

KRISHNASAMY

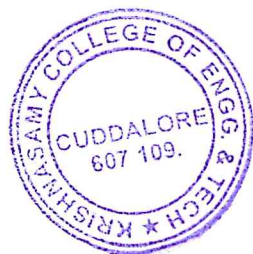
College of
ENGINEERING & TECHNOLOGY

Approved by AICTE & Affiliated to Anna University
Anand Nagar, Nellikuppam Main Road, S. Kumarapuram, Cuddalore - 607 109, Tamil Nadu.
☎ (04142) 285 601 - 604 🌐 www.kcet.in ✉ info@kcet.in

LIST OF RESEARCH GRANTS

Academic Year (2018-2019)

Name of the Research Project/ Endowment	Name of the Principal Investigator/ Co-investigator	Department of Principal Investigator	Amount Sanctioned INR in Lakhs	Duration of the Project	Name of the Funding Agency	Type (Government/non- Government)
SMART STICK FOR ELDERS SAFETY	Dr. S. RAMESH	COMPUTER SCIENCE AND ENGINEERING	0.075	6 Months	TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY	GOVERNMENT
SOLAR OPTIVERTER-A NOVEL HYBRID APPROACH TO THE PHOTOVOLTAIC MODULE LEVEL POWER ELECTRONICS	Er. K. INDHUMATHI	ELECTRICAL AND ELECTRONICS ENGINEERING	0.050	6 Months	ARUNAI CHARITABLE TRUST	NON- GOVERNMENT
ULTRA-COMPACT OPTICAL ENCODER USING PHOTONIC CRYSTAL PLATFORM	Er. R. RAJASEKAR	ELECTRONICS AND COMMUNICATION ENGINEERING	0.050	6 Months	ARUNAI CHARITABLE TRUST	NON- GOVERNMENT
RECURRENCE AND NON- RECURRENCE PREDICTION OF UTERUS CANCER IN BIG DATA	Er. P.M. KAMATCHI	COMPUTER SCIENCE AND ENGINEERING	0.050	6 Months	ARUNAI CHARITABLE TRUST	NON- GOVERNMENT
INVESTIGATE AND EFFECT ON PERFORMANCE OF DIAMOND AND CIRCULAR SHAPE PIN-FIN ARRAYS	Er. G. SETHILVEL	MECHANICAL ENGINEERING	0.050	6 Months	ARUNAI CHARITABLE TRUST	NON- GOVERNMENT
Total Amount			0.275			




Dr. G. ELANGO, M.E., Ph.D.,
PRINCIPAL
KRISHNASAMY COLLEGE OF
ENGINEERING & TECHNOLOGY,
S. Kumarapuram, Cuddalore



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COMMUNICATION RECEIVED FROM TNSCST (2018-19)

	Dept. of Computer Science and Engineering Velammal Engineering Velammal Nagar Chennai - 600 066				
083	Ms.S.Vanitha Assistant Professor Dept. of Computer Science and Engineering Dr.N.G.P. Institute of Technology Coimbatore - 641 048	Voice Based email system for blinds	M.Gowtham P.R.Harshitha B.Nireen Bharathi	CSE-008	5000/-
084	Dr.J.Yogapriya Dean (R & D) Dept. of Computer Science and Engineering Kongunadu College of Engineering and Technology Tholurpatti Trichy - 621 215	Automated external nipah virus defect detection system in banana	Bharanidharan.P Shanmugaraj.K.R Parameshwari.M Shalmi.P	CSE-009	5000/-
085	Dr.J.Nirmaladevi Associate Professor Dept. of Computer Science and Engineering Excel Engineering College Kumarapalayam-637303, Namakkal Dt.	Implementation on Intelligent assistive mechanism for deaf-dumb	Menisha.M Rajeshwari.A Karthikeyan.V	CSE-010	7000/-
086	Mr.S.Ramesh Assistant Professor Krishnasamy College of Engineering and Technology S.Kumarapuram Cuddalore - 607 109	Smart Stick for Elders safety	D.Lakshmi Devi K.Dhanalakshmi V.Ishwarya K.Kanga Preetha	CSE-011	7500/-
087	M.E.T Anto Theepak Assistant Professor Dept of Information Technology Francis Xavier Engineering College, Tirunelveli-627003	Energy Saver and GSM Based Smart Energy Meter for Automatic Instant billing of Electricity Changes	Neson Jose Rajan Y Naflar Shashikant Ashok Mani Barathi C	CSE-012	7500/-
088	Mrs.D.Murugeswari Assistant Professor Dept. of Information Technology Panimalar Institute of Technology, Poonamallee Chennai - 600 123	Child safety monitoring by android app using IoT	Shruthi.S Sushma.S.B Swethalakshmi.S Kamalaeswari RA	CSE-013	6000/-
089	Mrs.V.Rathinapriya Assistant Professor Dept. of Computer Science and Engineering Easwari Engineering College Ramapuram Chennai-89	An imperative aid that assists the dyslexic to read	Harigovinth.E Hari Eshwar.G Hari Ganapathy.K Maheswar.A	CSE-014	7500/-
090	Mr.B.K.Parthipan Assistant Professor Dept. of Mechatronics Kamaraj College of Engg. and Technology K.Vellakulam Virudhunagar-625701	Design and fabrication of hand gesture into voice conversion system for deaf and mute people	S.Senthil Rajan N.Sankaranarayanan M.Thamarai	CSE-015	4000/-
091	Dr.J.Vandarkuzhali Associate Professor	Mobile app based trauma alert of two - wheeler crash injuries and	T.Dhanusekaran R.Paramasivam	CSE-016	5000/-



