



THAMIRABHARANI ENGINEERING COLLEGE

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Chathirampudukulam, Chidambaranagar - Vepenkulam Road

Thatchanallur, Tirunelveli 627 358, Tamil Nadu.

3.2.2 Number of books and chapters in edited volumes / books published and papers published in national / international conference proceedings per teacher during last five years

INDEX

Academic year	Number of conference
2016-2017	0
2017-2018	0
2018-2019	0
2019-2020	2
2020-2021	2



THAMIRABHARANI ENGINEERING COLLEGE

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Chathirampudukulam, Chidambaranagar - Vepemkulam Road

Thatchanallur, Tirunelveli 627 358, Tamil Nadu.


3.2.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

INDEX

SL. NO	NAME OF THE TEACHER	TITLE OF THE PAPER	TITLE OF THE PROCEEDINGS OF THE CONFERENCE	YEAR OF PUBLICATION	ISBN/ISSN NUMBER OF THE PROCEEDING
1	Mr. S. Selva Kumar	Thermal analyses on solar collector with heat transfer configuration	INTERNATIONAL CONFERENCE ON EMERGING TRENDS IN SCIENCE, TECHNOLOGY AND MATHEMATICS	2019	978-93-5361-975-6
2	Mr. S. Selva Kumar	Experimentation on effective materials for photo thermal applications	NATIONAL CONFERENCE ON RECENT DEVELOPMENT IN EFFECTIVE MATERIALS	2020	978-93-5396-426-9
3	Mr. M. Ramnath	App Assessment with three phase evidence system using sentiment analysis	INTELLIGENT COMMUNICATION TECHNOLOGIES AND VIRTUAL MOBILE NETWORKS	2021	978-0-7381-1183-4
4	Dr. D. David Neels Ponkumar	Automated Smart Electronic Toll Payment System RFID Based With Cloud-Based Report for Time and Traffic Reduction	RENEWABLE ENERGY WITH IOT AND BIOMEDICAL APPLICATIONS	2021	978-81-952585-4-3

PRINCIPAL

THAMIRABHARANI ENGINEERING COLLEGE
Chathirampudukulam Village,
Chidambaranagar - Vepemkulam Road,
Thatchanallur, Tirunelveli - 627 358.




Parvathy's
Arts & Science College

Dindigul District

(A Co-educational Institution affiliated to
Madurai Kamaraj University)

CERTIFICATE



UGC Approval No : 43602
Impact Factor : 5.75
ISSN : 2349 - 5138
E- ISSN : 2348 - 1269

IGETSTM'19

International Conference on
Emerging Trends in

Science, Technology & Mathematics

AUGUST
22



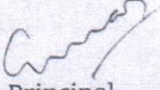
This is to certify that Mr./Ms. S. SELVAKUMAR, Research Scholar, Dept of Renewable Energy Science, Manonmaniam Sundaranar Univ, Abishekapatti, Thirunelveli has participated in the International Conference on Emerging Trends in Science, Technology and Mathematics organized by Department of Computer Science PARVATHY'S ARTS AND SCIENCE COLLEGE held on 22.08.2019 and presented a research paper entitled Thermal Analyses on Solar Collector with Heat Transfer Configurations.


Organizing Secretary


Convener


Chairman


Secretary


Principal

Wisdom City, Madurai Road(NH-7), Dindigul - 624002. ☎ 0451 - 2051074 ☎ +91-9677702015 / +91-7094008880 ✉ parvathycollege@yahoo.com 🌐 www.pasc.edu.in

dhya

PRINCIPAL
THAMIRABHARANI ENGINEERING COLLEGE
Chathirampudukulam Village,
Chidambaranagar-Vepemkulam Road,
Thatchanallur, Tirunelveli - 627 358.

THERMAL ANALYSES ON SOLAR COLLECTOR WITH HEAT TRANSFER CONFIGURATIONS

¹S. Selvakumar, ²T. R. Rajasekaran, ³V. Saharimuthan, ⁴R. V. Jeyarajasekhar

¹Research Scholar, ²Professor, ³Assistant Professor, ⁴Assistant Professor

¹Department of Renewable Energy Science, Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, 627012, India ²Department of Renewable Energy Science, Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, 627012, India ³Department of Physics, Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli, 627012, India

⁴PG & Research Department of Physics, Government Arts College, Melur, Madurai District, 625106, India

Abstract: The solar collectors with heat transfer configurations can be developed for their effective utilization in application sectors. In this connection, the present research work was conducted not only to prepare and incorporate heat transfer configurations with solar collector but also to experimentally assess the thermal characteristics of solar collector with the same heat transfer configurations. The research results revealed that heat transfer configurations with ribs, baffles and nano structured fins could be effectively integrated in solar collector. The research results also revealed that the temperature rise of working fluid was in the range of 16.8 to 28.4°C in solar collector with heat transfer configurations. It could be concluded that the thermal characteristics of solar collector would be substantially enhanced with rib, baffle and nano structured fin based heat transfer configurations.

