<sup>1</sup> Dr. K. Rama Krishniah<sup>2</sup> D Sarath Babu<sup>3</sup>

<sup>1</sup>M.Tech Student, Dept of CSE, R K College of Engineering, Krishna-521456, A. P., India

<sup>2</sup>Professor & Principal Dept of CSE, R K College of Engineering, Krishna-521456, A. P., India

<sup>3</sup>Assistant Professor, Dept of CSE, N V R College of Engineering, Krishna-522201, A. P., India

E-Mail:- niranjaniREVATHI@gmail.com

**Abstract:** : Due to the growing popularity of cloud computing, more and more data owners are motivated to outsource their data to cloud servers for great convenience and reduced cost in data management. However, sensitive data should be encrypted before outsourcing for privacy requirements, which obsoletes data utilization like keyword-based document retrieval. In this paper, we present a secure multi-keyword ranked search scheme over encrypted cloud data, which simultaneously supports dynamic update operations like deletion and insertion of documents. Specifically, the vector space model and the widely-used TF\_IDF model are shared in the index construction and query generation. We construct a special tree-based index structure and propose a "Greedy Depth-first Search" algorithm to provide efficient multi-keyword ranked search. The secure kNN algorithm is utilized to encrypt the index and query vectors, and meanwhile ensure accurate relevance score calculation between encrypted index and query vectors. In order to defy statistical attacks, phantom terms are added to the index vector for blinding search results. Due to the use of our special tree-based index structure, the proposed scheme can attain sub-linear search time and deal with the deletion and insertion of documents flexibly. Extensive experiments are conducted to demonstrate the efficiency of the proposed scheme.

**Index Terms:** Searchable encryption, multi-keyword ranked search, dynamic update, cloud computing.

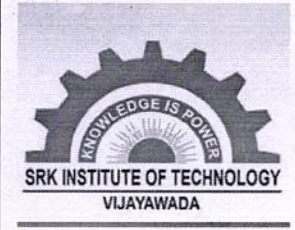
### INTRODUCTION

Disseminated computing is a country side of computer science that studies dispersed systems. A distributed system is a software scheme in which mechanism located on networked computers converse and synchronize their actions by passing messages. The mechanisms interrelate with each other in arrange to achieve a common goal. There are a lot of alternatives for the communication passing mechanism, including RPC-like connectors and message queues. Three important

characteristics of disseminated systems are: concurrency of apparatus, lack of a global clock, and self-determining malfunction of workings. A significant goal and brave of distributed systems is location simplicity. Examples of distributed systems vary from SOA-based systems to especially multiplayer online playoffs to peer-to-peer applications. A computer program that runs in a disseminated system is called a distributed program, and distributed programming is the development of writing such programs.

16-17

16-17




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5. Date & Duration of the Program : Oct 2016
6. Associating Professional Body / Agency : IJRRES
7. Financial support particulars :
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# INFERRING RISK OF DIABETES MELLITUS BASED ON ASSOCIATION RULE SUMMARIZATION

R.Mounica, MTech, Mail Id: [mounikarajapudi@gmail.com](mailto:mounikarajapudi@gmail.com)

J.Niranjani, Assistant professor, Mail Id: [niranjanirevathi@gmail.com](mailto:niranjanirevathi@gmail.com)

SRK Institute of Technology, Enikepadu, Vijayawada, Krishna(Dt)

**ABSTRACT—** *Data mining is a critical role in a number of functions akin to trade companies, educational associations, and government sectors, health care industry, scientific as well as engineering. . In the well being care industry, the information mining is predominantly used for ailment prediction. Giant information mining methods are existing for predicting ailments specifically classification, clustering, association ideas, summarizations, regression and etc. In accordance this paper, we reward medical software of organization rule mining to establish units of co-morbid stipulations. SVM is mostly used for classification and regression analysis. And in the same way k-nearest neighbour algorithm is a classification algorithm used to classify data using training examples. On this paper we advise K-Nearest Neighbour algorithm approach to increase the accuracy and to predict the disorder for high chance sufferer.*

## 1. INTRODUCTION

Healthcare is an enterprise which grows speedily in every single place the world with an severe system. Each social and business implications of healthcare are manifold. Ordinary healthcare offerings have two most important drawbacks. To begin with, they don't seem to be available always and all over. Ailing members must talk over with the caregivers or vice

versa so as to the medication. This puts a constraint on aged and/or disabled individuals living on my own and requiring sudden clinical concentration to thwart possible long term handicap. Secondly, prevailing healthcare infrastructure and personnel are insufficient to cater to the desires of the growing populace. In addition, the altering demographics, like the quickly aging population in most constituents of the world, and motives like pollution and stress put enormous pressure on the already fragile healthcare infrastructure. Diabetes could also be a new sort of diseases characterized via high blood glucose degree (blood sugar). If a man or woman has diabetes mellitus, the physique both would not manufacture ample hypoglycemic dealers or the body is unable to make use of its own insulin. Aldohexose builds up within the blood and explanations that, if no longer controlled, will effect in severe well being problems such as stroke and even death. The risk of dying for any person with diabetes mellitus is double the risk of someone of related age who doesn't have diabetes mellitus. Diabetes might be a predominant purpose for heart assault and stroke. Death values for coronary heart assault and as a consequence the risk of stroke are involving 2-4 instances greater variant cluster adults with diabetes mellitus than alternative



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IBM Cloud Computing
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6. Associating Professional Body / Agency : APSSDC
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
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  - iv. Others (if any) :

Date: 15.10.16

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Signature of the Staff Member

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the Sum of Rupees..... Two hundred rupees only-

Towards..... F.D.P.

Prepared by

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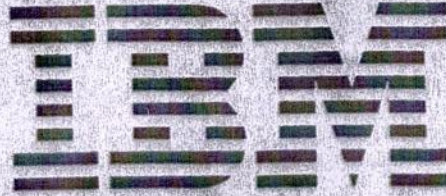
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# APSSDC

(Andhra Pradesh State Skill Development Corporation)  
Department of Skill Development, Entrepreneurship  
& Innovation, Govt. of AP



## Faculty Improvement Program(FIP)

On

### IBM Cloud Computing

*Certificate of Attendance*

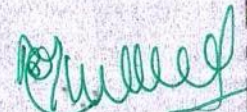
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**DAKOJI V V BRAHMACHARI**

from **SRK INSTITUTE OF TECHNOLOGY** participated

the IBM Cloud Computing Workshop from 17<sup>th</sup> to 26<sup>th</sup> Oct 2016.

  
for IBM

  
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5. Date & Duration of the Program : 19-10-16 - 21-10-16 (5 Days)
6. Associating Professional Body / Agency : NMVWA
7. Financial support particulars :
i. Registration Charges : 200/-
ii. Travelling Allowances :
iii. Membership Fee :
iv. Others (if any) :

Date: 17-10-16 Signature of the Staff Member

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2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

Account Department
Accountant: [Signature]
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# Modeling Combustion and Emissions of HSDI Diesel Engines Using Injectors with Different Spray Angles

Dr.K.Bala Showry  
Principal

SRK Institute of Technology  
Affiliated to JNTUK Vijayawada  
gurikini@gmail.com

## ABSTRACT

Due to the stringent legislation for emission of diesel engines and also increasing demand on fuel consumption, the importance of detailed 3D simulation of fuel injection, mixing and combustion have been increased in recent years. In the present work commercial validation tool was used for simulation has been used to study the performance and emission by using different included spray angles from 80 to 130 degrees. The simulation was performed with 50, 85, 120 and 130 degrees. The predicted in cylinder pressure, temperature NOX and Sox values have been validated with experimental results. Simulations were conducted at detailed modeling of spray and mixture formation in a Fiat heavy duty diesel engine. The paper provides an overview of the sub models implemented, which account for liquid spray atomization droplet, secondary break-up, droplet collision, impingement, turbulent dispersion and evaporation. NOX and Soot emission data were obtained with the use of Zeldovich mechanism and Hiroyasu model. Simulations have shown a very good agreement in terms of pressure NOX and PM. Injection was modeled using Lagrangian approach and reaction was modeled using non premixed combustion.

## Keywords

Diesel engine, combustion, pollution, Computational Fluid dynamics (CFD), Duration of injection (DOI), start of injection (SOI)

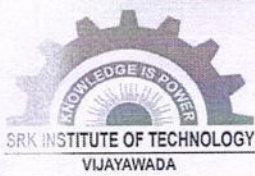
## 1. INTRODUCTION

Diesel engine is widely used in heavy duty transport applications. Diesel engine is more fuel efficient than spark ignition engine on the other side they have relatively higher emissions and noise levels. Diesel engine manufacturers have to address these problems to meet current and future government regulations which limit particulate and NOX emissions, while maintaining a quite efficient engine to satisfy the consumers. Particulate matter and NOX production along with engine noise highly depend on the combustion process. Therefore precise control over the fuel injection and spray formation is essential in making improvements to the combustion process. The optimum pressure and optimum nozzle diameter increases the performance and consequently reduces the particulate matter with the better atomization and fuel-air mixing. This in turn unfortunately increases NOX because of high temperature. To improve the performance and to reduce the NOX –particulate formation without sacrificing the fuel consumption, it is important to understand the relationships between various injection parameters and how they affect the combustion process. Along with the injection pressure and nozzle diameter other injection parameters like such as nozzle hole L/D ratio, rate of injection profile, effect

of fuel spray, spray characteristics, that may affect the droplet size, spray penetration exit velocity and spray cone angle. Use of multiple injections can reduce particulate emissions by as much as a factor of three without increasing NOX emissions. This will be done by better mixing later in the cycle. Optimizing the injection pressure, injection angle and optimizing the nozzle diameter has proven to be an effective way to reduce particulate emissions and consequently improves the engine performance. Multiple injection strategies have been reported for simultaneous reduction of NOX and PM in a large bore direct injection diesel engine [1, 2, 3]. Small bore diesel engines results shown by Nehmer and Reitz [2] that pulsed injection might provide a method to reduce PM and allow for reduction of NOX from controlled pressure rise. The effectiveness of double, triple and rate shaped injection strategies to simultaneously reduce NOX and PM was also evaluated. Numerical simulations were carried out to explore the mechanism of soot and NOX reduction for multiple injections [4]. Multiple injection strategies have a similar effect to the restarted single injection on NOX reduction. Reduced emissions are due to the fact that the soot producing rich region is not replenished when the injection pressure is terminated and restarted. Zang investigated the effect of [5] pilot injection on NOX, Soot emissions and combustion noise in a small diesel engine, soot emission was seen relevant to the pilot flame and reducing the pilot flame at the main injection starting time can reduce soot emissions. By optimizing pilot injection timings and quantity maintaining and dwell between main and pilot injections simultaneous reduction of NOX and PM was obtained in a HSDI diesel engine [6]. It was also shown that simultaneous reduction of combustion noise and emission is possible by the influence of the pilot burned gas through minimizing the fuel quantity by advancing the pilot injection timing [7]. Combustion concepts like homogeneous charge compression ignition combustion have been shown to be effective for NOX and PM reduction. The concept of HCCI was applied initially to spark ignition engines because of its volatility property for better homogeneous mixture, where as in diesel engines this concept has been delayed as diesel has low volatility. With the concept of multi pulse injection the problem of homogeneous mixture in diesel engines could be solved and the same has been applied for high speed direct injection diesel engines effectively. Hashizume [8] proposed a low soot solution called multiple stage diesel combustion for higher load operating conditions. Although, soothing luminous flame was observed, this luminous flame disappeared quickly and most of the soot was oxidized rapidly smoke and NOX were reduced. Su W, Lin T, Pei Y.A have done work [9] on multi pulse HCCI diesel engine, they used multiple short injection pulses for early injection and followed by main injection near top dead center and they found that for very early injection a

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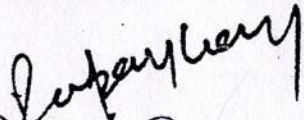
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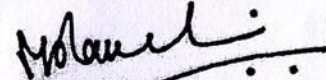
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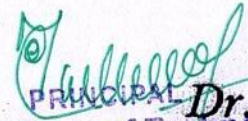
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# Eigen Value Buckling Analysis of Thin FRP Cross Ply 4-Layered Hexagonal Cut on Rectangular Laminated Composites

S. Mahesh Babu<sup>1\*</sup>, M. Venkateswara Rao<sup>2</sup>

<sup>1</sup>SRK Institute of Technology, Vijayawada, India

<sup>2</sup>Bapatla Engineering College, Bapatla, Guntur, India

**Abstract** The present research work is to evaluate the buckling load of thin FRP symmetric cross ply rectangular laminates ( $0^0/90^0/90^0/0^0$ ) with hexagonal cut out, which is subjected to uniaxial compression using finite-element method software ANSYS. The analysis is done using ANSYS 12.0. The buckling load is evaluated by changing the parameters such as hole orientation ( $\beta$ ), aspect ratio ( $a/b$ ), thickness ratio ( $S$ ), number of layers ( $N$ ) and boundary conditions. The effects of these five parameters are studied on buckling load. The result shows that the buckling load is more at  $\beta = 60^0$  and minimum at  $\beta = 30^0$ , decreases with the increase in an aspect ratio ( $a/b$ ), decreases with an increase in the thickness ratio ( $S$ ), increases from  $N=4$  to  $N=12$  and remains constant up to  $N=20$  and finally more in clamped-clamped (C-C) boundary condition when compared to clamped-simply supported (C-S) and simply-supported simply-supported (S-S) boundary conditions.

**Keywords** FRP, FEM, Buckling analysis, Uniaxial load, ANSYS, Cross-ply

## 1. Introduction

The buckling of rectangular plates was subject of more than a century. Exact and approximate solutions for rectangular plates have been developed. There were many exact solutions for linear elastic isotropic thin plates; many treated by Timoshenko [1].

M. Tajdari et al [2] investigated the effect of plate support conditions, aspect ratio and hole size on the buckling strength of perforated plates subjected to linearly varying load. They used FEM software ANSYS to solve their problem. They concluded that increasing the hole size does not necessarily reduce the buckling strength of the perforated plates. For certain aspect ratios and support conditions buckling strength increases with increase in hole size. And they also concluded that clamped boundary condition increases the buckling strength of the plate when compared to simply-supported and free boundary conditions.

J. Purbolaksono and M.H. Aliabadi [3] were presented the buckling analysis of the perforated thin plates by the dual reciprocity boundary element method (DRBM). The plate buckling equations of this method were presented as a standard eigen value problem. They evaluated the simply-supported rectangular plates with different locations

of a circular hole subjected to compressive load and FEM results were presented for comparison. They concluded that buckling co-efficient for the plate with a circular hole would decrease as the distance of the center of circular hole to the central of the plate increased.

Muhammed D. Tekin and M. Fatih Altan [4] investigated the buckling load of simply-supported reinforced rectangular plate with circular hole and without hole subjected to uniaxial compression. They implemented this problem into FORTRAN. They concluded that bending stiffness decreases with increase in diameter of the hole.

Ehaled M. El-Sawy and Aly S. Nazmy [5] were introduced the effect of aspect ratio on the elastic buckling of uniaxial loaded plates with eccentric holes. The finite element method has employed to determine the buckling of load of uniaxial loaded rectangular perforated plates along four simply-supported edges with length of 'a' and width 'b'. They concluded that rectangular hole with curved corners with its short dimension positioned along the longitudinal direction of the plate was better option compared to circular hole and also concluded that distance between the edge of the circular hole and nearest unloaded edge of the plate not less than  $0.1b$ .

Ibearugbulem et al [6] presented the buckling analysis of uniaxial compressed rectangular thin plate along the four simply-supported edges using Taylor-Mclaurin shape function. This study was accomplished through a theoretical formulation based on Taylor-Mclaurin's series and application of Ritz method. The resulting critical load was

\* Corresponding author:

mahesh0025@gmail.com (S. Mahesh Babu)

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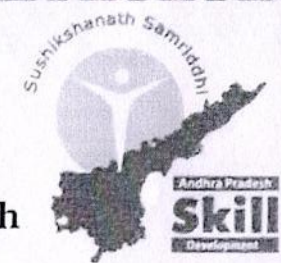
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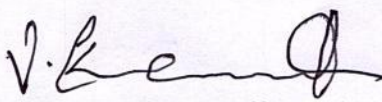
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# A Mix Design of Self Compacting Concrete with Copper slag as Fine aggregate and Silica fume as Mineral Admixture

Neeta.A, Subha.B, Karthik.V

**Abstract**— Since there is a scarcity of fine aggregate throughout the country it is essential to find a replacement of fine aggregate. Our idea is to use copper slag as replacement of fine aggregate. Due to several costs of labours for compaction we can go to self compacting concrete. Self compacting concrete is one of the high performance concrete which had an enormous growth in the construction industry in the recent years. Self compacting concrete can be described as a high performance materials that flows under its own self weight, without requiring vibration, to achieve consolidation by completely filling up formworks even when access is hindered by narrow gaps between reinforcement bars. In this present works, for M30 grade concrete beam copper slag is replaced for sand at 0%, 20%, 40%, 60%, 80% and silica fume is used as an admixture in concrete. The various concrete workability tests such as slump flow test, T50cm slump flow, V-funnel test, J-ring and L-box tests were performed.