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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

DOVE CAMPUS, CHENNAI-600 025

STUDENT PROJECT SCHEME 2018-2019

UTILISATION CERTIFICATE

(TWO COPIES)

1. Name of the guide and address : **Mr. S. RAMESH**,
ASSISTANT PROFESSOR,
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING,
KRISHNASAMY COLLEGE OF ENGINEERING & TECHNOLOGY,
S. KUMARAPURAM, CUDDALORE-607109.
2. Name of the student(s) : **D. LAKSHMI DEVI**
K. DHANALAKSHMI
V. ISHWARYA
K. KANAGA PREETHA
3. Title of the project : **SMART STICK FOR ELDER'S SAFETY**
4. Project code : **CSE-011**

It is certified that a sum of Rs **7,500** (Rupees **SEVEN THOUSAND FIVE HUNDRED** RUPEES ONLY) sanctioned by the Council for carrying out above mentioned student project has been utilized for the purpose for which it was sanctioned and sum of Rs.....^{NIL} remaining unutilized is refunded.

Signature of the Guide

Signature of the HOD

Signature of the
REGISTRAR/PRINCIPAL/DEAN
with seal



PRINCIPAL
Krishnasamy College of
Engineering & Technology,
Kumarapuram,
Cuddalore 607 109.



280

SMART STICK FOR ELDERS SAFETY

Dhanalakshmi. K, Iswarya. V, Kanaga Preetha. K, Lakshmi Devi. D

Department of Computer Science Engineering,

Krishnasamy College of Engineering and Technology, Cuddalore

Abstract

Fall related injuries caused have been a leading cause of fatalities among the elderly. Lots of aging people rely on a cane as a help device to overcome such problem as balance loss, leg weakness and other fall incidents. In this respect, the internet of thing may turn out to be critically helpful, by offering disabled people the assistance and support necessary for achieving a good quality of life. In this project, a Care-Cane design is proposed with a comprehensive monitoring of disabled people by which sudden fall detection can be maintained through the use of their connected walking stick. This project aims to shorten the time between the movement of heart attack and the arrival of medical personal. The warning before the emergency call will give the elder people a chance to avoid heart attack and also unfortunate faints. We propose to install a three axis acceleration sensor is fixed on the cane which continually collects acceleration data. The proposed Smart Android Application which will track the position of the attached person and also to monitor all sudden fall and Irregular Attacks using sensors. By analyzing the data, it is possible to detect whether the attacks of fall happened. A GPS system is employed to provide the detailed location information so that the emergency unit is able to arrive at the location where it happens.

Introduction

In recent years, fall-induced injury has become one of the leading causes of death among elderly people. About one third of people aged over 65 in America fall every year, and the statistics is almost three times higher for those living in nursing homes. Common injuries sustained from falls include soft and connective tissue damages, bone fractures, and head injuries. Not only does fall pose a serious threat to the health and well-being of the elderly population, fall-induced injuries can also incur an average annual health care cost of nearly \$20,000 for a person's first fall, which amounts to an estimated lifetime cost of \$12.6b for persons aged 65 and over.