Index Terms – Heat transfer configurations, Temperature enhancement of fluid, Performance improvement of solar collector

I. INTRODUCTION

Solar collector is the integral part of solar thermal devices [1]. Its efficiency is to be improved so as to match partially the demand and supply of hot fluids in photo thermal application sectors. It is reported that the efficiency of solar thermal device can be improved by improving the optical absorption of incident radiation through nano structured fins [2]. It is also reported that the efficiency of solar thermal device can be enhanced by improving the heat transfer from fin to fluid through ribs and baffles [2]. In this connection, the present research work was conducted not only to develop and incorporate heat transfer configurations with solar collector but also to experimentally assess the thermal characteristics of solar collector with the same heat transfer configurations. The standard materials, methods and test instruments were used for materializing these objectives [3]. The research outcomes along with their scientific interpretation have been documented in this research paper for the benefits of producers, researchers and end users of solar thermal devices.

II. MATERIALS AND METHODS

The conventional solar collector was taken. It was attached with heat transfer configurations such as ribs, baffles and nano structured fins. In fact, the 'V' shaped metal ribs were separately prepared and they were integrated on the fin of the solar collector. The rectangular shaped metal baffles were also separately prepared and they were integrated on the fin of the same solar collector. The metal substrate of the solar collector was spray coated with nano carbon and metal carbide based nano composite. It is worth mentioning that the ribs and baffles were also coated with the same nano composite so as to reap the enhanced optical and thermal benefits. The developed collector with heat transfer configurations was kept in the test set up and it was tested in field conditions as per specifications. It is to be noted that the parameters such as incident solar radiation, inlet temperature

PRINCIPAL
MANONMANIAM ENGINEERING COLLEGE
Chattampudukulam Village,
73 Chidambaram-Venemkulam Road,
Thatchanallur, Tirunelveli - 627 356.



SARAH TUCKER COLLEGE

(Autonomous)

Nationally Assessed and Re-accredited with 'A' grade
TIRUNELVELI-7, TAMILNADU.



REDEEMS '20

NATIONAL CONFERENCE ON "RECENT DEVELOPMENTS IN EFFECTIVE MATERIALS"

CERTIFICATE

This is to certify that Dr./Mr./Ms. S. SELVAKUMAR, Research Scholar,

Manonmaniam Sundararajan University, Abichela^{Pathi}, Tirunelveli has presented a paper (Oral / Poster)
entitled Experimentation on Effective Materials for Photo Thermal Applications at the
NATIONAL CONFERENCE on "Recent Developments in Effective Materials"-REDEEMS '20
organized by the Department of Physics, Sarah Tucker College (Autonomous),
Tirunelveli-7, Tamilnadu, on 7th February, 2020.

Moody
Dr. Usha Godwin

R. Anitha
Dr. R. Anitha

A. Effie Cordelia
Dr. A. Effie Cordelia
Convener

PRINCIPAL
THANIRAHARAN ENGINEERING COLLEGE
Chathirampudukulam Village,
Chidambaranagar-Vepenkulam Road,
Tirunelveli - 627 553

CONTENTS

S. No	Title of the Paper & Author's Name	Page No
-------	------------------------------------	---------

Invited Talks

1	IT 01 Photo Induced Micro Actuation Effect on Rapidly Solidified Ferromagnetic Shape Memory Alloys <i>S. Vinodh Kumar</i>	1
2	IT 02 Advancement of Nanotechnology in Electrical and Biological Applications <i>I. Vetha Potheher</i>	3