**Key words**— Compressible packing model, Packing factor, Nansu method, Superplasticizers.

## 1 INTRODUCTION

When there is a large construction for taller buildings the compaction for such type of concrete requires heavy compaction and labour costs are also high and it cannot be done by mechanical means. This difficulty can be easily solved by self compacting concrete. The self compacting concrete is a newest innovative high performance concrete that it has ability to spread and self consolidates the formwork without any external vibration. The elimination of vibration causes a reduce of manpower and increase the speed of construction. Replacement of fine aggregates produces reduction in scarcity of river sand.

Copper slag is one of the waste materials that are obtained from copper manufacturing industry. This material is suitable for fine aggregate. Hence it is a waste materials and is eco friendly. European Federation of National Associations Representing for Concrete provides a guidelines for requirements for constituent materials, test methods and check list. The design mix of self compacting concrete based on Nansu method and Compressible packing model for M30 grade concrete is prepared.

- Author name is currently pursuing masters degree program in structural engineering in Paavai Engineering College, Namakkal, PH-9159940713. E-mail: neeta.acivilpct@gmail.com
- Co-Author name is currently pursuing masters degree program in structural engineering in Paavai Engineering College, Namakkal, PH-8508797749. E-mail: subhacivilianz@gmail.com
- Our guide is Assistant Professor in Civil Engineering in Paavai Engineering College, Namakkal, PH-8122625335. E-mail: karthice@live.com

## 2 MATERIAL PROPERTIES

### 2.1 Cement

The cement used in this study was 53 grade Ordinary Portland Cement (OPC). The properties of cement used are given in table 1.

Table 1: Physical Properties of Cement

S.No	Properties	Result
1	Fineness of cement	2%
2	Normal Consistency	31.28%
3	Initial setting time of cement	37 minutes
4	Final setting time of cement	590 minutes
5	Specific gravity	3.15

### 2.2 Coarse aggregate

Locally available 16mm size well graded coarse aggregate were selected for present work. The various properties of coarse aggregate were determined and tabulated in Table 2.

Table 2: Properties coarse aggregate

S.No	Properties	Result
1	Fineness Modulus	3.46
2	Specific Gravity	2.695
3	Bulk Density	1450 kg/m <sup>3</sup>
4	Moisture Content	0.25%
5	Water Absorption	0.4%

### 2.3 Fine Aggregate

Fine aggregate used was river sand passing through IS sieves



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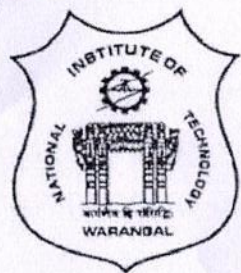
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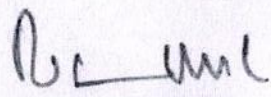
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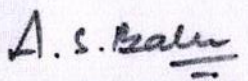


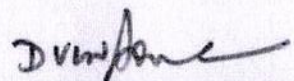
## Certificate


This is to certify that Prof. / <sup>✓</sup>Dr. / ~~Mr.~~ / ~~Mrs.~~ A PADMAJA of SRKIT, VIJAYAWADA participated in Faculty Development Programme (FDP) on "**Outcome Based Education**" jointly organised by Electronics & ICT Academy, NIT, Warangal & Dhanekula Institute of Engineering & Technology, Vijayawada, during 06-06-2016 to 11-06-2016. He/ She is awarded A grade in the test conducted.

  
Dr. B. Srinivasa Rao  
Professor & HOD, CSE  
DIET, Vijayawada

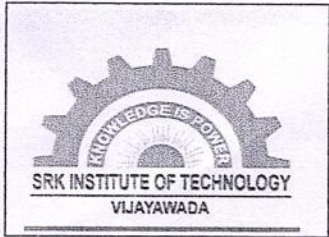
  
Dr. Ravi Kadiyala  
Principal  
DIET, Vijayawada

  
Dr. A. Sarath Babu  
Co-ordinator  
NIT, Warangal

  
Prof. DVLN Somayajulu  
Chair, E&ICT Academy  
NIT, Warangal

  
Prof. T. Srinivasa Rao  
Director  
NIT, Warangal

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADI, VIJAYAWADA-521 108.



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Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
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**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. Dr. Prashanthi
2. Designation : Assistant Professor
3. Department : S&H
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Multivariate Analysis Through R-Software
5. Date & Duration of the Program : 12-13 Nov 2016, twodays
6. Associating Professional Body / Agency : Guilavalluru engineering college
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 5-11-2016 Signature of the Staff Member [Signature]

1. Recommendations of the HOD : Approved & Admap  
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

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ENIKEPADU, VIJAYAWADA-521 108.

Account Department  
Accountant: [Signature]  
Date: 8/11/2016

No.

**VOUCHER**

Date 8/11/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.

Paid to..... V. Prasad (S&H) Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred rupees only.

Towards..... Workshop.

Prepared by

Approved by

Audited by

₹ 300/-

*BM*

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# GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)

Seshadri Rao Knowledge Village,

GUDLAVALLERU 521 356, ANDHRA PRADESH



## A TWO DAY WORKSHOP

ON

**"Multivariate analysis through R-Software"**

**CERTIFICATE**

This is to certify that Mr./Ms. V. Prasanthi of

Department has attended Two day Workshop

on **"Multivariate analysis through R-Software"**

Organized by Gudlavalleru Engineering College from 12th to 13th November, 2016  
BS & H Department

*R. Suresha*  
Co-Convenor

*[Signature]*  
Convenor

*[Signature]*  
PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 102

*[Signature]*  
Principal



VOUCHER

Date 10/10/16

SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programe.

Paid to..... D. Anand (S & H) Cash/Cheque..... 1500/-

the Sum of Rupees..... One thousand five hundred rupees

Towards..... Paper Publication.

Prepared by

Approved by

Audited by

₹ 1500/-

12m-

*[Signature]*  
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**Distinctive Voices of Women: A Feminist Study of  
Amitav Ghosh's *The Glass Palace***

**Mr. Anand Dampella**  
Asst. Professor of English  
SRK Institute of Technology  
Vijayawada

**Ms. Prescilla Palaparthi**  
Asst. Professor of English  
SRK Institute of Technology  
Vijayawada

Post-colonial feminist critics have raised a number of conceptual, methodological and political problems involved in the study of representations of gender. These problems are at once specific to feminist concerns, such as the possibility of finding an international, multicultural sisterhood between 'First World' and 'Third World' women as well as the other problems.

Feminism might be categorised into three groups: theories having an essentialist focus, which includes psychoanalytic and French feminism; theories aimed at defining or establishing a feminist literary canon or theories seeking to re-interpret and re-vision literature from less patriarchal slant which includes gyno-criticism and liberal feminism; and theories focusing on sexual differences and sexual politics including gender studies, radical feminism, cultural feminism, lesbian studies and socialist or materialist feminism.

But on a whole feminism is divided into 'First World' feminism, 'Second World' feminism and the 'Third World' feminism. The 'First World' referred to the rich, predominantly western nations in Europe, America and Australia. The 'Second World' denoted the Soviet Union and its





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### Financial Support Request Letter

1. Name of the Staff Member : Dr./Mr./Ms. P. Prescilla
2. Designation : Assistant Professor
3. Department : SEET
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Global English - oriented Research Journal
5. Date & Duration of the Program : Dec 2016
6. Associating Professional Body / Agency : GEORJ
7. Financial support particulars :
  - i. Registration Charges : 1500/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 8-11-2016

Signature of the Staff Member

1. Recommendations of the HOD : Approved Sadman
2. Recommendations of the Principal : T. Lakshmy \*Sanctioned / Not Sanctioned

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Accountant: [Signature]

Date: 10/11/2016

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Date. 16/11/16

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the Sum of Rupees. One thousand five hundred rupees.

Towards. Paper Publication.

Prepared by

₹ 1500

Approved by

*[Signature]*

Audited by

*[Signature]*

Receiver Signature

*[Signature]*



**Distinctive Voices of Women: A Feminist Study of  
Amitav Ghosh's *The Glass Palace***

**Mr. Anand Dampella**

Asst. Professor of English  
SRK Institute of Technology  
Vijayawada

**Ms. Prescilla Palaparthi**

Asst. Professor of English  
SRK Institute of Technology  
Vijayawada

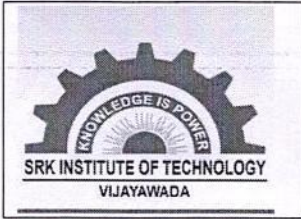
Post-colonial feminist critics have raised a number of conceptual, methodological and political problems involved in the study of representations of gender. These problems are at once specific to feminist concerns, such as the possibility of finding an international, multicultural sisterhood between 'First World' and 'Third World' women as well as the other problems.

Feminism might be categorised into three groups: theories having an essentialist focus, which includes psychoanalytic and French feminism; theories aimed at defining or establishing a feminist literary canon or theories seeking to re-interpret and re-vision literature from less patriarchal slant which includes gynocriticism and liberal feminism; and theories focusing on sexual differences and sexual politics including gender studies, radical feminism, cultural feminism, lesbian studies and socialist or materialist feminism.

But on a whole feminism is divided into 'First World' feminism, 'Second World' feminism and the 'Third World' feminism. The 'First World' referred to the rich, predominantly western nations in Europe, America and Australia. The 'Second World' denoted the Soviet Union and its



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**Financial Support Request Letter**

- 1. Name of the Staff Member : Dr./Mr./Ms. N. Sridevi
- 2. Designation : Asst. prof
- 3. Department : S & H
- 4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Studies on Selected Heavy Metal pollution on Fresh Water Fishes From Krishna River Near Ibrahimpatnam (MD) Krishna(DT), AP.
- 5. Date & Duration of the Program : December, 2016.
- 6. Associating Professional Body / Agency : Life sciences International Research Journal.
- 7. Financial support particulars :
  - i. Registration Charges : 2,000/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 16-12-2016. Signature of the Staff Member N. Sridevi.

1. Recommendations of the HOD: [Signature]  
2. Recommendations of the Principal: [Signature] \*Sanctioned / Not Sanctioned

Account Department  
Accountant: [Signature]  
Date: 14-12-2016

No.

**VOUCHER**

Date...14/12/2016

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Name of A/c. Faculty development program

Paid to. Dr. N. Sridevi Cash/Cheque 2000/-

the Sum of Rupees. Two thousand Rupees only

Towards. Paper Publication

Prepared by

Approved by

Audited by

₹ 2000/-

13m

N. Sridevi  
Receiver Signature

## STUDIES ON SELECTED HEAVY METAL POLLUTION ON FRESH WATER FISHES FROM KRISHNA RIVER NEAR IBRAHIMPATNAM (MD) KRISHNA (DT), ANDHRA PRADESH

SRILAKSHMI CHENNUPATI, SRIDEVI NEELAM

**Abstract:** In the present day we estimated the selected heavy metal pollution in Krishna river near Ibrahimpatnam mandal, Krishna District, India and their acute toxicity and further analysed its toxicological effects on commonly consumed fresh water fishes at Ibrahimpatnam region. Two species (*Labeorohita* and *cyprinus carpio*) were selected and collected from local market for the study. Fresh water samples were collected from 3-5 places and analysed for their essential and heavy metal by using Atomic Absorption Spectrophotometer. The fish meat samples are also investigated spectrophotometrically for their glycogen, total lipid, and protein content. Moderate to high concentrations of heavy metals were found in meat collected from fresh water fishes.

**Keywords:** Heavy metals, glycogen, pollutants, toxicity.

**Introduction:** Along with all the environmental pollutions, pollution of water resources is a matter of great distress. Poor and developing countries are at high risk due to lack of waste water treatment technologies. Increasing contamination of aquatic sources with large number of pollutants is not only endangering the aquatic biota but creating a worldwide shortage of recreational waters (Raiet *al.*, 1998). The water of aquatic sources gets polluted by domestic activities, mining activities, municipal wastes, modern agricultural practices, marine dumping, radioactive wastes, oil spillage, underground storage leakages and industries. But the major culprits causing the pollution of water resources are different industrial units. Indiscriminate discharge of toxic chemicals through effluents from a wide range of industries into water bodies pollutes these resources and causes hazardous effects on flora and fauna (Singh and Singh, 2004; Gavrilescu, 2004; Akar and Tunali, 2005). Heavy metals to a small extent they enter our bodies via food, drinking water and air. As trace elements, some of these heavy metals (e.g. copper, selenium, zinc) are essential to maintain the metabolism of the human body. However, at higher concentrations they can lead to ill effects. Heavy metal poisoning could result from drinking-water contamination, high ambient air concentrations near emission sources, or intake via the food chain. Heavy metals are dangerous because these tend to bioaccumulate. Compounds accumulate in living systems when these are taken up and are stored faster than these are broken down (metabolized) or excreted.

### Materials and Methods:

**Samples collection:** Two species of fresh water fishes, *Cyprinus carpio* and *Labeorohita* from Krishna River at Ibrahimpatnam mandal near ferry, Krishna (Dt), Vijayawada, India. Were collected and selected for monitoring the effect of water born metal pollution. Water sample from above site were also collected for determination of heavy metal pollution in present aquatic resources. Collection of water was made during fishing by fisher man in the depth of 3 to 5 feet in aquatic resources. Five sample of each fish were analyzed for essential and non-essential metal and their biochemical profile were estimated for nutritional quality.

Equal weight of two fishes tissues muscles was taken were washed with double distilled water and put in sterilized Petri dishes to dry at 120°C in oven until they reached a constant weight. One gram of each dried tissue muscles were then digested with diacid ( $\text{HNO}_3$  and  $\text{HClO}_4$  in 2:1 ratio) on a hot plate set at 130°C until all materials were dissolved. Digested samples were diluted with double distilled water appropriately in the range of the standards, which were prepared from the stock standard solutions of the metals (Merck). The metal concentration in the samples was measured using an Absorption Atomic Spectrophotometer (AAS). Water sample were digested in the same manner for the detection of pollutant toxic metals. Macronutrient elements were determined in fish meat samples by Spectrophotometry in laboratory and reported in g/kg and results of micronutrients were given in .Glycogen (Joseph and Robert, 1966) Total lipids and Protein were estimate using standard Biochemical method Lowry *et al.*, (1951).





34 16-17

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1. Name of the Staff Member : Dr./Mr./Ms. Yellamanda Vusa
2. Designation : Assistant professor
3. Department : SEET
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : National Conference On Communication Skills for professional Excellence.
5. Date & Duration of the Program : 24<sup>th</sup> March 2017.
6. Associating Professional Body / Agency : P.V.P Siddhartha Institute of technology.
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 10-3-2017

Yellamanda Vusa  
Signature of the Staff Member

1. Recommendations of the HOD : [Signature]
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

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Account Department

Accountant: [Signature]

Date: 14/3/2017

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Date.. 14/3/2017

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ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development Programme

Paid to..... Yellamanda Vuse (SLT) Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred rupees -

Towards..... Workshop -

Prepared by

Approved by

Audited by

₹ 300

13m -

Yellamanda  
Receiver Signature



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Accredited by NBA & NAAC, ISO 9001 - 2008 Certified Institute

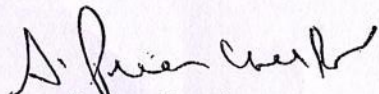
Kanuru, Vijayawada -520007

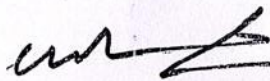
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## FACULTY OF ENGLISH


### Certificate

This is to certify that Mr / ~~Miss~~ Vusa. Yellamanda  
of S.R.K institute of technology has presented a paper entitled Secured  
Telugu Transliteration as a cause of wrong pronounciation of English words  
at the National Conference on Communication Skills for Professional  
Excellence on 24th March, 2017.

  
Coordinator

  
Dr. Ch. Padmanabha Raju  
Convenor

  
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**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. D. Anand
2. Designation : Assistant professor
3. Department : S and H
4. ~~Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours~~ <sup>With details:</sup> Learning English language classrooms  
*centered*
5. Date & Duration of the Program : 24-25 March 2017
6. Associating Professional Body / Agency : University College of Engineering JNTU Narasaraopet.
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 18-3-2017

[Signature]  
Signature of the Staff Member

1. Recommendations of the HOD : [Signature]
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

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ENIKEPADU, VIJAYAWADA-521 108.

Account Department  
Accountant: [Signature]  
Date: 20/3/2017

No.

**VOUCHER**

Date 20/3/2017

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ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c Faculty Development Programme

Paid to D. Anand (SRH)  Cash/Cheque 300

the Sum of Rupees Three hundred rupees only

Towards Workshop

Prepared by

Approved by

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₹ 300 / -

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# UNIVERSITY COLLEGE OF ENGINEERING JNTUK NARASARAOPET JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

*Two-day National Workshop on*

*“LEARNING - CENTERED ENGLISH LANGUAGE CLASS ROOMS”*

24<sup>th</sup> - 25<sup>th</sup> March, 2017

## Certificate of Participation

*This is to certify that Dr/Sri/Smt.....Anand Dampella.....  
of SRK Institute of Technology, Vijayawada....., has participated in the Two-day  
National Workshop on “LEARNING - CENTERED ENGLISH LANGUAGE CLASS ROOMS” organised by  
the Department of Mathematics & Basic Sciences and Department of English & Humanities, UCEN JNTUK  
NARASARAOPET during 24<sup>th</sup> - 25<sup>th</sup> March, 2017.*

Dr. K. Sobhan Babu  
Chair Person

  
PRINCIPAL

Dr. KVSG Murali Krishna  
Principal



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**Financial Support Request Letter**

- 1. Name of the Staff Member : Dr./Mr./Ms. A. Anand.
- 2. Designation : Assistant Professors
- 3. Department : S&H.
- 4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Propell Workshop for the TOEFL iBT Test.
- 5. Date & Duration of the Program : 14<sup>th</sup> May 2017 - 8 workshops.
- 6. Associating Professional Body / Agency : ETS
- 7. Financial support particulars :
  - i. Registration Charges : - 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 15-05-2017

Anand  
Signature of the Staff Member

- 1. Recommendations of the HOD : [Signature]
- 2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

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Account Department  
Accountant: [Signature]  
Date: 16/5/2017

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**VOUCHER**

Date.. 16/5/17

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ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.