Scope of the Project

The main objective of the project is to design the smart stick that tracks the elders with the help of an integrated GPS and sensors and alerts the authority when the person crosses the virtual zone boundary using GSM and With Android Phone. It aims to share out a novel idea of the implementation of a smart safety cane for detecting and notifying sudden fall and medical emergencies using existing smart phone hardware and software.

Hardware requirements

ARDUINO UNO microcontroller, Ultrasonic sensor, Temperature sensor, Heartbeat & Touch sensor, Switch, Wire and Screws etc, Accelerometer, GPS Transmitter and Receiver

Arduino Uno Microcontroller

The Arduino Mega 2560 is a microcontroller board based on the ATmega2560. It has 54 digital input/output pins (of which 15 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button.

Ultrasonic Sensor

Ultrasonic ranging module HC - SR04 provides 2cm - 400cm non-contact measurement function, the ranging accuracy can reach to 3mm. The modules includes ultrasonic transmitters, receiver and control circuit.



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TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

GOVERNMENT OF TAMILNADU



CERTIFICATE

This is to certify that **Ms.D.Lakshmi Devi**, Krishnasamy College of Engineering and Technology, Cuddalore - 607 109 has successfully completed the project titled "Smart Stick for Elders safety" in the Sector **COMPUTER SCIENCE AND ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year 2018-2019.

Chennai-600025
20.07.2019

Dr. R. Srinivasan
Dr.R.SRINIVASAN
Member Secretary

Sl.No.ECE-011/2019



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

GOVERNMENT OF TAMILNADU



CERTIFICATE

This is to certify that **Ms.K.Dhanalakshmi**, Krishnasamy College of Engineering and Technology, Cuddalore - 607 109 has successfully completed the project titled "Smart Stick for Elders safety" in the Sector **COMPUTER SCIENCE AND ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year 2018-2019.

Chennai-600025
20.07.2019

Dr. R. Srinivasan
Dr.R.SRINIVASAN
Member Secretary

Sl.No.ECE-011/2019



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GOVERNMENT OF TAMILNADU



CERTIFICATE

This is to certify that **Ms.V.Ishwarya**, Krishnasamy College of Engineering and Technology, Cuddalore - 607 109 has successfully completed the project titled "Smart Stick for Elders safety" in the Sector **COMPUTER SCIENCE AND ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year 2018-2019.

Chennai-600025
20.07.2019

[Signature]
DR.R.SRINIVASAN
Member Secretary

No.CSE-011/2019



TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

GOVERNMENT OF TAMILNADU



CERTIFICATE

This is to certify that **Ms.K.Kubega Preetha**, Krishnasamy College of Engineering and Technology, Cuddalore - 607 109 has successfully completed the project titled "Smart Stick for Elders safety" in the Sector **COMPUTER SCIENCE AND ENGINEERING** under **STUDENT PROJECT SCHEME** sponsored by the Council during the academic year **2018-2019**.

Chennai-600025
20.07.2019

[Signature]
DR.R.SRINIVASAN
Member Secretary

No.CSE-011/2019

KCEET CUDALORE-607109			
Despatch No. ✓			
O.P.	R.P.	Courier	In Person e-mail
1 AUG 2018			
OFFICER INCHARGE			DESPATCH CLET

To

01.08.2018

The Chairman,
Arunai Charitable Trust,
157/16, Siva Flats,
20th Main road, Anna Nagar,
Chennai – 600 040.

Respected Sir,

Sub: Submission of Application for Financial grand for the students projects –
Krishnasamy College of Engineering & Technology, Cuddalore – Reg.

Ref: Your office letter, dated 11.06.2018.

Greetings. First, we submit our heartfelt gratitude for your kind financial grants rendered to our student projects during the last year academic year.

With reference to your office letter cited above, I am herewith submitting the list of four different projects of our students which are recommended by our Research and Development Cell for financial grant. The particulars of the project, students name and Project supervisor name for the academic year 2018 -19 is enclosed herewith for your kind perusal.