Contributed Full Papers

3	FP 01 Investigation on Structural and Dielectric Properties of Polyaniline/Manganese Dioxide Nanocomposites <i>S.C. Vella Durai, E. Kumar, D. Muthuraj, V. Bena Jothy</i>	6
4	FP 02 Growth and Characterization of the Organic Nonlinear Optical Triphenylmethane P-Nitroaniline Single Crystals <i>C. S. Juliet Brintha and S. E. Joema</i>	8
5	FP 03 Synthesis, Optical and Mechanical Property of Guanidine Trichloroacetate NLO Single Crystals <i>P. Reena and S. E. Joema</i>	11
6	FP 04 Experimentation on Effective Materials for Photo Thermal Applications <i>S. Selvakumar, T.R. Rajasekaran, V. Sabarinathan, R.V. Jeba Rajasekhar</i>	14
7	FP 05 Studies on organic Nonlinear Optical Single Crystal: L-Phenylalanine Maleate (LPAM) <i>D. Abila Darling and S.E. Joema</i>	16
8	FP 06 Investigation on Crystallization and Optical Properties of L-Lysine Monohydrochloride Dihydrate Crystal <i>B. Aneeba, S.V. Ashvin Santhia, S. Vinu, R. Sheela Christy</i>	18
9	FP 07 Investigations on Growth, Structural, Optical and Dielectric Studies of L - Threonine Tartrate NLO Single Crystals <i>A. Effie Cordelia and R. Abiya Sweetlin</i>	20
10	FP 08 Theoretical and Experimental Vibrational Spectroscopic Investigation on Nicotinamidum Oxalate <i>E. Arockia Jeya Yasmi Prabha and S. Athimoolam</i>	24
11	FP 09 Optical and Thermal Studies on Chemically Synthesized Composite Polymer Blend Electrolytes <i>J. Juliet Latha Jeyakumari and C. Pargavi</i>	28

PRINCIPAL

THAMIRABARANI ENGINEERING COLLEGE

Chairampudukulam Village

Chidambaram - Veperankulam

Thatchanallur, Tirunelveli - 627 001

CERTIFICATE OF PRESENTATION

This is to certify that

Mr. M Ramnath

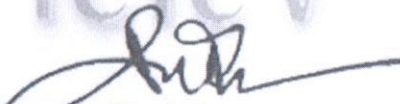
has successfully presented a paper titled


**APP ASSESSMENT WITH THREE PHASE EVIDENCE SYSTEM
USING SENTIMENT ANALYSIS**

in the 3rd International Conference on

Intelligent Communication Technologies and Virtual Mobile Networks (ICICV 2021)
organised by Francis Xavier Engineering College, Tirunelveli, India on 04-06, February 2021.


Session Chair


Dr. G. Rajakumar
Conference Chair


Dr. V. Velmurugan
Principal

APP ASSESSMENT WITH THREE PHASE EVIDENCE SYSTEM USING SENTIMENT ANALYSIS

1. Mr. M. Ramnath Assistant professor,
Dept. of Computer Science and Engineering,
Thamirabharani Engineering College,
Tirunelveli Tamilnadu, India.
ramnath25@gmail.com

2. Dr. C. Yesubai Rubavathi
Associate professor,
Dept. of Computer Science and Engineering,
Francis Xavier Engineering College,
Tirunelveli Tamilnadu, India.

Abstract

The rapid increase in mobile industry results in large number of mobile apps arising in the market which can be downloaded by either paying or free of cost. The selection of an app for a category will be based on rating, review and ranking by the user. The current system to detect the app's genuineness is based on any one of the parameter that takes time as it doesn't consider the other two which fail to correlate the results. If app's evaluation on any one of the parameter gives good results, it doesn't need to be same for others. For that, we have proposed a method that collects review, rating and rank of an app which will be evaluated independently. In case of review, each review of an app undergoes sentiment analysis using Word2Vec model that predicts words closer to the target word and classify them as either positive or negative. The rating of an app is considered by setting a threshold value for evaluation. The ranking pattern of an app is analyzed which classified under rising, recession and maintenance phase. The results of the above three parameters are aggregated which gives the evidence to determine whether the app is trustful or not.

Keywords: Word2Vec, Review and Ranking

I. INTRODUCTION

As there are numerous applications accessible in market clients are in fluffly state while downloading the applications for their utilization. Diverse App stores like Google play store and Apple store dispatched their chief board on consistent schedule to move the clients to download most famous applications by noticing the positioning of uses. Truth be told to promote a specific versatile Apps, pioneer leading body of applications is the main route on the lookout. An application which is at the top on the pioneer board prompts enormous