Paid to.. Anand D. (S.H.) Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred rupees only.

Towards..... Work shop

Prepared by

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Audited by

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18/5/17

Receiver Signature



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D. Anand

has successfully completed the

**Propell® Workshop for the *TOEFL iBT*® Test**

***Listening, Reading, Speaking and Writing***

on

14<sup>th</sup> May 2017

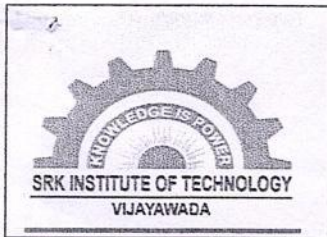
**8 workshop Hours**

David G. Payne

David G. Payne  
Vice President and Chief Operating Officer  
Global Division, ETS

  
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ENIKEPADU, VIJAYAWADA-521 108

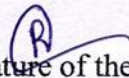




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**Financial Support Request Letter**


- 1. Name of the Staff Member : Dr./Mr./Ms. CA. Rajendra Babu
- 2. Designation : Assistant professor
- 3. Department : IT
- 4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : ICPCIA, International Journal of Digital Content Technology and its Applications.
- 5. Date & Duration of the Program :
- 6. Associating Professional Body / Agency :
- 7. Financial support particulars :
  - i. Registration Charges : 1500/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 10/10/16

Signature  of the Staff Member

- 1. Recommendations of the HOD : 
- 2. Recommendations of the Principal :  \*Sanctioned / Not Sanctioned

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Account Department  
Accountant:   
Date: 11/10/16

No.

**VOUCHER**

Date... 20/07/2016

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program

Paid to..... ch. Rajendrababu Cash/Cheque..... cash

the Sum of Rupees..... one thousand five hundred only

Towards..... Paper publication

Prepared by

Approved by

Audited by

₹ 1500/-

Receiver Signature

16-17  
15-16

## Age Group Classification of Facial Images Using Rank Based Edge Texture Unit (RETU)

Ch Rajendra Babu, E. Sreenivasa Reddy and B. Prabhakara Rao

**Abstract** Human beings can easily categorize a person's age group from a facial image where as this ability has not been promising in the computer vision community. To address this problem very important area of research, the present paper proposes a novel scheme of age classification system using features derived from co-occurrence parameters using Rank based Edge Texture Unit (RETU). The Co-occurrence Matrix (CM) on RETU characterizes the relationship between the neighboring edge values, while preserving local information. The novelty of the proposed RETU is it classifies the age of human into seven categories i.e. in the age groups of 1-10, 11-20, 21-30, 31-40, 41-50, 51-60, and greater than 60. The TU of the proposed RETU ranges from 0 to 17 and thus reduces overall complexity in evaluating features from CM. The co-occurrence features extracted from the RETU provide complete facial image information for age classification purpose. The RETU reduces each  $3 \times 3$  sub image into  $2 \times 2$  sub image while preserving the texture features and thus reduces the overall dimensionality of the image.

**Keywords** RETU · Age classification · Co-occurrence features · Texture features

---


C.R. Babu (✉)  
SRK Institute of Technology, Vijayawada, Andhra Pradesh, India  
e-mail: chikkalarajendra@gmail.com

E. Sreenivasa Reddy  
ANU College of Engineering and Technology, Guntur, Andhra Pradesh, India  
e-mail: esreddy67@gmail.com

B. Prabhakara Rao  
JNTUK, Kakinada, Andhra Pradesh, India  
e-mail: drbpr@rediffmail.com

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483

  
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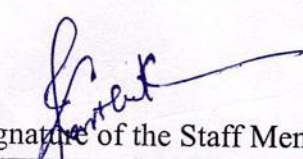
\* 2016-17  
voucher  
number

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(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. M. Karthik Kumar
2. Designation : Assistant Professor
3. Department : Civil Engineering
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Neeru - Pragathi  
and Irrigation vision document.
5. Date & Duration of the Program : 18-02-2017, oneday
6. Associating Professional Body / Agency : WRD, OUT of AP
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 17/02/17

  
Signature of the Staff Member

1. Recommendations of the HOD : T. Lakshmi
2. Recommendations of the Principal : [Signature]

\*Sanctioned / Not Sanctioned

**PRINCIPAL**  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 17/02/17

No.

**VOUCHER**

Date... 13/2/17...

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program.....

Paid to..... M. Kasthik Kumar (Civil) Cash/Cheque..... 300/-.....

the Sum of Rupees..... Three hundred rupees only.....

Towards..... Work shop.....

Prepared by

Approved by

Audited by

₹ 300/-

*[Signature]*

*[Signature]*

*[Signature]*  
Receiver Signature



# GOVERNMENT OF ANDHRA PRADESH WATER RESOURCES DEPARTMENT



## *Certificate of Participation*

Date : 18-02-2017

*This is to certify that Mr / Miss. M. Laxthik Kumar.....  
.....of S.R.K.D.T. college in Krishna District has  
participated in workshop on NEERU PRAGATHI and IRRIGATION VISION  
DOCUMENT conducted by Water Resources Department, Government of  
Andhra Pradesh.*

District Water Resources Officer,  
Chief Engineer,  
Krishna Delta System,  
Vijayawada.

Collector & District Magistrate  
Krishna District

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108



16-1 ✓

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. SK Gousia Gahseen
2. Designation : Assistant professor
3. Department : Civil
4. ~~Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours~~ With details : Neeru - pragathi and Irrigation Vision
5. Date & Duration of the Program : [18-02-2017] document
6. Associating Professional Body / Agency : GOVT of AP, WRD
7. Financial support particulars :
- i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 10/2/2017

SK. Teheeb  
Signature of the Staff Member

1. Recommendations of the HOD : T. Lakshy
2. Recommendations of the Principal : T. Lakshy \*Sanctioned / Not Sanctioned ✓

PRINCIPAL

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108

Account Department

Accountant: [Signature]

Date: 13/2/2017



No.

**VOUCHER**

Date... 13/2/17...

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program.....

Paid to... S.K. Gousia Rehaseen (Civil) Cash/Cheque..... 300/-.....

the Sum of Rupees..... Three hundred rupees only.....

Towards..... Work shop.....

Prepared by

Approved by

Audited by

₹ 300/-

S.K. Rehaseen  
Receiver Signature



# GOVERNMENT OF ANDHRA PRADESH WATER RESOURCES DEPARTMENT



## *Certificate of Participation*

Date : 18-02-2017

This is to certify that Mr / Miss *S.K. Gousia Tehaseen*.....  
.....of *S.R.K.I.T.*.....college in Krishna District has  
participated in workshop on NEERU PRAGATHI and IRRIGATION VISION  
DOCUMENT conducted by Water Resources Department, Government of  
Andhra Pradesh.

*[Signature]*  
District Water Resources Officer,  
Chief Engineer,  
Krishna Delta System,  
Vijayawada.

*[Signature]*  
Collector & District Magistrate  
Krishna District

*[Signature]*  
PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.



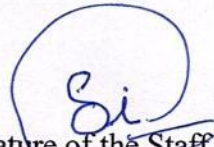
16/12

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. G. Sri Lakshmi
2. Designation : Assistant Professor
3. Department : Civil Engg
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Neeru Pragathi & Irrigation vision document
5. Date & Duration of the Program : 18-02-2017
6. Associating Professional Body / Agency : WRD, A.P
7. Financial support particulars :
  - i. Registration Charges :
  - ii. Travelling Allowances : 300/-
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 10/2/2017

  
Signature of the Staff Member

1. Recommendations of the HOD : T. Lakshmi
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned

PRINCIPAL

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108

Account Department

Accountant: [Signature]

Date: 13/2/2017

No.

**VOUCHER**

Date <sup>16/12</sup> 13/2/17

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development program

Paid to G. Sri lakshmi (civil) Cash/Cheque..... 800

the Sum of Rupees..... Three hundred rupees only -

Towards..... work shop

Prepared by

Approved by

Audited by

₹ 800/-

*[Signature]*

*[Signature]*  
Receiver Signature



# GOVERNMENT OF ANDHRA PRADESH WATER RESOURCES DEPARTMENT



## *Certificate of Participation*

Date : 18-02-2017

*This is to certify that Mr / Miss.....P. Sri Lakshmi.....  
.....of .....S.R.K.I.T......college in Krishna District has  
participated in workshop on NEERU PRAGATHI and IRRIGATION VISION  
DOCUMENT conducted by Water Resources Department, Government of  
Andhra Pradesh.*

*[Signature]*  
District Water Resources Officer,  
Chief Engineer,  
Krishna Delta System,  
Vijayawada.

*[Signature]*  
Collector & District Magistrate  
Krishna District

*[Signature]*  
PRINCIPAL

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA 521 108



16-12 ✓

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. T. Siva Rama Krishna
2. Designation : Asst. Professor
3. Department : CIVIL
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : -----  
WRTAP
5. Date & Duration of the Program : 18-02-2017
6. Associating Professional Body / Agency : WRD AP
7. Financial support particulars :
  - i. Registration Charges :
  - ii. Travelling Allowances : 300/-
  - iii. Membership Fee :
  - iv. Others (if any) :

Date:

T. Siva Rama Krishna  
Signature of the Staff Member

1. Recommendations of the HOD : T. Lakshmi
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 13/2/2017

No.

**VOUCHER**

Date... 13/2/17...

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development program.....

Paid to... T. Siva Rama Krishna (Civil) Cash/Cheque..... 300/-.....

the Sum of Rupees..... Three hundred rupees Only.....

Towards..... Work shop.....

Prepared by

₹ 300/-

Approved by

TKK

TKK

Audited by

TKK

Receiver Signature



GOVERNMENT OF ANDHRA PRADESH  
WATER RESOURCES DEPARTMENT



*Certificate of Participation*

Date : 18-02-2017

This is to certify that Mr / Miss *T. Siva Rama Krishna*.....  
*Asst. Professor*.....of *SRK IT*.....college in Krishna District has  
participated in workshop on NEERU PRAGATHI and IRRIGATION VISION  
DOCUMENT conducted by Water Resources Department, Government of  
Andhra Pradesh.

District Water Resources Officer,  
Chief Engineer,  
Krishna Delta System,  
Vijayawada.

*[Signature]*  
Collector & District Magistrate  
Krishna District

*[Signature]*  
PRINCIPAL  
SRK Institute of Technology  
ENIKEPADO, VIJAYAWADA-521 108





2016-17 ✓

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./MS. Dr. T. Satyanarayana.
2. Designation : Professor
3. Department : Civil Engineering.
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Neeru-pragathi and Irrigation Vision Document.
5. Date & Duration of the Program : 18-02-2017 [1 day]
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 17/02/2017

T. Lakshay  
Signature of the Staff Member

1. Recommendations of the HOD : T. Lakshay
2. Recommendations of the Principal : T. Lakshay \*Sanctioned / Not Sanctioned

**PRINCIPAL**

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 17/02/2017

No.

**VOUCHER**

Date 13/2/17

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development program

Paid to..... Dr. T. Satyanarayana (civil) Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred rupees only

Towards..... Work Shop

Prepared by

Approved by

Audited by

₹ 300/-

13/2/17

[Signature]

T. Lakshmi  
Receiver Signature



**GOVERNMENT OF ANDHRA PRADESH**  
**WATER RESOURCES DEPARTMENT**



*Certificate of Participation*

Date : 18-02-2017

*This is to certify that Mr / Miss.....Dr.T. Satyanarayana....  
.....of .....S.P.K.I.T.....college in Krishna District has  
participated in workshop on NEERU PRAGATHI and IRRIGATION VISION  
DOCUMENT conducted by Water Resources Department, Government of  
Andhra Pradesh.*

District Water Resources Officer,  
Chief Engineer,  
Krishna Delta System,  
Vijayawada.

Collector & District Magistrate  
Krishna District

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108



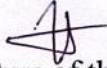
37-18-12

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. S. Usha Sree
2. Designation : Assistant Professor
3. Department : C&PI
4. ~~Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours~~ - With details : \_\_\_\_\_  
Three day Faculty Development program on Remote
5. Date & Duration of the Program : 3 days [8-06-2016 to 10-6-2016] sewing and CDS
6. Associating Professional Body / Agency : AZIET
7. Financial support particulars :
- i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

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

  
Signature of the Staff Member

1. Recommendations of the HOD : I. Lakshmi
2. Recommendations of the Principal : I. Lakshmi \*Sanctioned / Not Sanctioned
- PRINCIPAL

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 10/3/2017

No.

VOUCHER

Date 10/3/18

# SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme

Paid to E. Usha Sree (Civil)..... Cash/Cheque..... 200/-

the Sum of Rupees..... Two hundred rupees only.

Towards..... F. D. P.

Prepared by

Approved by

*[Signature]*

Audited by

₹ 200/-

*[Signature]*

*[Signature]*  
Receiver Signature



# ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, AFFILIATED TO JNTUK)

Polytechnic Post Office Road, Beside Kaladarshini, Krishna (Dist.), VIJAYAWADA-08

## Certificate

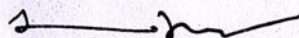
This is to certify that E. USHA SREE


from SRKIT

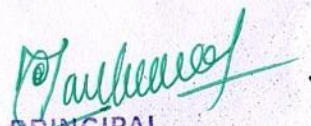
has participated/organised the **THREE DAY FACULTY DEVELOPMENT PROGRAMME**

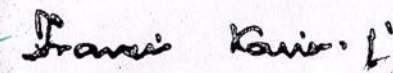
on "REMOTE SENSING & G.I.S" Organised by the Department Of Civil Engineering

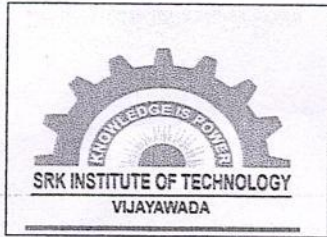
from 8th to 10th June 2016.

  
HOD

  
Principal

  
PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

  
Francis Xavier P.  
Director



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

- 1. Name of the Staff Member : Dr. Mr./Ms. N. Karanthi Rekha
- 2. Designation : Asst. Professor
- 3. Department : Civil Engg.
- 4. Conference / Publication / Membership Fee / Workshop /  FDP / Seminar / Training / Industrial Visit / Tours With details : \_\_\_\_\_  
Three day faculty development Program on Remote Sensing & GIS
- 5. Date & Duration of the Program : 8<sup>th</sup> to 10<sup>th</sup> June 2016
- 6. Associating Professional Body / Agency : - AICTE
- 7. Financial support particulars :
  - i. Registration Charges :
  - ii. Travelling Allowances : 200/-
  - iii. Membership Fee :
  - iv. Others (if any) :

*NIR*

Date: 06/03/17

Signature of the Staff Member

- 1. Recommendations of the HOD : J. Lakshay
- 2. Recommendations of the Principal : J. Lakshay  
PRINCIPAL

\*Sanctioned / Not Sanctioned

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 07/03/2017

No.

VOUCHER 98

16-12  
Date 07/03/12

# SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.....

Paid to..... N. Karanthi Redha (Civil) Cash/Cheque..... 200/-

the Sum of Rupees..... Two hundred rupees only.....

Towards..... R. P. P.....

Prepared by

Approved by

Audited by

₹ 200/-

13/3/12

Receiver Signature





# ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY


(Approved by AICTE, AFFILIATED TO JNTUK)

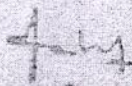
Polytechnic Post Office Road, Beside Kaladarshini, Krishna (Dist.), VIJAYAWADA-08


## Certificate

This is to certify that N. KRANTHI REKHA  
from SRKIT

has participated/organised the **THREE DAY FACULTY DEVELOPMENT PROGRAMME**  
on "REMOTE SENSING & G.I.S" Organised by the Department Of Civil Engineering  
from 8th to 10th June 2016.

  
HOD

  
Principal

  
Director



PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.



# SRK INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108

Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

## Financial Support Request Letter

1. Name of the Staff Member : Dr./Mr./Ms. T. satyanarayana
2. Designation : Professor
3. Department : Civil engg.
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : International Journal of Civil Engineering & Tech,
5. Date & Duration of the Program : NOV-DEC 2016, 2 months
6. Associating Professional Body / Agency : IJCIE T
7. Financial support particulars :
  - i. Registration Charges : 1500/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date:

T. Satyanarayana  
Signature of the Staff Member

1. Recommendations of the HOD : T. Satyanarayana
2. Recommendations of the Principal : T. Satyanarayana \*Sanctioned / Not Sanctioned

PRINCIPAL

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

Account Department

Accountant: [Signature]

Date: 20/12/2016

No.