Guide Name and Institution Address	Title of the Project	Students Name	Department of the Students
Ms.K.Indhumathi Assistant professor Krishnasamy College of Engineering and Technology, Kumarapuram, Cuddalore- 607109.	Solar Optiverter- A novel hybrid approach to the photovoltaic module level power electronics	Akalya.D Janani.R	Electrical and Electronics Engineering
Mr.R.Rajasekar Assistant professor Krishnasamy College of Engineering and Technology, Kumarapuram, Cuddalore- 607109.	Ultra-compact optical encoder using photonic crystal platform	Sivaranjani.J Sridevi.S Madhuharani	Electrical and Communication Engineering
Ms.P.M.Kamatchi Assistant professor Krishnasamy College of	Recurrence and Non recurrence prediction of	Aruna.M Malathi.S Thamizh selvi.K	Computer Science and Engineering


Engineering and Technology, Kumarapuram, Cuddalore- 607109.	uterus cancer in big data		
Mr.G.Sethivel Assistant professor Krishnasamy College of Engineering and Technology, Kumarapuram, Cuddalore- 607109.	Investigate and effect on performance of diamond and circular shape PIN-FIN arrays	Asfaq Ahamed.S Harikeerthi.M Jeeva.M	Mechanical Engineering

The recommended project proposal for financial grant is forwarded after getting the acceptance from, **Dr. K. Rajendran**, Chairman, Sri Krishnasamy Reddiar Educational Trust, Cuddalore.

I request, the recommended projects may kindly be considered and financial grant be sanctioned from your end.

Thanking you,

Yours truly,



PRINCIPAL

o/c
dm
17/2/18



ARUNAI CHARITABLE TRUST

(Estd 1994)

20/9/18

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N.C.Vivekananthan
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Managing Trustee
A.S.Subramanian
Cell : 9442061799

Secretary
Prabhakaran.V
Cell : 9962343400

Treasurer
K.Chandrasekaran
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Jt. Secretary
S. Ganesh
Cell : 98843 06830

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Cell : 9360574545

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K. Vijayakumar
Cell : 98413 97999

Legal Advisor :
S. Udayakumar
Cell : 94440 45747

Chennai
10.09.2018

The Chairman,
Krishnasamy college of Engineering & Technology,
Nelikuppam Main Road,S Kumarapuram,
Cuddalore – 607 109

Sub : - Financial Grant to Recommended student – Reg.
Ref: - Recommendation letter dated 01.08.2018

With reference to the recommended applications for financial assistance for the student projects from you on 01.08.2018, We are enclosing the KVQ cheque No.000525 dated 09.09.2018 for Rs.20,000/-towards financial assistance to the recommended Students Projects. Kindly acknowledge the receipt by signing the enclosed voucher and return back to us.

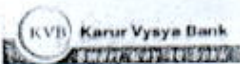
Thanking you.

Your Friendly,
For Arunai Charitable Trust



K.Chandrasekaran
(Treasurer)

Encl: KVB Cheque No. 000525 & Voucher



A/c payee only

Valid for 3 months from the date of issue
Payable at all branches

09 09 2018
D D M M Y Y Y Y

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IFSC : KVBL0001154

Pay अदा करें Krishnasamy college of Engineering & Technology or Bearer
या धारक को
Rupees रुपये Twenty Thousand only

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INITIAL
आपस

For ARUNAL CHARITABLE TRUST

K. Chandras

TRUSTEE(S)/AUTHORISED SIGNATORY

⑈000525⑈ 600053005⑈ 000000⑈ 31



ARUNAI CHARITABLE TRUST

(Estd 1994)

#157/16, Siva Flatss, 20th Main Road, Annanagar West, Chennai - 600 040

Research/Project Grant 2018-2019

UTILISATION CERTIFICATE

1 Name of the guide & Address

: MS. K. INDHUMADHI
Assistant professor
Department of Electrical and
Electronics Engineering

2 Name of the student(s)

: D. AKALYA
R. JANANI
Solar optixenter - A Novel
hybrid approach to the

3 Title of the project

: Photovoltaic module
level power electronics

4 Department/Institution Name & Address

Electrical and Electronics
Engineering, Krishnasamy
College of Engineering and
Technology, B. Kumarapuram
Cuddalore - 607109.

It is certified that a sum of Rs 5000 (Five thousand only)
sanctioned by the Trust for carrying out above mentioned project has been utilized for the purpose for which
it was sanctioned.