number of downloads and it will acquire most extreme benefit. To have their Apps positioned as high as could be expected under the circumstances, application designers advance their applications utilizing different ways, for example, promoting, offers and so on Such applications harm to telephone and furthermore may cause information robberies. Subsequently such applications should be distinguished, with the goal that they will be recognizable for play store clients. So we are proposing an android application which will handle the data, remarks and three audits of the application with characteristic language preparing to give results. So it will be simpler to choose extortion application. Mobile applications are a vital piece of any association's online presence, yet they are additionally an obvious objective for cybercriminals. They exploit associations that have insignificant perceivability of their digital resources by focusing on their clients and clients by means of dubious/malignant versatile applications, which are as a rule effectively distributed on outsider application stores. Not all portable applications of authentic brands distributed on outsider application stores essentially must be malevolent/repackaged. Cybercriminals can likewise deceive clients with click misrepresentation on obscure outsider application stores that are infused with promotions or subsidiary with different other compensation per-click sites. They frequently target brands with an enormous client base with an end thought process to gather or take delicate data [1].

As there are numerous applications accessible in market clients are in fluffly state while downloading the applications for their utilization. Diverse App stores like Google play store and Apple store dispatched their chief board on consistent schedule to move the clients to download most famous applications by noticing the positioning of uses. Truth be told to promote a specific

PRINCIPAL
THAMIRABHARANI ENGINEERING COLLEGE
Chathirampudukulam Village,
Chidambaranagar-Vepenkulam Road,
Thatchanallur, Tirunelveli - 627 358.

Automated Smart Electronic Toll Payment System RFID Based With Cloud-Based Report for Time and Traffic Reduction

B Sumathy, Associate Professor, Department of Instrumentation and Control Engineering, Sri Sairam Engineering College, Chennai, Tamil Nadu, India, bsumathy.ice@gmail.com.

Kanagaraj Venusamy, Research Scholar, Department of Engineering, University of Technology and Applied Science-Al Mudabah, Muladdah, Musanna, Sultanate of Oman, kanagaraj@act.edu.om.

D David Neels Ponkumar, Professor and Head, Department of Electronics and Communication Engineering, Thamirabharani Eng.Clg.Tirunelveli, Tamil Nadu, India, david26571@gmail.com.

P Malathi, Assistant Professor, Department of Electronics and Communication Engineering, Prathyusha Engineering College, Thiruvallur, Tamil Nadu, India, mals_sharu@yahoo.com.

Abstract

Automatic tax networks have been a great benefit in reducing the severe congestion in today's metropolis. This is one of the simplest means of coordinating high traffic flows. If the car passes the toll door on any lane, the reader of the RFID indicates that the clarification has expired. This solution eliminates the need for manual toll systems, and the toll system works through RFID. The installed device thus cuts travelers' time and costs very expeditiously as the tag can be decrypted from a distance.

Keywords: Cloud, Toll collection system, RFID, IoT, Time

INTRODUCTION

Intelligent transportation system (ITS) applications innovations are encouraged to solve the problems posed by the continuing rise of cars in urban centers in developing smart cities. In order to tackle problems of long vehicle queues, waste of fuel, high risk of accident and environmental pollution, the use of traditional/manual toll collection systems, municipal officials can implement Electronic Toll Collection (ETCs) systems. Electronic payment mechanisms are an integral part of ETC schemes and have been widely adopted worldwide in toll collection. The key process in stands or toilets is automated using embedded and mobile communication systems to reduce human interaction needs, decrease latency and increase system performance.

Briefly, ETC is being implemented in smart cities to accomplish productive interruption practices with a minimum of restrictions. The installation of ETC on busy city roads, among other benefits, would significantly eliminate excessive vehicle waits, curtail fuel usage and save the world from adverse carbon emissions. Different techniques and technology may be useful for the different processes of automation needed to incorporate ETC systems in intelligent and connected societies effectively and efficiently. For ETC systems using the tension gage cell, Arduino Super 2560, the intelligent card reader and Optical Character Recognition System, Chatteraj and others have designed more efficient payment and tracking methods. Any vehicle category is dependent on its weight as calculated by the cell loading strain gage. This knowledge is conveyed by means of the Arduino system and smart card readers to the payment network. The license numbers plate with the OCR scheme is used to individually mark all cars.

Gupta et al. also dealt with the problems of illicit compilation, device errors and unstable links in ETC applications in their related work. In order to minimize fuel consumption and fraud, the authors were using Radio Frequency Identification (RFID) as well as GSM and ZigBee technologies. The RFID readers and tags and ZigBee transmitters and receivers are part of the system peripherals. Inserra et al. developed an RFID reader that can work on a real-life scenario in at least three coverage sectors where the antenna array size is minimal.