**VOUCHER**

Date <sup>16-1</sup> 20/12/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.

Paid to Dr. P. Sathyanarayana (Civil) Cash/Cheque..... 1500/-

the Sum of Rupees..... One thousand five hundred rupees only.

Towards..... Paper presentation

Prepared by

Approved by

  
Audited by

₹ 1500/-

13m

T. Lakshmi  
Receiver Signature

# ASSESSMENT OF GROUNDWATER POLLUTION ALONG THIPPAGUNTA DRAIN IN PRASADAMPADU, VIJAYAWADA RURAL, KRISHNA DISTRICT, ANDHRA PRADESH

**M. Sujatha**

Assistant Professor, K.L University, Andhra Pradesh, India

**N. Rama Rao**

Assistant Professor, SRK Institute of Technology, Andhra Pradesh, India

**T. Satyanarayana**

Professor, SRK Institute of Technology, Andhra Pradesh, India

**SS. Asadi**

Associate Dean of Academic, K.L University, Andhra Pradesh, India

**K. Siva Kishore Babu**

Assistant Professor, K.L University, Andhra Pradesh, India

## ABSTRACT

*Assessment of groundwater pollution along Thippagunta drain, the physical and chemical characteristics such as colour, turbidity, odour, pH, Electrical Conductivity, Total dissolved solids, Total Hardness, Calcium, Magnesium, Nitrate, Sulphate Chloride, Fluoride and Iron were studied. The main objective of the study is to know the quality of water for drinking and its impact on the public health of Prasadampadu. All the parameters of groundwater samples in the study area are within the permissible limits except at industrial Estate and Johnson Private Limited Industry, near Pantakaluva.*

**Key words:** groundwater, pollution, Total Hardness, Calcium, Magnesium, Nitrate,

**Cite this Article:** M. Sujatha, N. Rama Rao, T. Satyanarayana SS. Asadi and K. Siva Kishore Babu. Assessment of Groundwater Pollution along Thippagunta Drain in Prasadampadu, Vijayawada Rural, Krishna District, Andhra Pradesh. *International Journal of Civil Engineering and Technology*, 7(6), 2016, pp. 738-746.

<http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=7&IType=6>

## 1. INTRODUCTION

Water is essential for existence on the planet earth and is often referred as "Blue planet" It is recognized that water is the prime natural resource, a basic need and precious national asset. At present the quality of water is getting vastly deteriorated and polluted due to unscientific waste disposal, application of



# SRK INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108

Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

## Financial Support Request Letter

1. Name of the Staff Member : Dr./Mr./Ms. N. Rama Rao
2. Designation : Assistant professor
3. Department : civil
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : International Journal of civil engineering & Technology
5. Date & Duration of the Program : NOV-DEC-2016 2 MONTHS
6. Associating Professional Body / Agency : IJCET
7. Financial support particulars :
  - i. Registration Charges : 2000/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date:

N. Rama Rao  
Signature of the Staff Member

1. Recommendations of the HOD : T. Lakshmi
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned  
PRINCIPAL

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

Account Department

Accountant: [Signature]

Date: 20/12/2016

No.

VOUCHER

76

Date... 20/12/16...

# SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.

Paid to..... N. Rama Rao (Civil) Cash/Cheque..... 2000/-

the Sum of Rupees..... Two thousand Rupees only

Towards..... Paper Publication.

Prepared by

Approved by

Audited by

₹ 2000/-

13/11/16

N. Rama Rao  
Receiver Signature

# ASSESSMENT OF GROUNDWATER POLLUTION ALONG THIPPAGUNTA DRAIN IN PRASADAMPADU, VIJAYAWADA RURAL, KRISHNA DISTRICT, ANDHRA PRADESH

**M. Sujatha**

Assistant Professor, K.L University, Andhra Pradesh, India

**N. Rama Rao**

Assistant Professor, SRK Institute of Technology, Andhra Pradesh, India

**T. Satyanarayana**

Professor, SRK Institute of Technology, Andhra Pradesh, India

**SS. Asadi**

Associate Dean of Academic, K.L University, Andhra Pradesh, India

**K. Siva Kishore Babu**

Assistant Professor, K.L University, Andhra Pradesh, India

## ABSTRACT

*Assessment of groundwater pollution along Thippagunta drain, the physical and chemical characteristics such as colour, turbidity, odour, pH, Electrical Conductivity, Total dissolved solids, Total Hardness, Calcium, Magnesium, Nitrate, Sulphate Chloride, Fluoride and Iron were studied. The main objective of the study is to know the quality of water for drinking and its impact on the public health of Prasadampadu. All the parameters of groundwater samples in the study area are within the permissible limits except at industrial Estate and Johnson Private Limited Industry, near Pantakaluva.*

**Key words:** groundwater, pollution, Total Hardness, Calcium, Magnesium, Nitrate,

**Cite this Article:** M. Sujatha, N. Rama Rao, T. Satyanarayana SS. Asadi and K. Siva Kishore Babu. Assessment of Groundwater Pollution along Thippagunta Drain in Prasadampadu, Vijayawada Rural, Krishna District, Andhra Pradesh. *International Journal of Civil Engineering and Technology*, 7(6), 2016, pp. 738-746.

<http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=7&IType=6>

## 1. INTRODUCTION

Water is essential for existence on the planet earth and is often referred as "Blue planet" It is recognized that water is the prime natural resource, a basic need and precious national asset. At present the quality of water is getting vastly deteriorated and polluted due to unscientific waste disposal, application of




85-16-17-231

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. ch. mallika chowdary
2. Designation : Assistant professor
3. Department : CPEP
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : International Journal of civil Engineering and Technology (IJCIET)
5. Date & Duration of the Program : 4-07-2016
6. Associating Professional Body / Agency : IJCIET
7. Financial support particulars :
  - i. Registration Charges : 1500/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 11/2/2017

  
Signature of the Staff Member

1. Recommendations of the HOD : T. Lakshmi
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned

PRINCIPAL

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108

Account Department

Accountant: [Signature]

Date: 13/2/2017



16-12

No.

**VOUCHER**

05

Date... 13/2/12

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programs

Paid to..... Ch. Mallika Chowdary (Civil) Cash/Cheque..... 1500/-

the Sum of Rupees..... One thousand five hundred rupees only.

Towards..... Paper presentation

Prepared by

Approved by

Audited by

₹ 1500/-

BM

Signature

Receiver Signature

## INFLUENCE OF THERMAL DUST AS AN ADMIX IN CONCRETE MIX

**Ch. Mallika Chowdary**

Assistant Professor, Civil Engineering Department,  
Siva Rama Krishna Institute of Technology (SRKIT)  
Enekepadu-Vijayawada, India

**I. Siva Kishore**

Assistant Professor, Civil Engineering Department,  
KL University (KLU)  
Vaddeswaram-Guntur, India

### ABSTRACT

*The Iron industries produce a huge quantity of slag and dust as by-product, which is a non-biodegradable waste material from that only a small percentage of it is used by cement industries to manufacture cement. In the present investigation thermal dust from local industries has been utilized to find its suitability which is used as an admixture in concrete making would lead to considerable environmental benefits. A comparison of bottom ash and boiler slag is been collected and among these both we have chosen bottom ash. The experimental study of bottom ash on normal strength concrete grade for 2% and 4% replacement cube were also prepared respectively.*

**Key words:** Thermal Dust/Bottom ash, Compressive Strength, Environmental Benefits.

**Cite this Article:** Ch. Mallika Chowdary and I. Siva Kishore, Influence of Thermal Dust as an admix in Concrete Mix. *International Journal of Civil Engineering and Technology*, 7(4), 2016, pp.296–303.

<http://www.iaeme.com/IJCIET/issues.asp?JType=IJCIET&VType=7&IType=4>

### 1. INTRODUCTION

Leaving the waste materials to nature specifically can bring about ecological issue. Henceforth the reuse of waste material has been stressed Bottom ash or thermal dust consists of heavier particles that fall to the bottom of the furnace. Bottom ash is also composed primarily of amorphous or glassy aluminosilicate materials derived from the melted mineral phases. Most bottom ash is produced in dry-bottom boilers, where the ash cools in a dry state, Boiler slag is a type of bottom ash collected in wet-bottom boilers (slag tap or cyclone furnaces, which operate at very high temperatures), where the molten particles are cooled in a water quench. Fly ash is composed mainly of



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Enikepadu, Vijayawada 521108  
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(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : ~~Dr./Mr./Ms.~~ A.V.P. Somuvari
2. Designation : Assistant Professor
3. Department : ECE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : -----  
Faculty Improvement Program on VLSI Design
5. Date & Duration of the Program : 15-11-2016 to 19-11-2016
6. Associating Professional Body / Agency : APSSDC
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 14-11-16

A.V.P.  
Signature of the Staff Member

1. Recommendations of the HOD : forwarded &
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned

**PRINCIPAL**  
**SRK Institute of Technology**  
**ENIKEPADU, VIJAYAWADA-521 108.**

Account Department

Accountant: lethe

Date: 16-11-2016

16-12

No.

**VOUCHER**

Date...16-11-2016...

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development Program

Paid to..... A.P. Sarvan Cash/Cheque..... 200/-

the Sum of Rupees..... Two hundred rupees only

Towards..... FDP

Prepared by

Approved by

*[Signature]*

Audited by

₹ 200/-

*[Signature]*

*[Signature]*  
Receiver Signature



# APSSDC

(Andhra Pradesh State Skill Development Corporation)

Department of Skill Development,

Entrepreneurship & Innovation, Government of Andhra Pradesh



## Faculty Improvement Program (FIP)

on

## VLSI Design

### Certificate of Attendance

This is to certify that

**VENKATA PRASANNA SARAVARI A**

from

**SRK Institute of Technology**

participated in the VLSI Design from 15<sup>th</sup> to 19<sup>th</sup> Nov 2016



*Narasimha*  
LUCID VLSI

*[Signature]*  
PRINCIPAL

*Subbarao Ghanta*  
for APSSDC

Ln 18-17



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : ~~Dr./Mr./Ms.~~ P. Ratna Bhaskar
2. Designation : Assistant Professor
3. Department : ECE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Overview On Latest Telecom Technologies
5. Date & Duration of the Program : 04.08.2016 - 06.08.2016 3 days
6. Associating Professional Body / Agency : BSNL
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 1-8-16

Bhal  
Signature of the Staff Member

1. Recommendations of the HOD : forwarded
2. Recommendations of the Principal : I. Lakshay \*Sanctioned / Not Sanctioned

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 2-8-16

No.

**VOUCHER**

Date... 2-8-16 .....

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... FDP .....

Paid to..... P. Ratna Bhalke..... Cash/Cheque..... 300/- .....

the Sum of Rupees..... Three hundred Rupees only .....

Towards..... FDP .....

Prepared by

Approved by

Audited by

₹

300

Receiver Signature

72/SRKIT/P-2/16-17



**भारत संचार निगम लिमिटेड**  
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(भारत सरकार का उद्यम)  
(A Govt. of India Enterprise)  
कृष्णा एसएसए Krishna SSA

**Certificate**

This is to certify that Mr/Ms P.Ratna Bhaskar, Assistant Professor  
in Department of ECE in S.R.K. Institute of Technology, Enikepadu, Vijayawada  
has participated as Course Co-ordinator for smooth conduction of the workshop  
"Overview on Latest Telecom Technologies" conducted by BSNL Krishna SSA  
for three days from 04.08.2016 to 06.08.2016.

Date: 06.08.2016

PRINCIPAL

SPK Institute of Technology  
ENIKEPADU, VIJAYAWADA

O/o General Manager, BSNL, Vijayawada.



WT 16-17



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. A.V.P. Sarwari
2. Designation : Assistant Professor
3. Department : ECE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Smart Instrumentation system with Solar Power
5. Date & Duration of the Program : 2 days 30 & 31 December 2016
6. Associating Professional Body / Agency : LBRC
7. Financial support particulars :
  - i. Registration Charges : 300
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 27-12-16

A.V.P.  
Signature of the Staff Member

1. Recommendations of the HOD : Sanctioned
2. Recommendations of the Principal : J. Lakshmi \*Sanctioned / Not Sanctioned

**PRINCIPAL**  
**SRK Institute of Technology**  
**ENIKEPADU, VIJAYAWADA-521 108.**

Account Department

Accountant: [Signature]

Date: 8-12-2016

No.

**VOUCHER**

Date... 28-12-2018

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Workshop

Paid to..... A.V.P. Sarvani ..... Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred Rupees only

Towards..... Workshop

Prepared by

Approved by

Audited by

₹ 300/-

13M

Receiver Signature



Jointly Organised by Departments of EIE & ECE

Lakireddy Bali Reddy College of Engineering (Autonomous)

Approved by AICTE New Delhi, Affiliated to JNTU Kakinada  
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www.lbrce.ac.in

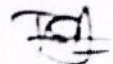
Two Day Workshop


SISSPASPT - 2K16

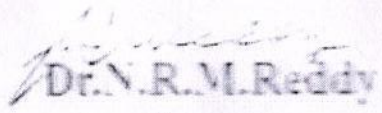
30<sup>th</sup> & 31<sup>st</sup> Dec. 2016

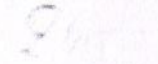
### Certificate

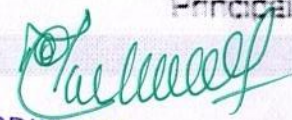
This Certificate is awarded to Mr/Ms/Dr Prof. A.V.P. Saravali  
of ..... has Participated in Two Day Workshop  
on " Smart Instrumentation System with Solar Tower and Advanced Signal Processing  
Techniques " held at Lakireddy Bali Reddy College of Engineering

  
Dr. T. Satyanarayana  
Convener

  
Mr. R. Anjaneyulu Naik  
Head of the Department

  
Dr. N.R.M. Reddy  
Principal

  
Dr. E.V. Prasad  
Director

  
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**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. T. Vishnu priya
2. Designation : Assistant Professor
3. Department : ECE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : \_\_\_\_\_  
Outcome Based Education
5. Date & Duration of the Program : 6-6-2016 to 11-6-2016
6. Associating Professional Body / Agency : Electronics & ICT Academy
7. Financial support particulars :
  - i. Registration Charges : 3001-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 4-6-16

T. Vishnu priya.  
Signature of the Staff Member

- 
1. Recommendations of the HOD : forwarded
  2. Recommendations of the Principal : T. Lakshmi
  3. Recommendations of the IQAC : ✓ \*Sanctioned / Not Sanctioned

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: HAO

Date: 4-6-2016

No.

**VOUCHER**

Date 04/06/2016

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.....

Paid to..... P. Vishnu Priya (ECE) Cash/Cheque..... 300/-

the Sum of Rupees..... Three hundred rupees only.....

Towards..... work shop.....

Prepared by

Approved by

Audited by

₹ 300/-

BM

~~BM~~  
P. Vishnu Priya  
Receiver Signature



# Electronics & ICT Academy

(Initiative of DeitY, MCIT, GOI)

National Institute of Technology, Warangal

and

Dhanekula Institute of Engineering & Technology

GANGURU, VIJAYAWADA



## Certificate


This is to certify that Prof. / Dr. / Mr. / Mrs. T VISHNU PRIYA of

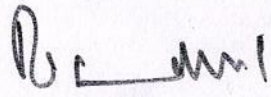
SRKIT, VIJAYAWADA participated in Faculty Development Programme (FDP)

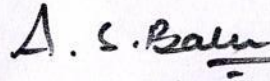
on "Outcome Based Education" jointly organised by Electronics & ICT Academy, NIT, Warangal

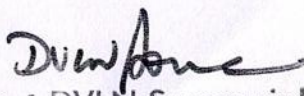
& Dhanekula Institute of Engineering & Technology, Vijayawada, during 06-06-2016 to 11-06-2016.

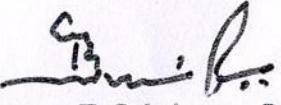
He/ She is awarded B+ grade in the test conducted.

  
Dr. B. Srinivasa Rao  
Professor & HOD, CSE  
DIET, Vijayawada

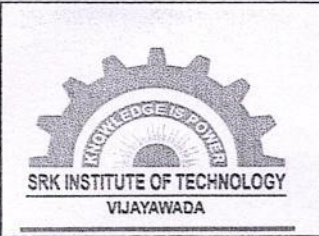
  
Dr. Ravi Kadiyala  
Principal  
DIET, Vijayawada

  
Dr. A. Sarath Babu  
Co-ordinator  
NIT, Warangal

  
Prof. DVLN Somayajulu  
Chair, E&ICT Academy  
NIT, Warangal

  
Prof. T. Srinivasa Rao  
Director  
NIT, Warangal

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Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
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**Financial Support Request Letter**

- 1. Name of the Staff Member : Dr./Mr./Ms. N. Mayuri
- 2. Designation : Assistant professor
- 3. Department : ECE
- 4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Faculty Improvement program on VLSI Design
- 5. Date & Duration of the Program : 15-11-2016 to 19-11-2016
- 6. Associating Professional Body / Agency : APBSDC
- 7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 14-11-16 Signature of the Staff Member [Signature]

1. Recommendations of the HOD : Forwarded  
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

**PRINCIPAL**  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department  
Accountant: [Signature]  
Date: 15-11-16

No.