Signature of the Guide


Signature of the HOD


Signature of the Principal

**SOLAR OPTIVERTER – A NOVEL HYBRID
APPROACH TO THE PHOTOVOLTAIC MODULE
LEVEL POWER ELECTRONICS
A PROJECT REPORT**

Submitted by

D.AKALYA

421315105001

R.JANANI

421315105008

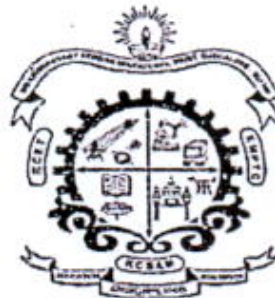
in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

ELECTRICAL AND ELECTRONICS ENGINEERING



KRISHINASAMY COLLEGE OF ENGINEERING AND TECHNOLOGY

CUDDALORE-607 109



ANNA UNIVERSITY::CHIENNAI 600 025

MARCH 2019

ABSTRACT

Power supply from the national grid is inefficient and unreliable hence the need to provide alternative source of power. It is imperative that if the country is to be self-sufficient in power generation, transmission and distribution. It must be based largely on indigenous engineering initiative and researches to design develop and manufacture local based renewable energy. In this project the concept of an Optiverter is proposed as a novel class of photovoltaic (PV) module level power electronics systems. Functionally, the Optiverter is a hybrid technology that combines the ultra-wide maximum power point tracking (MPPT) voltage window of the PV power optimizers with the direct AC connectivity and inherent safety of the PV microinverters. The advanced multimode control with variable DC-link and the shade-tolerant MPPT algorithm, the proposed Optiverter ensures efficient energy harvest from the PV module in different shading scenarios.



KRISHNASAMY


College of Engineering & Technology

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Certificate

This is to certify that ~~Mr.~~ / Ms. AKALYA.D (EEE - IV YEAR) of
Krishnasamy College of Engineering and Technology, Cuddalore has successfully completed the
project titled SOLAR OPTIVERTER - A NOVEL HYBRID APPROACH TO THE PHOTOVOLTAIC
MODULE LEVEL POWER ELECTRONICS
under Research / Project grant sponsored by the Arunai Charitable Trust during the academic year 2018- 2019


Principal


Dr. K. Rajendran
Chairman



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Nellikuppam Main Road, S. Kumarapuram, Cuddalore - 607 109.

Certificate

This is to certify that Mr. / Ms. JANANI.R (EEE - IV YEAR) of
Krishnasamy College of Engineering and Technology, Cuddalore has successfully completed the
project titled SOLAR OPTIVERTER - A NOVEL HYBRID APPROACH TO THE PHOTOVOLTAIC
MODULE LEVEL POWER ELECTRONICS.
under Research / Project grant sponsored by the Arunai Charitable Trust during the academic year 2018 2019


Principal


Dr. K. Rajendran
Chairman



ARUNAI CHARITABLE TRUST

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#157/16, Siva Flatss, 20th Main Road, Annanagar West, Chennai - 600 040

Research/Project Grant 2018-2019

UTILISATION CERTIFICATE

- 1 Name of the guide & Address : **MR. R. RAJASEKAR**
Assistant professor
Department of Electrical
& communication Engineering
- 2 Name of the student(s) : **Sivaranjani J**
Sridevi S
Madhu harani
- 3 Title of the project : Ultra compact - optical
Encoder using photonic
crystal platform
- 4 Department/Institution Name & Address : Electrical & communication
Engineering / Krishna sarny college
of Engineering and Technology,
S. Kumarapuram, Cuddalore
607109

It is certified that a sum of Rs 5000 (Five thousand only) sanctioned by the Trust for carrying out above mentioned project has been utilized for the purpose for which it was sanctioned.