VOUCHER

Date..... 18/11/20

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program

Paid to..... N. Mayuri (ECE) Cash/Cheque..... 200/-

the Sum of Rupees..... Two hundred rupees only.

Towards..... F.D.P.

Prepared by

Approved by

Audited by

₹ 200/-

Receiver Signature





# APSSDC

(Andhra Pradesh State Skill Development Corporation)  
Department of Skill Development,  
Entrepreneurship & Innovation, Government of Andhra Pradesh



## Faculty Improvement Program (FIP)

on

## VLSI Design

### Certificate of Attendance

This is to certify that

**N MAYURI**

from

**SRK Institute of Technology**

participated in the VLSI Design from 15<sup>th</sup> to 19<sup>th</sup> Nov 2016



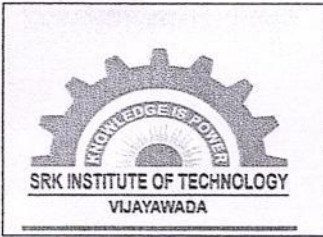
*Navasankar*

**LUCID VLSI**

*Subbarao*  
PRINCIPAL  
SRK Institute of Technology  
ENKEPADI, VILAYAWADA-521 108

*Subbarao yha*  
for APSSDC

44 16-17



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Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. Y. Apurupa
2. Designation : Assistant professor
3. Department : ECE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Faculty Improvement program VLSI Design
5. Date & Duration of the Program : 15-11-2016 to 19-11-2016
6. Associating Professional Body / Agency : APSSDC
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: ~~9-11-16~~ 14-11-16

Y. Apurupa  
Signature of the Staff Member

- 
1. Recommendations of the HOD : for recorded &
  2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned
- 

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 14-11-16

No.

**VOUCHER**

Date 16/11/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme

Paid to..... Y. Apurupa (ECE) Cash/Cheque..... 200/-

the Sum of Rupees..... Two hundred rupees only.

Towards..... F.D.P.

Prepared by

Approved by

*Initial*

Audited by

₹ 200/-

*Initial*

*Signature Y.*  
Receiver Signature



# APSSDC

(Andhra Pradesh State Skill Development Corporation)

Department of Skill Development,

Entrepreneurship & Innovation, Government of Andhra Pradesh



## Faculty Improvement Program (FIP)

on

## VLSI Design

### Certificate of Attendance

This is to certify that

**Y APURUPA**

from

**SRK Institute of Technology**

participated in the VLSI Design from 15<sup>th</sup> to 19<sup>th</sup> Nov 2016



*Narasimha*  
for LUCID VLSI

*[Signature]*  
PRINCIPAL

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

*Subbarao Eshank*  
for APSSDC



# SRK INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108

Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

## Financial Support Request Letter

- 48 16-17
- Name of the Staff Member : Dr./Mr./Ms. K. Venkateswarao
  - Designation : Assistant professor
  - Department : Ece
  - Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : faculty Improvement program VLSI Design
  - Date & Duration of the Program : 15-11-2016 to 19-11-2016
  - Associating Professional Body / Agency : APSSDC
  - Financial support particulars :
    - Registration Charges : 200/-
    - Travelling Allowances :
    - Membership Fee :
    - Others (if any) :

Date: 14-11-16

Signature of the Staff Member

1. Recommendations of the HOD : Sanctioned
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 14-11-16

No.

VOUCHER

Date 24/6/16

SRK INSTITUTE OF TECHNOLOGY

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c Faculty development program

Paid to M. Venkateshwara Rao (ECE) Cash/Cheque 200/-

the Sum of Rupees Two hundred rupees only.

Towards F.D.P.

Prepared by

Approved by

Audited by

₹ 200/-

13/11/16

Receiver Signature



# APSSDC

(Andhra Pradesh State Skill Development Corporation)  
Department of Skill Development,  
Entrepreneurship & Innovation, Government of Andhra Pradesh



## Faculty Improvement Program (FIP)

on

## VLSI Design

### Certificate of Attendance

This is to certify that

**VENKATESWARA RAO KANKATA**

from

**SRK Institute of Technology**

participated in the VLSI Design from 15<sup>th</sup> to 19<sup>th</sup> Nov 2016



*Narasimha Rao*  
**LUCID VLSI**

*[Signature]*

PRINCIPAL

**SRK Institute of Technology**  
ENIKEPADU, VIJAYAWADA-521 108.

*Subbarao Ghanta*

for APSSDC



16-17 50  
**SRK INSTITUTE OF TECHNOLOGY**

**Enikepadu, Vijayawada 521108**

**Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)**

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. NVK Maha Lakshmi
2. Designation : Assistant professor
3. Department : ECE
4. Conference / Publication / Membership Fee /  Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : \_\_\_\_\_  
Design & Analysis of RF Antennas
5. Date & Duration of the Program : 29-11-2016 to 1-12-2016
6. Associating Professional Body / Agency : LORCE
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 28-11-16

Mael  
Signature of the Staff Member

- 
1. Recommendations of the HOD : forwarded
  2. Recommendations of the Principal : I. Lakshmi \*Sanctioned / Not Sanctioned

PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.

Account Department

Accountant: [Signature]

Date: 29-11-16



No.

**VOUCHER**

Date. 29/11/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program

Paid to N.V.K. Maha lakshmi (ECE) Cash/Cheque..... 200/-

the Sum of Rupees..... Two hundred rupees only.

Towards..... F.D.P.

Prepared by

Approved by

Audited by

₹ 200/-

13m

Signature  
Receiver Signature



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)

APPROVED BY AICTE, NEW DELHI, AFFILIATED TO JNTU-K, ACCREDITED BY NAAC WITH 'A' GRADE, NBA ACCREDITED, ISO 9001:2008 CERTIFIED INSTITUTION  
MYLAVARAM-521230, KRISHNA DIST., A.P. INDIA, TEL: 08659-222933, 934, 223936 FAX: 08659-222931.

## Certificate of Participation

*This is to certify that Prof/Dy/Mr/Miss/Ms.....N.V.K. MAHA LAKSHMI.....from  
.....SRK Institute of Technology, Enikepadu.....has participated in a 3-day  
Faculty Development Programme on "DESIGN AND ANALYSIS OF RF  
ANTENNAS USING HFSS" Organised by Department of Electronics and  
Communication Engineering from 29<sup>th</sup> November to 1<sup>st</sup> December, 2016  
In association with IETE, Vijayawada.*

  
CONVENER

**Dr. M. Suman**  
Professor, Department of ECE

  
CHAIRMAN

**Prof. B. Ramesh Reddy**  
Head, Department of ECE

  
DIRECTOR

**Dr. E. V. Prasad**



16-17 51

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. Ch. Vijaya Sekhar Babu
2. Designation : Assistant Professor
3. Department : ECE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Design and Analysis of RF Antennas.
5. Date & Duration of the Program : 29-11-2016 to 1-12-2016
6. Associating Professional Body / Agency : LBPC
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 28-11-16

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# TWO-DIMENSIONAL EVOLUTIONAL SPECTRUM UNDER FADING CHANNEL

O. Monica Raj<sup>1</sup>, P.Subha Sri,<sup>2</sup>

<sup>1</sup>Student, (M.tech) Department of Electronics and Communication, S.R.K. Institute of Technology, Enikepadu, Vijayawada, A.P., India.

<sup>2</sup> Associate Professor, Department of Electronics and Communication, S.R.K. Institute of Technology, Enikepadu, Vijayawada, A.P., India.

**Abstract:** Broadband mobile communication systems experience fading over a wide frequency band. Most of the existing works on fading channel modelling assume wide-sense stationarity with respect to time and uncorrelated scattering w.r.t. delay. However, due to the time-varying movement of mobile terminals, fading is usually non-stationary w.r.t. time, i.e., the Doppler spectrum is non-stationary. To model non-stationary broadband mobile fading channels, in this project introduces a two-dimensional evolutionary spectrum (2D ES) approach, which is compatible with the power spectral density of a stationary process. Based on the 2D ES, an estimation method to estimate the 2D ES parameters from a trace of a fading process. In this project Nakagami-m fading channels are used which is non-stationary in both time and frequency domain. Developing SUI-3 2D ES based reference models further improves the non-stationary broadband channel modelling performance. This is a new research direction in the channel modelling.

**Key words:**-Two-dimensional evolutionary spectrum, non-stationary mobile fading channel, Nakagami-m fading, SUI channel model.

## I. INTRODUCTION

To meet the demand of mobile users on high data rates, broadband communication is needed. A broadband channel poses significant challenges to the design of mobile communication systems due to time dispersion (delay spread) and frequency dispersion (frequency spread)[1]. An accurate and concise broadband channel model which characterizes both time and frequency dispersions is useful for channel simulation, performance evaluation and further design of broadband communication systems, especially for high speed vehicular transmissions. Usually, conventional broadband mobile fading channels have been characterized by wide-sense stationary (WSS) and uncorrelated scattering (US) fading channel models. With WSS assumption, the Doppler effect caused by frequency dispersion can be described by the spectrum of channel gain process. To better characterize broadband mobile fading channels, it is of

great importance to develop accurate and concise non-stationary channel models [2],[3].

In this paper, we extend the ES theory to 2D stochastic process, developing a 2D ES-based broadband channel modelling approach. Due to the fact that the auto correlation function of a 2D stochastic process is related to four variables at least, a 2D ES is not a simple product form or trivial linear combination of 1D ES. Based on 2D ES representation of the broadband fading channel, we discuss the 2D ES estimation and channel simulation in detail. The main contributions of this work can be summarized as follows.

- A complete 2D ES theory is established and used to simulate non-stationary broadband fading channels.
- Combining with filter model for stationary channel modelling, we present a broadband mobile fading channel simulator based on the 2D ES theory.
- We show that the 2D ES holds a strong compatibility in the sense that the 2D ES density of a WSSUS channel can be degraded as the scattering function of the channel.
- The proposed 2D ES theory is applied to analyze a class of Nakagami-m fading channels.
- Further, to improve the performance of channel model SUI channel is considered and the proposed 2D ES theory are applied to SUI channel model.

## II. EVOLUTIONARY SPECTRUM FOR NON-STATIONARY BROADBAND FADING CHANNEL

First we introduce a 2D ES for non-stationary broadband mobile fading channels. Then we present how to estimate the 2D ES and evaluate the estimation error in detail.

### A) The 2D ES representation of broadband mobile fading channels

Let us denote the complex channel gain of a broadband mobile fading channel by  $h(t, \tau)$  where  $t$  and  $\tau$  represent the time and the delay, respectively. Usually,  $h(t, \tau)$  is







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# Inter Carrier Interference Cancellation in OFDM Systems under Different Channeling Environments

N.Mounika<sup>1</sup>, P.Ratna Bhaskar<sup>2</sup>

P.G. Student, Department of Electronics and Communication Engineering, SRKIT, Enikepadu, Vijayawada, India<sup>1</sup>

Assistant Professor, Department of Electronics and Communication Engineering, SRKIT, Enikepadu, Vijayawada, India<sup>2</sup>

**ABSTRACT:** Inter carrier Interference (ICI) is the most prevalent effect that is observed in orthogonal frequency division multiplexing (OFDM) systems. This may be due to the Doppler shift or phase noise. In this paper, a parallel cancellation algorithm is proposed in space frequency domain to mitigate the ICI. The performance of this approach is evaluated under different channeling environments. Experimental results show that the proposed space frequency parallel cancellation proves better in different SUI channeling environments when compared against the conventional parallel cancellation scheme.

**KEYWORDS:** Inter Carrier Interference, OFDM, Space Frequency Parallel Cancellation, SUI

## I. INTRODUCTION

Orthogonal frequency division multiplexing (OFDM) communication system has number of advantages over conventional communication techniques namely FDMA, TDMA and CDMA. Orthogonal frequency division multiplexing (OFDM) communication system has better spectral efficiency, high data rate, low inter carrier interference and moreover it is termed as future generation communication system because of its flexible and reliable high speed data rates, high spectral efficiency, high quality service and robustness against narrow band interference and frequency selective Fading.

In orthogonal frequency division multiplexing (OFDM) all subcarriers are orthogonal to each other which results in correlation between the subcarriers. Although orthogonal frequency division multiplexing (OFDM) supports wide range of advance applications with high data rate .In the MCM (multi carrier modulation), OFDM yields good results over Frequency division multiplexing (FDM). Generally OFDM is considered as optimal version of the MCM schemes and respective representations are as follows.

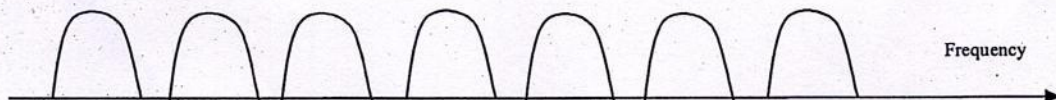


Fig. 1(a) Conventional FDM in MCM

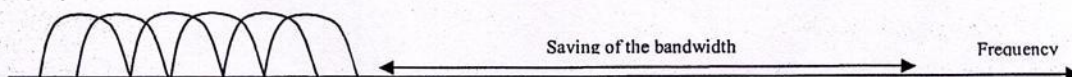


Fig. 1(b) OFDM Multicarrier modulation technique

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## SPY ROBOT CONTROLLING THROUGH ZIGBEE USING MATLAB

MD.SHABEENA BEGUM, P.KOTESWARA RAO

Assistant Professor, SRKIT, Enikepadu, Vijayawada

### ABSTRACT

*In today's world, in almost all sectors, most of the work is done by robots. In this paper, a spy robot can be developed by using natural gestures of the humans. The software part of the system uses gesture based image processing technique. This system uses a camera to capture the image of hand gesture. The captured image of the hand is processed to understand the gesture commands. Human machine interaction can be developed by converting the gesture commands into a signal. The hardware part is developed based on Arduino microcontroller. The Spybot is programmed to understand the gesture command signal and navigate according to hand gestures. In this way the user can control the robot by simple hand gestures. The camera placed on the robot capture the images of its surrounding, wherever it travels and send it back to the PC for monitoring. The gesture commands can be used for controlling the Spybot functions such as movement of the robot, or other operations of the robot silently. The system can be directly applied to defence grounds for detection of enemy, for spying purpose where the human reach is avoided or not recommended.*

**Key words:** Gesture controlled robot, gesture signal processing, spybot, Zigbee module, Arduino Uno microcontroller board.

### I. INTRODUCTION

Now a days, humans are working on developing the new techniques of interacting with the robot. The gesture is one of these techniques which is more flexible than other. Gestures used for communicating between humans and machines as well as between people using sign language. Gesture can be static which requires less computational complexity (or) dynamic which are more complex but suitable for real time environments. Different methods have been proposed for acquiring information necessary for gesture recognition system. Some methods used additional hardware devices such as data glove devices and color markers to easily extract comprehensive description of gesture features other methods based on the appearance of the hand using the skin color to segment the hand and extract necessary features, these methods considered easy, natural and less cost comparing with other methods.

Some recent reviews explained gesture recognition system applications and its growing importance in our life especially for human computer interaction(HCI).The proposed work does not require any special equipment like glove or other devices to be attached to the body to sense

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## SPY ROBOT CONTROLLING THROUGH ZIGBEE USING MATLAB

MD.SHABEENA BEGUM, P.KOTESWARA RAO

Assistant Professor, SRKIT, Enikepadu, Vijayawada

### ABSTRACT

*In today's world, in almost all sectors, most of the work is done by robots. In this paper, a spy robot can be developed by using natural gestures of the humans. The software part of the system uses gesture based image processing technique. This system uses a camera to capture the image of hand gesture. The captured image of the hand is processed to understand the gesture commands. Human machine interaction can be developed by converting the gesture commands into a signal. The hardware part is developed based on Arduino microcontroller. The Spybot is programmed to understand the gesture command signal and navigate according to hand gestures. In this way the user can control the robot by simple hand gestures. The camera placed on the robot capture the images of its surrounding, wherever it travels and send it back to the PC for monitoring. The gesture commands can be used for controlling the Spybot functions such as movement of the robot, or other operations of the robot silently. The system can be directly applied to defence grounds for detection of enemy, for spying purpose where the human reach is avoided or not recommended.*

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## Hybrid Technique for Template Based Face Detection and Gender Classification using Histogram of oriented gradient (HOG)

N.Naga Supriya<sup>1</sup>, N.V.K.Maha Lakshmi<sup>2</sup>

P.G. Student, Department of ECE, SRKIT, Enikepadu, Vijayawada, A.P, India<sup>1</sup>

Assistant Professor, Department of ECE, SRKIT, Enikepadu, Vijayawada, A.P, India<sup>2</sup>

**ABSTRACT:** Gender Classification is the hot research topic from last two decades but still a gap exist between the requirements and actual performances. This gap lies due to the variation in pose, expression and illumination condition etc. Gender classification of face images is the process of identification of gender by their facial images. In this paper color segmentation, template matching as well as Histogram of oriented gradient(HOG) in order to determine the more efficient approach for gender classification from face images.

**KEYWORDS:** Color segmentation, template matching, Gender classification, Histogram of oriented gradient(HOG)

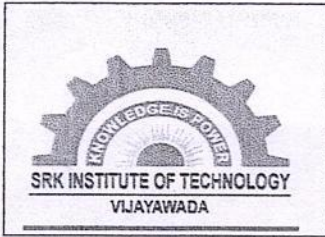
### I. INTRODUCTION

A person is a male or female is an easy task for human to recognize but it is very difficult for a machine or robot. Gender identification using voice of a person is comparatively easier than that from facial images. This is a binary classification which is useful in many applications such as targeted advertising, surveillance system, human machine interaction, content based indexing and searching, demographic collection, biometrics etc. In the present scenario identification of a face, gesture recognition and gender classification plays an important role in order to meet the secure, reliable and individualized services. In the previous time, gender recognition is based on the recognition and psychology regions but in present time people began to start thinking about this problem more technically. Now, the gender recognition is receiving more and more attention. Gender classification research started in 1990s. Golomb et al and Cottrel and Metcalfe first used the face images manually and used neural network classifier to classify the gender. Generally features can be broadly classified into 2 categories: geometric based feature and appearance based feature. They are also known as local feature and global feature respectively. Appearance based methods are based on the pixels in an image and geometric based methods are related to various properties of face such as eyes, nose, chin, eyebrow etc. Many feature extraction methods have been used for the classification of gender. The global feature method which we present in this paper has the potential to identify the gender. In this paper Histogram equalization is used to equalize the illumination effects for color images. Firstly, histogram equalization is applied to equalize the illumination changes. HOG feature methods are applied for the facial feature extraction.

### II. RELATED WORK

Face Detection is the technique where, in a given arbitrary image, the work is to determine whether or not, there are any faces in the image and, if present, return the image location and extent of each face. The challenges associated with face detections are

- 1) Pose: The images of a face vary due to the relative camera-face positions and some facial features such as an eye or the nose may become partially or wholly occluded.
- 2) Presence or absence of structural components: Facial features such as beards, mustaches, and glasses may or may not be present and there is a great deal of variability among these components including shape, color, and size.



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## Application of Grey Relational Analysis to Network Selection: A Case Study

KSS Anupama<sup>1</sup>, S Sri Gowri<sup>2</sup> and B Prbakara Rao<sup>3</sup>

<sup>1</sup>Department of E&I, VRSEC, AP, INDIA

[cssanupama@gmail.com](mailto:cssanupama@gmail.com)

<sup>2</sup>Department of E&C, SRKIT, AP, INDIA

[sajjasrigowri@yahoo.com](mailto:sajjasrigowri@yahoo.com)

<sup>3</sup>Department of E&C, JNTU Kakinada, AP, INDIA

[vcjntuk.drbpr@gmail.com](mailto:vcjntuk.drbpr@gmail.com)

February 7, 2017

### Abstract

Multiple wireless network availability has become a norm rather than an exception for the mobile users due to the advent of wireless technologies. In this context, user faces uncertainty in two situations, one in selecting the best network and another is maintaining connectivity while roaming through the heterogeneous networking environment. Network selection depends on multiple decisive factors like cost, bandwidth, delay, jitter, network utilization and packet loss etc., making selection process an uncertain and complicated task. To resolve such uncertainty, an efficient mathematical model Grey Relational Analysis (GRA) is applied to the problem of network selection. The selection process involves three stages—normalizing the multi-parameterized attributes, formulating weights to each attribute based on the user priorities and ranking the networks based on Grey Relational Coefficient (GRC). The results drawn through GRA model is compared with a conventional outranking method.

**AMS Subject Classification:** 90B30, 90B50, 90C29, 91B06

**Key Words and Phrases:** Call continuity, Grey Relational Analysis, Handoff, MADM, Network selection, PROMETHEE



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## A CMOS dynamic logic circuit using FCR

Kankata Venkateswara Rao<sup>#1</sup>, Asst. Professor  
T.NSKM Dheera<sup>#2</sup>, P.Siva Rama Krishna<sup>#3</sup>, SK.Rajak<sup>#4</sup>

Department of Electronics & Communication Engineering  
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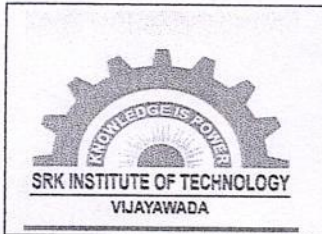
**Abstract:** Due to the superior speed and area characteristics, dynamic circuits are widely applied in data paths and other time critical components in modern microprocessors. The high switching activity of dynamic circuits, however, consumes significant power. In this project, a p-type/n-type dynamic circuit selection (PNS) algorithm and a flexible charge recycling (FCR) design methodology are proposed to achieve high power efficiency in data paths. The effects of technology scaling, data path width, design complexity, clock skew and environmental conditions are discussed. Simulation results shows that the power consumption of an arithmetic and logic unit (ALU) with the proposed PNS-FCR can be reduced by up to 60% as compared with a conventional ALU.

### I. Introduction

Over the past four decades, the number of transistors in a chip has grown continuously. With an increasing transistor density, the power consumption of microprocessors has become a major design issue for a wide range of applications, from ultralow power medical sensors to high performance microprocessors in leading servers. As a fundamental part of modern microprocessors, data paths perform computing operations, typically along the critical path. The operating speed of the data paths usually determines the achievable operating frequency of the entire microprocessor. At the same time, the data path is one of the most active components and consumes a significant share of the total power consumption. This situation is further exacerbated for those applications with an intensive computation, such as digital signal microprocessors and multimedia processors with multiple cores. Hence, it is vital to achieve low power data paths in modern microprocessors.

Due to the superior speed and area characteristics, dynamic circuits are widely applied in data paths and other time critical paths. For example, in the 32-nm Intel Itanium microprocessor, code named Poulson, and the 32-nm AMD microprocessor, code named Bulldozer, the on-chip memory and arithmetic and logic unit (ALU) adopt n-type dynamic circuits to minimize latency. However, since the dynamic circuits are usually cascaded to form domino CMOS logic, each stage of dynamic logic requires a static CMOS inverter to ensure that all inputs to each stage are maintained low during the precharge phase. This property makes synthesizing dynamic circuits with Computer Aided Design (CAD) tools more difficult than synthesizing static CMOS circuits. In addition, the varying characteristics of different types of dynamic circuits (n-type and p-type) increase the design complexity of a data path. Unfortunately, the existing solutions are not sufficient to solve these issues. In this paper, a novel p-type/n-type dynamic circuit selection (PNS) algorithm and a flexible charge recycling (FCR) design methodology are proposed, referred to here as PNS-FCR, which targets low power data paths in modern microprocessors. The primary contributions of this paper are as follows.

- 1) A novel PNS algorithm is presented to provide charge recycling and explore power saving opportunities for specific applications.
- 2) A design flow to achieve power efficient data paths is presented.
- 3) An analysis of power efficiency of the PNS-FCR is provided and an analytical model is described for estimating the power savings of PNS-FCR.
- 4) A comprehensive suite of simulations is discussed, evaluating the effects of technology scaling, data path width, design complexity, clock skew, and environmental conditions. These simulations demonstrate that PNS-FCR provides low design complexity, good design flexibility, and significant power savings, while achieving the targeted performance objectives of different applications.
- 5) An ALU IC is described based on a 0.35- $\mu\text{m}$  Global Foundries technology, demonstrating the power and area efficiency of PNS-FCR.



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# DESIGN OF COMPACT HALF-CIRCULAR SLOT UWB ANTENNA FOR WIRELESS APPLICATIONS

Ch. Vijayasekhar Babu

Assistant Professor, Department of ECE, SRK Institute of Technology, AP, India

**Abstract:** In this communication, the design of a compact patch antenna is proposed for operating in UWB applications. The patch antenna is composed of a circular slot in the ground plane and a circular patch serves as the radiating element. The antenna is studied with different iterations of the base antenna such as the half-structure, and corresponding down scaled structures of a scaling factor of 0.4, 0.5, 0.6. In this experimentation, the study of antenna parameters such as return loss, VSWR, gain, radiation patterns have been presented which are obtained in the HFSS simulations. The proposed compact models are observed to be suitable for UWB high data rate applications.

**Keywords:** Half-Circular patch, down-scale, VSWR, HFSS, gain.

## I. Introduction

Ultra Wide Band antenna has much importance in Communication Systems because of its potential for accommodating higher data rate [1,2]. Various antenna configurations are more popular such as planar monopoles, slot antennas and dipoles for use in wireless applications [3,4]. Slotted UWB antennas have more merits like Omni directional radiation patterns, simple structure and low cost. Advantages of UWB technology is low power, high data rate and short range wireless communications. The necessity of small size UWB antennas increased and many miniaturization techniques were presented. In [5,6], a simple a CPW-fed U type monopole antenna and a microstrip square ring slot antenna (MSRSA) are proposed. A slot coupled patch antenna with two slots on the ground plane with a feedline in a non-symmetric U-shape is presented for the 10–22 GHz applications (75%) [7]. In [8], a UWB antenna design is presented with printed circular slot configuration and a half-cutting method is used.

In this paper, we have presented the design of a compact half-circular slot antenna for UWB applications. The characteristics of the antenna have been studied including the down-scaled version of the base antenna to study the its miniaturization effect. The results of various antenna scaled variations are made for comparative study. The details of the antenna geometry are discussed and the results of the models are presented in the subsequent sections.

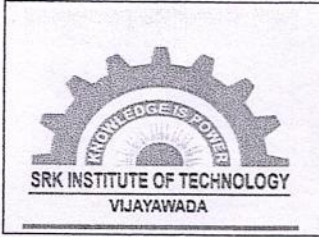
## II. Antenna Design

### (a) 40mm x 40mm UWB Antenna Design:

The proposed model is a UWB antenna based on a circular slot. Four different models of sizes 40 x 40mm, 20 x 40 mm, 10 x 20 mm and 20 x 20 mm of thickness 1.4mm were proposed and are printed on FR4 substrate with a dielectric constant of 4.4 and fed with microstrip line. A comparative analysis is to be made between all the four models. The proposed antenna is to be simulated using High Frequency Structure Simulator (HFSS) and the parameters like Return Loss, impedance, gain and radiation pattern etc. are to be analysed.

### (b) 20mm x 40mm UWB Antenna Design and the down-scaled versions:

In the next iteration, the basic antenna is halved down along a center line bisecting the feed and the dimensions will become 20mm x 40mm which is shown in Fig. 1. The antenna is realized on FR4-Epoxy substrate having thickness of the PCB is 1.4mm. The radiating element is a half circular disc which is fed by microstrip line. The



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## PAPR Reduction Based On Hadamard Technique in OFDM System

Kagga Yesu Babu<sup>1</sup>, A. Vanaja<sup>2</sup>

P.G. Student, Department of ECE, SRKIT, Enikepadu, Vijayawada, India<sup>1</sup>

Assistant Professor, Department of ECE, SRKIT, Enikepadu, Vijayawada, India<sup>2</sup>

**ABSTRACT:** OFDM (Orthogonal frequency division multiplexing) technique has been adopted as the standards in the several high data rate applications, The OFDM signal has high PAPR because of the superimposition of multi-carrier signals with large number of sub-carriers. One of the biggest drawbacks of OFDM is its high peak to average power ratio (PAPR). High PAPR of OFDM makes it unusable in non-linear systems. So the results in signal distortion and recovered signal are distorted at receiver, so the performances of bit-error-rate (BER) and channel capacity drop severely. So to avoid those problems a new algorithm has been developed the selected mapping (SLM) technique is one of the technique to reducing the Peak-to-Average Power ratio. The proposed method Hadamard technique has lower computation complexity and reduces the PAPR performance.

**KEYWORDS:** OFDM (Orthogonal frequency division multiplexing), peak to average power ratio (PAPR), selected mapping (SLM), bit-error-rate (BER).

### I. INTRODUCTION

OFDM is one of the multi-carrier modulation (MCM) techniques that transmit signals through multiple number of carrier signals. OFDM systems suffer a high peak-to-average power ratio of the transmitted signals, which causes significant in-band distortion and out-of-band radiation inter-symbol interference (ISI), inter-carrier interference (ICI) problems, when the signals are passed through nonlinear power amplifier. OFDM is a promising candidate that eliminates the need of very complex equalization. To reduce the PAPR, many techniques have been proposed. Such as SLM, tone reservation (TR), Clipping and tone injection (TI), partial transmit sequence (PTS), hadamard transforms and other techniques etc. Hadamard transform may reduce PAPR of OFDM signal while the error probability of system is not increased. In this paper, an efficient reducing PAPR technique based on hadamard transform method is proposed. This scheme will be compared with the original system with hadamard technique for reduction PAPR. The rest of paper is organized as follows chapter II is RELATED WORK, Chapter III System model, Chapter IV. SLM-Technique, Chapter V. PROPERTIES OF OFDM SYSTEMS, Chapter VI. PROPOSED HADAMARD TECHNIQUE, Chapter VII. CCDF AND PAPR CALCULATIONS, Chapter VIII. SIMULATION RESULTS, Chapter IX. CONCLUSION.

### II. RELATED WORK

Orthogonal Frequency Division Multiplexing is a digital transmission method developed to meet the increasing demand for higher data rates in communications. Major drawback is high PAPR. Analysis and simulation of PAPR that the occurrence of large peaks in OFDM. The effect on system performance in terms of the Bit Error Rate (BER) and Power Spectral Density (PSD) is simulated for an OFDM transceiver with a saturated High Power Amplifier. This is followed by a study of published PAPR reduction methods.

The first contribution is a low complexity variation of Partial Transmit Sequences (PTS). In PTS several alternate transmit signals are seeded from the same source, each alternate transmit signal has a reversible and different phase rotation performed on the data. The transmit signal with the lowest PAPR is chosen for transmission. In novel variations, called Cyclic Shifted Sequences (CSS) and Time Inversion (TI), different shifts of the data are performed which avoid the need for complex multiplications. In certain cases a whole IFFT operation can be removed with a negligible effect on performance when CSS is combined with PTS. Furthermore it is shown that the peak re-growth of





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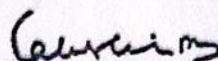
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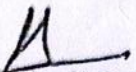
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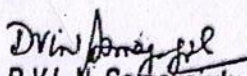
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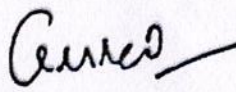
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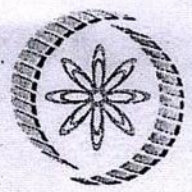
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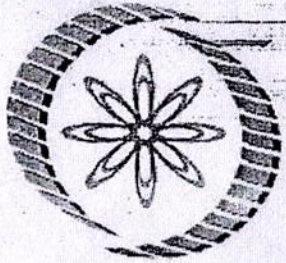
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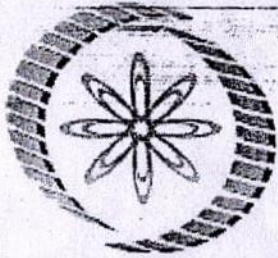
Audited by

₹ 300/-

*[Signature]*

*[Signature]*

P. B. Raju  
Receiver Signature



# NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to  
**PIDATHALA BHAGYA RAJU**  
for successfully completing the course

**Programming, Data Structures and Algorithms using Python**

with a consolidated score of 57 %

Online Assignments	17.75/25	Proctored Exam	39/75
--------------------	----------	----------------	-------

Total number of candidates certified: 2411

Prof. A. Ramesh  
Chairman

Centre for Continuing Education, IITM

Jan-Mar 2017  
(8 week course)

Prof. Andrew Thangaraj  
NPTEL Coordinator  
IIT Madras



Indian Institute of Technology Madras

PRINCIPAL  
SRK Institute of Technology  
VIJAYAWADA-521 108

PRINCIPAL in partnership with  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108  
**NASSCOM**

Roll No: NPTEL17CS1026760019FN

To validate and check scores: <http://nptel.ac.in/noc>



28 16-17

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. Apparao Geddapu
2. Designation : Assistant Professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : \_\_\_\_\_  
Internetwork Security
5. Date & Duration of the Program : Jan 2017 - Apr 2017
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 30.12.16

E. A. J.  
Signature of the Staff Member

1. Recommendations of the HOD : Duanthe
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

Account Department

Accountant: [Signature]

Date: 20.1.17



No.

**VOUCHER**

Date 20/01/17

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development Program

Paid to..... GI. Apparao (CSE) Cash/Cheque..... 300

the Sum of Rupees..... Three hundred Rupees only

Towards..... Workshop

Prepared by

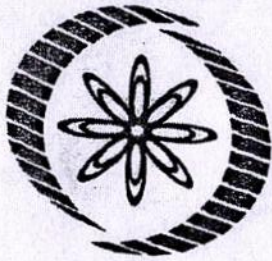
Approved by

Audited by

₹ 300/-

Bm

[Signature]  
Receiver Signature



Elite

# NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to  
**APPARAO GEDDAPU**  
for successfully completing the course  
**Internetwork Security**

with a consolidated score of 69 %

Online Assignments	22/25	Proctored Exam	46.5/75
--------------------	-------	----------------	---------

Total number of candidates certified: 527

Prof. Anupam Basu  
Chairman and Head

Centre for Continuing Education, IIT Kharagpur

Jan-Apr 2017  
(12 week course)

  
PRINCIPAL

O. P. Sha

Prof. O. P. Sha  
Dean  
Centre for Continuing Education, IIT Kharagpur

SRK Institute of Technology  
GURUPADU, VIJAYAWADA-521 108.