Signature of the Guide


Signature of the HOD


Signature of the Principal

ULTRA COMPACT OPTICAL ENCODER USING PHOTONIC CRYSTAL PLATFORM

A PROJECT REPORT

Submitted by

J.SIVARANJANI (421315106025)

S.SRIDEVI (421315106026)

V.MADHU BARANI (421315016701)

In partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING



KRISHNASAMY COLLEGE OF ENGINEERING AND TECHNOLOGY

CUDDALORE -607 109



ANNA UNIVERSITY:: CHENNAI - 600 025

MARCH-2019

ABSTRACT

Optical encoders are circuits that are used in the design of optical processor. To reduce the size of optical devices, it is necessary to design small-scale logic circuits. In this study an all-optical 4x2 encoder based on 2D photonic crystals, was designed and simulated. This simple structure of this optical encoder makes it possible build it in optical integrated circuits. Owing to its low dimensional structure and the use of simple defect paths, the delay time of the encoder will be reduced and so, the data bit rate will be increased. Another characteristic of the proposed optical encoder is that the output optical power in "0" logic state is very low, which increases the contrast ratio as compared to the previous work. Finite-difference time-domain and plane-wave expansion methods where used to analyze the structure and optimize the optical encoder. Furthermore, the presented device has numerous advantages such as simple structure very low power consumption, high speed of operation, high data rate and a good contrast ratio.



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Certificate

This is to certify that Mr. / Ms. SIVARANJANI. J. (ECE - IV year) of
Krishnasamy College of Engineering and Technology, Cuddalore has successfully completed the
project titled Ultra-Compact Optical Encoder using Photonic Crystal Platform
under Research / Project grant sponsored by the Arunai Charitable Trust during the academic year 2018-2019


Principal


Dr. K. Rajendran
Chairman



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Certificate

This is to certify that **Mr. / Ms. SRIDEVI.S (ECE - IV YEAR)** of
Krishnasamy College of Engineering and Technology, Cuddalore has successfully completed the
project titled **ULTRA-COMPACT OPTICAL ENCODER USING PHOTONIC
CRYSTAL PLATFORM**
under Research / Project grant sponsored by the Arunai Charitable Trust during the academic year 2018- 2019.


Principal


Dr. K. Rajendran
Chairman



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Certificate

This is to certify that Mr. / Ms. MADHUHARANI (ECE - IV YEAR) of
Krishnasamy College of Engineering and Technology, Cuddalore has successfully completed the
project titled ULTRA - COMPACT OPTICAL ENCODER USING PHOTONIC
CRYSTAL PLATFORM.
under Research / Project grant sponsored by the Arunai Charitable Trust during the academic year 2018- 2019.


Principal


Dr. K. Rajendran
Chairman



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#157/16, Siva Flatss, 20th Main Road, Annanagar West, Chennai - 600 040

Research/Project Grant **2018-2019**

UTILISATION CERTIFICATE

- 1 Name of the guide & Address : **MS. P.M. KAMATCHI**
Assistant professor
Department of computer
science and Engineering.
- 2 Name of the student(s) : **Aruna M**
Malathi S
Thamizh selvi K
- 3 Title of the project : Reverence and non
reverence prediction of
cubicus cancer in big
data
- 4 Department/Institution Name & Address : Computer science & Engineering
Krishnasamy college of
Engineering and Technology
S. Kumarapuram, Cuddalore.
607109.

It is certified that a sum of Rs 5000 (five thousand only) sanctioned by the Trust for carrying out above mentioned project has been utilized for the purpose for which it was sanctioned.


Signature of the Guide


Signature of the HOD


Signature of the Principal

RECURRENCE AND NON RECURRENCE PREDICTION OF UTERUS CANCER IN BIG DATA

A PROJECT REPORT

Submitted by

M.Aruna

S.Malathi

Tamilselvi

In partial fulfillment for the award of the degree

Of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING



**KRISHNASAMY COLLEGE OF ENGINEERING &
TECHNOLOGY CUDDALORE- 607109**



ANNA UNIVERSITY:: CHENNAI – 600025

SEPTEMBER-2018

RECURRENCE AND NON RECURRENCE PREDICTION OF UTERUS CANCER IN BIG DATA

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Abstract

Women have recovered from breast cancer always fear its recurrence. This project aims to compare the accuracy of a few existing data mining algorithms in predicting uterus cancer recurrence and non-recurrence period. The early prediction of the recurrence and non-recurrence can help the patient receive treatment earlier. The recurrence and non-recurrence period are predicted through the three renowned classifiers namely, Neural Networks, Hidden Markov model and Linear Filtering. The prediction of the uterus cancer recurrence period is done by analyzing the image format health records of the patient.