Indian Institute of Technology Kharagpur

  
SRK Institute of Technology  
GURUPADU, VIJAYAWADA-521 108.  
PRINCIPAL

In partnership with  
**NASSCOM**

NPTEL 705



## SRK INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108

Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

### Financial Support Request Letter

1. Name of the Staff Member : Dr./Mr./Ms. D. Madhusudhana Rao
2. Designation : Assistant professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : FDP on cyber security and forensics
5. Date & Duration of the Program : 16.8.16 - 20.8.16
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 12-8-16

MAD  
Signature of the Staff Member

1. Recommendations of the HOD : D. Sathya
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned

Account Department

Accountant: l. A. A.

Date: 12.8.16

No.

**VOUCHER**

Date... 12/8/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development program

Paid to... D. Madhusudana Rao (CSE) Cash/Cheque..... 300

the Sum of Rupees..... three hundred Rupees only

Towards..... Workshop

Prepared by

Approved by

Audited by

₹ 300/-

Receiver Signature

# SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN (Autonomous)

Vishnupur, BHIMAVARAM-534 202, A.P.




One Week National Level Faculty Development Program on  
**CYBER SECURITY AND FORENSICS**

16<sup>th</sup> – 20<sup>th</sup> August 2016

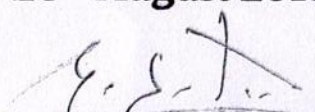
Organized by DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
Under TEQIP – II

## Certificate of Participation

This is to certify that Dr./<sup>✓</sup>Mr./Ms./Mrs. D. Madhusudhana Rao <sup>WS</sup> of  
SRK Institute of Technology has participated in One week  
National Level Faculty Development Program on “Cyber Security and Forensics” held  
at Shri Vishnu Engineering College for Women, Bhimavaram during 16<sup>th</sup> – 20<sup>th</sup> August 2016.

  
Prof V. Purushothama Raju  
Convener

  
Dr. P. Srinivasa Raju  
Vice-Principal

  
Dr. G. Srinivasa Rao  
Principal

  
PRINCIPAL

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108.




1613 24

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. Ch. Ambedkar
2. Designation : Assistant Professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Online course  
Design & Analysis of Algorithms
5. Date & Duration of the Program : Jan - Mar 2017
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : ₹ 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 31.12.16

  
Signature of the Staff Member

1. Recommendations of the HOD : Duanthe
2. Recommendations of the Principal : P. Lakshy \*Sanctioned / Not Sanctioned

Account Department

Accountant: Lettao

Date: 2.1.17.

No.

**VOUCHER**

Date 02/01/17

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development

Paid to CH Ambedhkar (ESE) Cash/Cheque..... 300

the Sum of Rupees..... Three hundred Rupees only.

Towards..... Workshop.

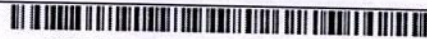
Prepared by

Approved by

Audited by

₹ 300/-

[Signature]  
Receiver Signature



Roll No: NPTEL17CS0926760074AN

To

CHINTAGUNTA AMBEDKAR  
FLAT NO-T1, S R RESIDENCY, ZION HIGH  
SCHOOL ROAD, E S I, GUNADALA, VIJAYAWADA  
KRISHNA  
ANDHRA PRADESH  
520004  
PH. NO :9247259985

Score	Type of Certificate
>=90	Elite + Gold Medal
60-89	Elite
40-59	Successfully Completed the course
<40	No Certificate

Number of credits recommended by NPTEL:2



# NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to  
**CHINTAGUNTA AMBEDKAR**  
for successfully completing the course  
**Design and Analysis of Algorithms**

with a consolidated score of 49 %

Online Assignments	17/25	Proctored Exam	31.875/75
--------------------	-------	----------------	-----------

Total number of candidates certified: 960

Prof. A. Ramesh  
Chairman  
Centre for Continuing Education, IITM

Jan-Mar 2017  
(8 week course)

Prof. Andrew Thangaraj  
NPTEL Coordinator  
IIT Madras



Indian Institute of Technology Madras

SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108

In partnership with  
**NASSCOM**

Roll No: NPTEL17CS0926760074AN

To validate and check scores: <http://npTEL.ac.in/noc>





**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. Nasala Sudhakar Reddy.
2. Designation : Assistant professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details :  
Design & Analysis of Algorithms
5. Date & Duration of the Program : Jan - May 2017.
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 300/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 31.12.16

Signature of the Staff Member

- 
1. Recommendations of the HOD : [Signature]
  2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

Account Department

Accountant: [Signature]

Date: 2.1.17

No.

**VOUCHER**

Date... 02/01/17.....

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty Development Program

Paid to... N. Sudhakar Reddy (CASH) Cash/Cheque..... 300

the Sum of Rupees..... three hundred Rupees only

Towards..... Workshop

Prepared by

Approved by

Audited by

₹ 300/-

Receiver Signature



Roll No:NPTEL17CS0926760014FN

To

**NARALA SUDHAKAR REDDY**  
D.NO:61-22/2-19,GULABI THOTA,  
RAMALINGESWARA NAGAR, VIJAYAWADA  
KRISHNA  
ANDHRA PRADESH  
520013  
PH. NO :9866385245

Score	Type of Certificate
>=90	Elite + Gold Medal
60-89	Elite
40-59	Successfully Completed the course
<40	No Certificate

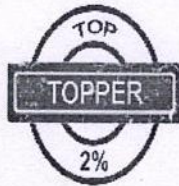
Number of credits recommended by NPTEL:2

**Elite**



# NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

**NARALA SUDHAKAR REDDY**

for successfully completing the course

**Design and Analysis of Algorithms**

with a consolidated score of 87 %

Online Assignments	17.75/25	Proctored Exam	69.375/75
--------------------	----------	----------------	-----------

Total number of candidates certified: 960

*A. Ramesh*

Prof. A. Ramesh  
Chairman  
Centre for Continuing Education, IITM

Jan-Mar 2017  
(8 week course)

*Andrew Thangaraj*

Prof. Andrew Thangaraj  
NPTEL Coordinator  
IIT Madras



Indian Institute of Technology Madras

Roll No: NPTEL17CS0926760014FN

*Principal*  
PRINCIPAL  
SRK Institute of Technology  
ENIKEPADI, VIJAYAWADA-521102  
In partnership with  
NASSCOM

To validate and check scores: <http://npTEL.ac.in/noc>



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member :  Dr./Mr./Ms. Dr. D. Haritha
2. Designation : Professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details :   
FDP on Data Science and Big Data Analytics
5. Date & Duration of the Program : 18.11.16
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 17.11.16

Haritha  
Signature of the Staff Member

1. Recommendations of the HOD : Haritha
2. Recommendations of the Principal : I. Lakshmi  \*Sanctioned / Not Sanctioned

Account Department

Accountant: [Signature]

Date: 14.11.16

No.

**VOUCHER**

Date 14/11/16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program

Paid to..... D. Haritha (SE) Cash/Cheque..... 200

the Sum of Rupees..... Two hundred rupees only

Towards..... FDP

Prepared by

Approved by

Audited by

₹ 200/-

*BMS*

*Dharitha*  
Receiver Signature

EMC Education Services

EMC<sup>2</sup>

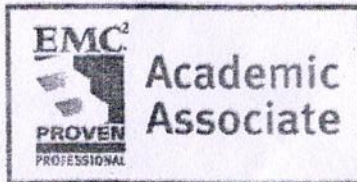
*This certificate recognizes*

**Haritha Dasari**

*has successfully completed the requirements for*

**EMC Academic Associate**

**EMC Academic Associate, Data Science and Big Data Analytics**

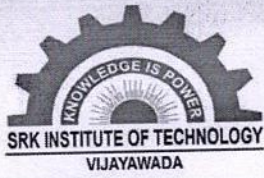


**November 18, 2016**

Verification Code: FHR0F8HRD21E2LVS  
Verify at: [www.certmetrics.com/emc/public/verification.aspx](http://www.certmetrics.com/emc/public/verification.aspx)

R

*Praveen*  
PRINCIPAL  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. S. Suresh Babu
2. Designation : Asst. Prof
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : Cyber security and forensics
5. Date & Duration of the Program : 16.8.16 - 20.8.16
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 400
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 11.8.16

Suresh Babu  
Signature of the Staff Member

1. Recommendations of the HOD : Duante
2. Recommendations of the Principal : I. Lakshy \*Sanctioned / Not Sanctioned

Account Department

Accountant: [Signature]

Date: 12.8.16

No.

**VOUCHER**

Date 12.8.16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c Faculty Development Program

Paid to S. Suresh Babu (CSE) Cash/Cheque 400

the Sum of Rupees four hundred Rupees only

Towards FDP

Prepared by

Approved by

Audited by

₹ 400/-

B.M.

S. Suresh Babu  
Receiver Signature



# SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN (Autonomous)



**VISHNU**  
UNIVERSAL LEARNING

Vishnupur, BHIMAVARAM-534 202, A.P.


One Week National Level Faculty Development Program on  
**CYBER SECURITY AND FORENSICS**

16<sup>th</sup> – 20<sup>th</sup> August 2016

Organized by DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
Under TEQIP – II

## Certificate of Participation

This is to certify that Dr./Mr./Ms./Mrs. S. Suresh Babu of  
SRK Institute of Technology has participated in One week  
National Level Faculty Development Program on “Cyber Security and Forensics” held  
at Shri Vishnu Engineering College for Women, Bhimavaram during 16<sup>th</sup> – 20<sup>th</sup> August 2016.

  
Prof V. Purushothama Raju  
Convener

  
Dr. P. Srinivasa Raju  
Vice-Principal

  
PRINCIPAL  
Dr. G. Srinivasa Rao  
Principal  
SRK Institute of Technology  
ENIKEPADU, VIJAYAWADA-521 108



66

**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. ✓ P. Bhagya Raju
2. Designation : Assistant professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : ✓ FDP on cyber security and forensics.
5. Date & Duration of the Program : 16.8.16 to 20.8.16. (5 Days)
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 200/-
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 11.8.16

P. B. Raju  
Signature of the Staff Member

- 
1. Recommendations of the HOD : Duanthe
  2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned ✓

Account Department

Accountant: [Signature]

Date: 12.8.16

No.

**VOUCHER**

Date..... 12/8/16.....

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development program

Paid to..... P. Bhagya Raju (CIE) Cash/Cheque..... 200

the Sum of Rupees..... Two hundred rupees only

Towards..... FDP

Prepared by

Approved by

Audited by

₹

200/-

Bm

P. B. Raju  
Receiver Signature

WS



**INNOVIANS  
TECHNOLOGIES**

**engineeri.com**  
It's all about Engineers



**VISHNU**  
UNIVERSAL LEARNING

## Certificate of Completion

This is to certify that

Mr./Ms. P. Bhogya Raju

of SRK Institute of Technology

has successfully completed One Week Workshop on

**Cyber Security and Forensics**

delivered by **Innovians Technologies (India)**



Held at ; **Shri Vishnu Engineering College for Women, Bhimavaram, A.P.**

**On 16<sup>th</sup> to 20<sup>th</sup> Aug, 2016.**



Innovians Technologies

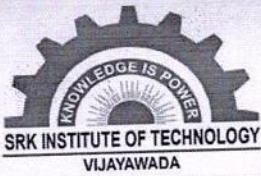
*Dr. K. Ganesh Roddy*  
Dr. K. Ganesh Roddy  
Coordinator, Associate Professor - CSE  
SVECW Bhimavaram

[www.innovianstechnologies.com](http://www.innovianstechnologies.com)

*Dr. P. Kiran Sree*  
Dr. P. Kiran Sree  
Coordinator, Professor - C.S.E.  
SVECW Bhimavaram

*Chulkeel*

**PRINCIPAL**  
**SRK Institute of Technology**  
**ENIKEPADU, VIJAYAWADA-521 108**



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. ✓ A. Radhika
2. Designation : Asst. Prof
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : ✓  
Android Developer Fundamentals
5. Date & Duration of the Program : 6.9.16 - 10.9.16
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : 400
  - ii. Travelling Allowances :
  - iii. Membership Fee :
  - iv. Others (if any) :

Date: 3.9.16.

A Radhika  
Signature of the Staff Member

1. Recommendations of the HOD : D. Sathya
2. Recommendations of the Principal : T. Lakshmi \*Sanctioned / Not Sanctioned ✓

Account Department

Accountant: [Signature]

Date: 5.9.16.

No.

**VOUCHER**

Date 5.9.16

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c. Faculty Development Program

Paid to A. Radhika Cash/Cheque 400

the Sum of Rupees four hundred Rupees Only

Towards FDP

Prepared by

Approved by

Audited by

₹ 400/-

Radhika  
Receiver Signature



# APSSDC

(Andhra Pradesh State Skill Development Corporation)  
Department of Skill Development,  
Entrepreneurship & Innovation, Govt. of AP



## Faculty Improvement Program (FIP)

on

# Google

## Android Developer Fundamentals

### Certificate of Attendance

This is to certify that

**A.Radhika**

from *Srk Institute Of Technology Krishna*

participated in the Google Android Developer Fundamentals Workshop from

6<sup>th</sup> to 10<sup>th</sup> Sep 2016

*Jocelyn Becker*

for Google

*[Signature]*  
PRINCIPAL

SRK Institute of Technology  
SRIKESAPADU, NIZAMABAD-521 108

*Subbaraj Shankar*

for APSSDC



SRK INSTITUTE OF TECHNOLOGY  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

Financial Support Request Letter

1. Name of the Staff Member : Dr./Mr./Ms. Ch. Praneeth
2. Designation : Asst. Professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : FDP on cloud computing
5. Date & Duration of the Program : 22/9/16 - 25/9/16
6. Associating Professional Body / Agency :
7. Financial support particulars :
- i. Registration Charges : 4000/-
- ii. Travelling Allowances :
- iii. Membership Fee :
- iv. Others (if any) :

Date: 12.9.16

Ch  
Signature of the Staff Member

1. Recommendations of the HOD : Duante
2. Recommendations of the Principal : [Signature] \*Sanctioned / Not Sanctioned

Account Department

Accountant: [Signature]

Date: 18.9.16



No.

**VOUCHER**

Date.....18/09/16.....

**SRK INSTITUTE OF TECHNOLOGY**

ENIKEPADU, VIJAYAWADA - 521 108. Ph. : 2843839

Name of A/c..... Faculty development programme.....

Paid to..... Ch. Pra neeth (CSE) Cash/Cheque..... 1000/-.....

the Sum of Rupees..... ~~Five~~ hundred rupees only.....

Towards..... F.D.P.....

Prepared by

Approved by

Audited by

₹ 1000/-

Receiver Signature



# APSSDC

(Andhra Pradesh State Skill Development Corporation)  
Department of Skill Development,  
Entrepreneurship & Innovation, Govt. of AP



Cloud Computing Innovation  
Council of India

## Faculty Improvement Program (FIP)

on

### Cloud Computing

### Certificate of Attendance

This is to certify that

**Ch. Praneeth**

from SRK Institute of Technology, Krishna  
participated in the Cloud Computing Workshop from 22<sup>nd</sup> to 25<sup>th</sup> Sep 2016

G.N. Anant Kumar

for CCICI

*Gullu*  
PRINCIPAL

SRK Institute of Technology



*Subbarao ghanta*

for APSSDC

SATP



**SRK INSTITUTE OF TECHNOLOGY**  
Enikepadu, Vijayawada 521108  
Approved by AICTE, Affiliated to JNTUK, Kakinada  
(ISO 9001:2015 Certified Institution)

**Financial Support Request Letter**

1. Name of the Staff Member : Dr./Mr./Ms. ✓ G. Apparao
2. Designation : Assistant professor
3. Department : CSE
4. Conference / Publication / Membership Fee / Workshop / FDP / Seminar / Training / Industrial Visit / Tours With details : ✓  
FDP on VSphere : Skills for operators
5. Date & Duration of the Program : 19/10/16 - 21/10/16
6. Associating Professional Body / Agency :
7. Financial support particulars :
  - i. Registration Charges : ₹ 00/-
  - ii. Travelling Allowances :
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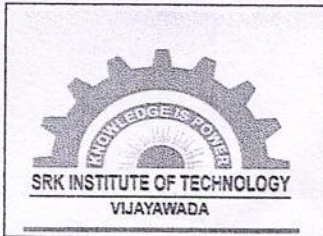
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## Dissecting Malicious Word, PDF Documents

1K.Tanuja, 2CH.Praneeth, 3Dr D.Haritha

<sup>1,2,3</sup> Dept of C.S.E, S.R.K. Institute Of Technology, Enikepadu, Krishna dist, AP, India

**Abstract :** Internet and computers are now a part of our daily routine life. With the development of network and information technology, E-mail has become increasingly popular and the society's indispensable need. However, virus spreading via the E-mail is also increasing at an enormous rate. The E-mail attachment such as PDF Document, Microsoft Word Document, EXE program can spread viruses from one computer to another computer. This paper describes and analyses the various forms of the E-mail viruses via the Microsoft Word Documents and the PDF Documents. We describe the methodology to detect such E-mail viruses using tools such as OfficeMalscanner for Word Documents and PDF stream Dumper for PDF Documents.

### 1. Introduction

With the extensive use of computers, more and more people use E-mail for communication and hence paving the way for the spreading of virus through e-mail. There are various types of malware such as Worms, Trojans and malicious code. These viruses have a strong impact on the system, like, destroying data on the disk, make the computer or network running slowly, destroying the video display screen[1]. An E-mail virus is a destructive computer program and is embedded in the text by malicious code or attachments and then exploiting people's curiosity to open e-mail. An example of the E-mail virus is "I love you". This virus makes people to open the attachment with "I love you" as the subject, and then the receiver computer will be infected by the malicious code. Once the computer has been infected, this virus will forward the E-mail with the virus to the receiver's address list. Another example is the "Melissa" virus in 1999. The virus sent the virus document as an e-mail message to top 50 people in the receiver's address book. This virus contains the friendly message and the sender's name. It also infects all the Word documents that are opened subsequently on the receiver's machine [3].

A variety of viruses can be spread through the E-mail attachment. It contains a piece of code in an attachment document, for example, PDF documents, Microsoft Word documents and .EXE programs. This paper begins with a description and extends to the analysis of viruses in the attachments of the E-mail[2]. Section 2 describes structure of

the Microsoft Word Document and its vulnerabilities. Section 3 describes PDF Document structure. Section 4 describes methodology to detect viruses affected Microsoft Word and PDF Documents. This Section also explores various tools available for detection of such infected files.

### 2. Microsoft Word Document

Microsoft Word is a word processor developed by Microsoft and can be used to type letters, reports, and other documents. It facilitates desktop publishing. The vulnerability in word document file is the presence of Macros. Generally, Macros are used for creating shortcuts to tasks performing repeatedly. Attackers make use of this feature and infect the Macros present in a document. When a word processing or spreadsheet document containing infected virus is opened, the Macro virus gets activated and infects the Normal template (Normal.dot)-a general purpose file that stores default document formatting settings. Every document opened with Word Processor refers to the Normal template, and hence gets infected with the Macro virus. Since this virus attaches itself to documents, the infection can spread if such documents are opened on other computers. These documents spread through mails by attackers [4]. In the past five years, Macro malware could be considered practically extinct. A resurgence of malicious VBA Macros has been observed – this time, not only self-replicating viruses, but simple downloader Trojan codes [3].

Macro viruses can use the VBA *SHELL* command or utilize the operating system's kernel API to run any external command they want. The VBA *KILL* command can be used to delete files. Macro viruses modify registries, use E-mail to forward copies of itself to others, look for passwords, copy documents, and infect other programs. Macro viruses can do a lot of different damage in a lot of different ways [3].

#### 2.1 Vulnerability in the MS-WORD in the form of Macro code:

The macro code, designed for automatic execution on opening of a Word Document, has the following structure (the order in which the individual functions appear and the name of the main function varies in the different variants):

```
Sub Auto_Open()  
    main_code()
```





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# A System for Secured Data Retrieval in Hostile Regions using CP-ABE Based in Ad Hoc Disruption- Tolerant Networks

A. Radhika, D. VaraLaxmi · Published 2016 · Engineering

Generally Networks operated in ad hoc mode suffer isolated network connectivity in the Hostile Military environments like battlefield. Deployment of Disruption-tolerant networks (DTN) enhances the connectivity between wireless devices carried by soldiers in battle field, this provides them to communicate effectively and share the information confidently. Cipertext -policy attribute based encryption (CP-ABE) is effective cryptographic technique to access control issues. Ad hoc network are... Expand

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# ANALYSIS OF ENERGY EFFICIENCY IN WSN BY CONSIDERING SHM APPLICATION

Pawan Kumar\*, Naresh Babu\*\*, Vaibhav Jain\*, Naveen Goel\*\*\*

\*Department of ECE, Vaish College of Engineering, Rohtak, India

\*\*Assistant Professor, SRK Institute of Technology, Vijayawada, India

\*\*\*Department of ECE, Maharaja Agrasen University, Baddi, India

Corresponding Author: Pawan Kumar, pawankr8732@gmail.com

**Abstract**-The wireless Sensor Network is composed of a significant number of autonomous nodes deployed in an extensive area. In WSN, the sensor nodes have a limited transmission range, processing speed and storage capabilities as well as their energy resources are also limited. In WSN all nodes are not directly connected. The primary objective for all kind of WSN is optimization of the network lifetime. It means to minimize the energy consumption in the WSN by considering reduction in the transmission power consumption during communication, with intelligent topology layouts and by minimizing the active links in the network. There are lots of applications of WSN out of which this research paper focuses upon the Structural Health Monitoring application in which 50 Meter bridge has been taken as a test application for the simulation purpose.

**Keywords:** WSN, SHM, Routing Protocols

## 1. INTRODUCTION

Wireless Sensor Network is the wireless network which is the combination of autonomous sensors to monitor or control environment conditions. Information that are to be collected or sensed are temperature, pressure, humidity, motion, heat, sound, light, electromagnetic field, vibration, images, pollutants etc.[1,2,3,4,5,6,7].The popularity of WSN has increased due to growth in Micro-Electro-Mechanical Systems (MEMS) technology. The concept of wireless sensor networks is based on a simple equation: Sensing + CPU + Radio = Thousands of potential applications [8].The sensor node has limited resources like energy, size, memory, computational power, communication range, bandwidth, so a large no of sensor nodes are distributed over a area of interest for collecting the information. So these nodes communicate with each other either directly or through intermediate nodes and thus form a network. So each node works as a router.

The concept of is to provide the path or route between source to sink via intermediate nodes. The central goal of the routing in the network layer is to find out the minimum cost path for the packets from source to the sink. Data are routed from one node to other node using routing protocols. Routing protocols specifies how routers (sensor nodes) communicate with each other. Routing algorithm chooses the routes between nodes. If WSNs nodes are more powerful or

mains-powered devices in the vicinity, it is beneficial to utilize their computation and communication resources for complex algorithms and as gateways to other networks. New network architectures with heterogeneous devices and expected advances in technology are eliminating current limitations and expanding the spectrum of possible applications for WSNs considerably

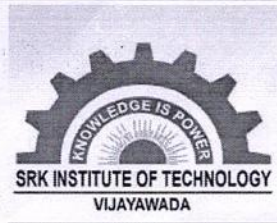
## 2. WSN NODE ARCHITECTURE

### 2.1 Sensing Unit:

Sensing units are usually composed of two subunits: sensors and analog to digital converters (ADCs). Sensor is a device which is used to translate physical phenomena to electrical signals. Sensors can be classified as either analog or digital devices. There exists a variety of sensors that measure environmental parameters such as temperature, light intensity, sound, magnetic fields, image, etc. The analog signals produced by the sensors based on the observed phenomenon are converted to digital signals by the ADC and then fed into the processing unit [9].

### 2.2 Processing Unit:

The processing unit mainly provides intelligence to the sensor node. The processing unit consists of a microprocessor, which is responsible for control of the sensors, execution of communication protocols and signal processing algorithms on the gathered sensor data. Commonly used microprocessors are Intel's Strong ARM microprocessor, Atmel's AVR microcontroller and Texas Instruments' MP430 microprocessor. For example, the processing unit



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# An Arbitrary Gini Index for the Redundant Feature Datasets Analysis

Rajesh Vemulakonda<sup>1</sup>, Abdul Ahad<sup>2</sup>, Suresh Babu Yalavarthi<sup>3</sup>, Praneeth Cheraku<sup>4</sup> and Nageswara Rao Puli<sup>4</sup>

<sup>1</sup>Department of CSE, P V P Siddhartha Institute of Technology, Vijayawada – 520007, Andhra Pradesh, India; vrajesh@pvpsiddhartha.ac.in

<sup>2</sup>Department of CSE, ANU College, Guntur – 522510, Andhra Pradesh, India; ahadbabu@gmail.com

<sup>3</sup>Department of CSE, JKC College, Guntur – 522006, Andhra Pradesh, India; yalavarthi\_s@yahoo.com

<sup>4</sup>Department of CSE, SRK Institute of Technology, Vijayawada – 521108, Andhra Pradesh, India; chpraneeth@hotmail.com, nageswararaopuli@gmail.com

## Abstract

**Objectives:** Knowledge Discovery methods get more accurate results when the dimensionality of the data is subsided; dimensionality is an important aspect of any data. Several algorithms have been proposed to increase the accuracy, but most of them generate complex models as the size of the data is extremely large. Objective of this paper is to build a simple model to get high accuracy. **Method:** In order to increase the accuracy of the Knowledge Discovery methods by substituting the dimensionality, we introduce a novel heuristic functionality, Arbitrary Gini Index (ArGI). **Findings:** We evaluated the performance of ArGI on the real world datasets. The experiment on the ten real world data sets analysis shows 60% data sets are more accurate for ArGI and 40% for Gini Index. **Applications:** It is expecting that the applications of ArGI will show a better approach in the real world learning tasks.

**Keywords:** Arbitrary Gini Index, CART, Classification, Datasets, Decision Tree, Filtering, Random Sampling

## 1. Introduction

Decision Trees (DTs) is the best suitable methods for classification and regressions; use supervised learning method without parameters. Main goal of Decision Tree is to create a model that predicts the value of a target variable by learning simple decisions rules inferred from the featured datas<sup>1</sup>. Decision Tree breaks down a dataset into subset using that associated decisions tree is incrementally developed<sup>2</sup>. Final result is tree with decision nodes and leaf node. Decision tree build classification or regression model in the form of a tree structures<sup>3</sup>.

### 1.1 Classification

Classifications are a data mining techniques used to predict groups association for data instance. Learning and modeling are two steps involved in classifications task. Later estimate or defines the testing accuracy of the

models by analyzing the data set. The models can be used to define class label for a data instances for which the classes label is not known. Now, the models can participate in classifications activity<sup>4</sup>. Figure 1 show the stages in classifications activity. Classification broadly divided into two types supervised and unsupervised classifications.

#### 1.1.1 Supervised Classification

In supervise classifications it is possible extract quantitative information from given resource. Using this approach we have availability of sufficient known information to generate representative parameters for each interested classes, which is known as training. Trained classifier is used to attach label to all the data sets according to the train parameters<sup>5</sup>. In supervise learning inputs are observation and able to determine causes of other observation, known as output. Figure 2 show supervised classification.

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# Clickthrough Mechanism For Keyword Search In Mobiles

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 SRK Institute of Technology, Enikepadu, AP-India

**D NALINI KUMARI**

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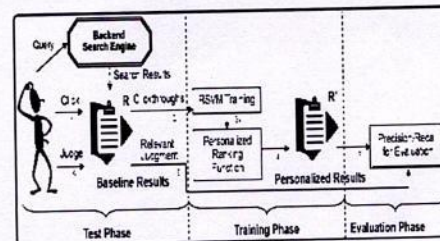
**Abstract:** Within our design, the customer collects and stores in your area the click through data to safeguard privacy, whereas heavy tasks for example concept extraction, training, and reranking are carried out in the PMSE server. Because of the need for location information in mobile search, PMSE classifies these concepts into content concepts and placement concepts. Additionally, users' locations are utilized to supplement the place concepts in PMSE. We advise a customized mobile internet search engine that captures the users' preferences by means of concepts by mining their click on data. The consumer preferences are organized within an ontology-based, multifaceted account, which are utilized to adapt a customized ranking function for rank adaptation of future search engine results. In line with the client-server model, we present an in depth architecture and style for implementation of PMSE. To characterize the variety from the concepts connected having a query as well as their relevance's towards the user's need; four entropies are brought to balance the weights between your content and placement facets. Experimental results reveal that PMSE considerably increases the precision evaluating towards the baseline. Furthermore, we address the privacy issue by restricting the data within the account uncovered towards the PMSE server with two privacy parameters. We prototype PMSE around the Android Os platform.

**Keywords:** Click Through Data; Concept; Location Search; Mobile Search Engine; Ontology; Personalization; And User Profiling;

## I. INTRODUCTION

To be able to return highly relevant leads to you, mobile search engines like Google must have the ability to profile the users' interests and personalize looking results based on the users' profiles. Observing the requirement for various kinds of concepts, we contained in this paper a customized mobile internet search engine (PMSE) addressing various kinds of concepts in various ontologism. Particularly, recognizing the significance of location information in mobile search, we separate concepts into location concepts and content concepts. PMSE will favor results which are worried about hotel information in Japan for future queries on "hotel." To include context information revealed by user mobility, we take into consideration the visited physical locations of users within the PMSE [1]. Because this information could be easily acquired by Gps navigation devices, it's hence known as Gps navigation locations. Gps navigation locations play a huge role in mobile web search. Within this paper, we advise a practical the perception of PMSE by following a met search approach which relies on among the commercial search engines like Google, for example Google, Yahoo, or Bing, to do a real search. The customer accounts for finding the user's demands, submitting the demands towards the PMSE server, displaying the came back results, and collecting his/her clickthroughs to be able to derive his/her requirements. The PMSE server, however, accounts for handling heavy tasks for example forwarding the demands to some

commercial internet search engine, in addition to training and reranking of search engine results prior to being come back towards the client. The suggested personalized mobile internet search engine is definitely an innovative method for personalizing web search engine results. By mining content and placement preferences for user profiling, it utilizes both content and placement preferences to personalize search engine results for any user. Privacy upkeep is really a challenging issue in PMSE, where users send their user profiles together with queries towards the PMSE server to acquire personalized search engine results. PMSE addresses the privacy issue by permitting users to manage their privacy levels with two privacy parameters, minDistance and expRatio. The suggested personalized mobile internet search engine is definitely an innovative method for personalizing web search engine results.



**Fig.1. Overview of the system**

## II. METHODOLOGY

First, computation-intensive tasks, for example RSVM training, ought to be handled through the PMSE server because of the limited computational



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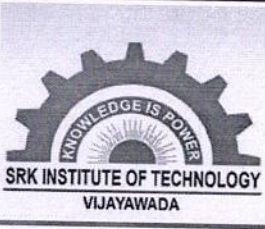
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Keywords: fuzzy, texton, texture classification, shape features.

### 3. EARLIEST DEADLINE FIRST SCHEDULING IN CLOUD COMPUTING

Neelima Priyanka N, Research Scholar, CSE, Adikavi Nannaya University

Suresh Varma P, Department of CSE, Adikavi Nannaya University

Ram Krishna Raj I, Department of CS, B.V.Raju College

Sukumar Babu B Department of CSE, Vijaya Institute of Technology For Women

Cloud Computing is a new phenomenon in Information Technology where computing is delivered as service rather than product, through shared resources, software and information to consumers as an utility over networks. Cloud computing deals with various kinds of resources in the form of virtual machines, hence scheduling plays an important role in cloud computing. In cloud, user may enable hundreds of thousands of jobs and each jobs requests number of virtualized resources for completion of each task. Hence manual scheduling is not a feasible. Hence in this paper we focused the comprehensive way of scheduling algorithms in cloud computing using Earliest Deadline First (EDF) scheduling. In this paper we presented an Earliest Deadline First Scheduling while allocating resources to the required jobs. This model shows that the performance metrics like Average Turnaround Time, Average Waiting Time and Average Deadline Violation are reduced reasonably when compare to traditional scheduling models like FCFS and SJF Scheduling Models.

Index Terms— Scheduling, FCFS, SJF, EDF, ATR, AWT, ADVT, Cloud Computing, Virtual Machine, job.

### 4. SUGGESTING CHARGING STATIONS FOR ELECTRICAL VEHICLES USING GPS DATA

S. Jagadheesh Ram

Student, Department of CSE, KSR College of Technology

Electric Vehicles (EV) normally cause a very less amount of air pollution and is implemented on a large scale around the world. This evolution has caused immense differences in many countries and has started to make an difference even in India, where the fuel vehicles have started to be being replaced by the Electric Vehicles (EV). We here recommend an easy way to find the charging stations in case of the need to charge these vehicles in time of travel or in need, in an more efficient manner. We find the nearby charging stations near to the vehicles using the GPS data and then suggest the nearby charging stations according to the amount of the distance that can be travelled by the vehicle with the amount of battery left in it. The charging stations are recommended in the ascending order of the waiting time, cost and distance in an efficient manner.

Keyword : Electric vehicle (EV), charging station, recommendation.



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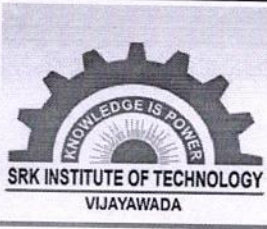
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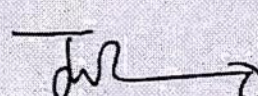


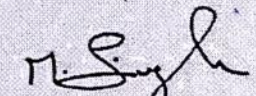
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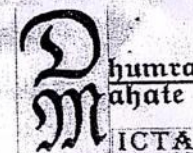
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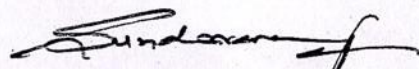
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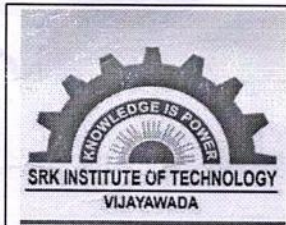
Dr. D HARITHA , Ch. PRANEETH

at the International Conference on Algorithms, Methodology, Models and Applications in Emerging Technologies – 2017 ( ICAMMAET) organized by Bharath Institute of Higher Education And Research during 16/02/2017 to 18/02/2017

  
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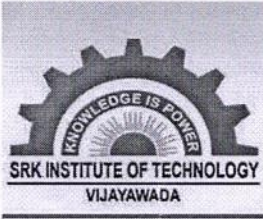
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