Keywords: Data mining, Convolutional neural network (CNN), Hidden Markov Model, Cervical Cancer

Introduction

Early detection and treatment of cancer is essential to increase the survival rate and life quality of patients with cancer. According to [Cancer Research UK](#), for breast cancer and prostate cancer, the most common cancer in women and men respectively, a five-year survival rate is almost 100 percent if diagnosed at/before stage

Currently, cancer is typically not diagnosed until patients show symptoms, such as vomiting and dizziness. However, in most cases symptoms are only noticeable at later stages, and both patients and doctors will not suspect cancer in the first place even if symptoms appear. It is thus preferable to find a reliable method to check cancer using routine check-up samples (*e.g.*, blood samples), and to “red-flag” suspected cancer samples for further tests even before the symptoms appear.

Mass spectrometry offers an affordable and fast solution to collect chemical information as much as possible from saliva, blood, or other samples, which has been widely applied in pharmaceutical companies for drug screenings and testing.

In general, mass spectrometry differentiates chemicals by their weight or mass, and it is of high sensitivity even with low concentration of chemicals. Moreover, the mass spectrometry analysis typically uses tiny samples (milligrams), takes minutes to finish, and can be easily coupled with robotic sample preparation techniques, which is an ideal approach for high throughput chemical screening and testing.

However, too much information means that it is difficult to find which mass is determinant for cancer diagnosis, even for experienced professionals. Common practice is that people predict cancer based on a limited number of known cancer determinant chemicals (or standards), which will cause lots of misclassification due to sample variances.

Big Data Health Informatics

Big data in the sense it has huge collection of the information, it is normally represented by using the velocity, veracity, volume, variety and value terms [11]. In big data volume represents the size of the data, veracity represents that the genuineness of the information, velocity measures the pace at new data generation, variety represents that the different complexity of the information and value used to measure the quality of the data. Thus the big data approach is used to store the health informatics which is used during the disease diagnoses and the treatment. In this paper the big data based data set is used to analyse and detect the ovarian cancer because, the data set consist of multi scale information such as MRI details, recording, treatment, disease related symptoms, DNA micro data and so on. In the health informatics data set having different level [12] of health information which are mention as follows, bioinformatics, neuro informatics, clinical informatics, public health information, micro level data which means molecules, tissue level data, MRI details, patient level data such as monitored information, mission data and social data which are retrieved from the social medias such as Face book, twitter, Google and so. The social media data having the list of patient and user queries, doubts and general symptoms which are used during the diagnosis, treatment and prescription. Then the overall goal of big data analysis in the health informatics is providing the different variety of data's with low cost and high quality.




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Hari Koorithi . M
Jeeva . M
- 3 Title of the project : **An vesticale and effect on
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- 4 Department/Institution Name & Address : **Méchanical Engineering
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**INVESTIGATE AND EFFECT ON PERFORMANCE OF
DIAMOND AND CIRCULAR SHAPE PIN-FIN ARRAYS**

A PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

DEPARTMENT OF MECHANICAL ENGINEERING



KRISHNASAMY COLLEGE OF ENGINEERING AND TECHNOLOGY

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ABSTRACT

Now a day in electronic components and many industrial applications, internal heat generation can cause serious over heating problems and sometimes leads to system failure. The temperature of modern electronic components should not exceed the manufacturer's recommendations, so that reliable operation can be ensured. Due to wide applications and miniaturization of electronic components an efficient cooling technique is needed

An experimental investigation has been performed to study the heat transfer and pressure drop characteristics for circular fins. The effect of pin-fin spacing in both the stream wise and span wise directions and the rate of heat dissipation from the heat exchanger for different air flow rates have been examined. From the experimental result it is observed that the heat transfer rate is higher at lower inter fin distance. Further heat transfer co-efficient increases with increasing mass flow rate in both stream wise and span wise directions. The better heat transfer rate was achieved when the clearance ratio is zero compared to $C/H=0$. From the experimental results it is observed that the square pin-in array gives better performance than the circular arrays.

A brief Introduction about the pin-fin array is given in Chapter 1, Chapter 2 gives the various Literature survey from reputed international journals. The heat transfer from protruding surfaces and different types of cooling systems are given in chapters 3 and 4. Experimental used in this study is explained in chapter 5. In chapter 6 working process of measurement described. In chapter 7 the data reduction and Results and Discussion are given. In Chapter 8 deals with a brief conclusion.




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