

Hepatoprotective Potential of Novel Siddha Formulation *Santha Santhrodhaya Mathirai* against Paracetamol and Methotrexate Induced Hepatotoxicity in Chang liver Cell line Model

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Abstract

Liver is the most important metabolic organ primarily concerned with the biochemical activities in the human body. Hepatocytes (liver parenchymal cells) perform essential metabolic functions. Exposure to environmental pollutants such as toxicants and chemicals often results in liver injury and damage. Liver disorders can result from a wide variety of insults, including infections, drugs, toxins, ischemia, and autoimmune disorders. Hepatic dysfunction is primary causes of morbidity and mortality worldwide. India subcontinent is well known for its usage of traditional preparations and medicines from siddha origin that is often considered to be protective and curative in nature against liver disorders. Siddha has several indigenous preparations which comprises of herbs, minerals and polyherbs which has been used for the treatment of liver injury since several centuries. One such siddha formulation is *Santha Santhrodhaya Mathirai* (SSM) which majorly comprises of borax, mercurous chloride, turmeric and lemon juice. As there is increasing evidence that conventional allopathic drugs used for liver rejuvenation has their own side effects hence it is the need of the hour of exploring an alternate complimentary traditional formulation from siddha origin which has both preventive and rejuvenation potential. The main aim of the present investigation is to evaluate the hepatoprotective nature of the formulation SSM against Paracetamol and methotrexate induced hepatotoxicity in chang liver cell line model. Chang liver cells, a human hepatoma cells were now a days been widely used to evaluate the hepatoprotective nature of the drugs and chemicals. The results obtained from the present investigation has revealed that treatment with paracetamol has significantly up-regulated cytochrome P 450 - CYP gene further it was observed that treatment with paracetamol down regulated the UGT- uridine glucuronosyl transferase and ALB-Albumin gene in the chang liver cells. Treatment with SSM at the dose of 10, 100 and 1000 ng/ml dose dependently ameliorated these alterations by up regulating the UGT, ALB and down regulating the CYP gene. Similar results were observed in immunoblotting analysis. Treatment with methotrexate increases the expression of pro-apoptotic BAX gene and decreases the anti-apoptotic BCL-2, DHFR-Dihydrofolate reductase gene expression. Incubation with SSM at the dose of 10, 100 and 1000 ng/ml dose significantly reverse these changes which was further evident by the results of Immunoblotting assay. It was concluded from the data's obtained from the present investigation that the drug SSM possess promising hepatoprotective activity against paracetamol and methotrexate induced insult in chang liver cell line and hence this formulation may be considered as first drug of choice for the clinical management and treatment of liver disease in humans.

Key Words: Liver, Siddha, *Santha Santhrodhaya Mathirai*, Hepatoprotective, Chang liver cell line, Paracetamol, Methotrexate, Gene expression.

1. INTRODUCTION

The liver is an important metabolic organ that plays a vital role in the maintenance of homeostasis. The liver is majorly responsible for multiple metabolic functions and physiological processes such as detoxification, bile synthesis, energy production, biotransformation of lipid, proteins and carbohydrates. Toxicology is a branch of science that deals with study of the adverse effects of chemical or physical agents on living organisms. A toxicologist is trained to examine and communicate the nature of those effects on human, animal, and environmental health [1-2]. Toxicological research examines the cellular, biochemical, and molecular mechanisms of action as well as functional effects such as physiological, neurobehavioral and immunological, and

assesses the probability of their occurrence. Toxic agents are categorized in a variety of ways, depending on the interests and needs of the classifier. For example, toxic agents are discussed in terms of their target organs (liver, kidney, hematopoietic system, etc), use (pesticide, solvent, food additive, etc), source (animal and plant toxins), and effects (cancer, mutation, liver injury, etc) [3].

Due to non-availability of satisfactory and adequate number of synthetic drugs for prevention and treatment of liver disorders leads to further damage to the liver. Therefore, there is an emergency need of effective drugs from natural origin for the prevention and treatment of liver diseases. Recently there is a greater global interest in non-synthetic, natural drugs derived from Indian system of traditional medicine due to better tolerance and minimum adverse drug reactions. Siddha system of traditional

FILE NO. TAR/2019/000247
SCIENCE & ENGINEERING RESEARCH BOARD(SERB)
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Dated: 13-Mar-2020

ORDER

Subject: Financial Sanction under Teachers Associateship for Research Excellence (TARE) to **Dr. Stalin Dhas T, Sathyabama Institute Of Science And Technology , Sathyabama University, Jeppiar Nagar, Rajiv Gandhi Road, Chennai, Chennai, Tamil Nadu-600119**- under the mentorship of N. Sujatha, at **Indian Institute of Technology Chennai I.I.T. Post Office Chennai - 600036**- Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned grant at a total cost of **Rs. 18,30,000/- (Rs. Eighteen Lakh Thirty Thousand Only)** for a duration of 36 months.

The date of start of the project will be 28 February, 2020 .The items of expenditure for which the total allocation of **Rs. 18,30,000/-** has been approved are given below:

The following budget is proposed for

Sathyabama Institute Of Science And Technology , Sathyabama University, Jeppiar Nagar, Rajiv Gandhi Road, Chennai, Chennai, Tamil Nadu-600119 (Parent)

Sl. No.	Budget Head	Amount
1.	Fellowship	Rs. 0 (@0/- per month (consolidated))
2.	Research Grant	Rs. 2,50,000/- per annum
3.	Overheads	Rs. 25,000/- per annum

Indian Institute of Technology Chennai I.I.T. Post Office Chennai - 600036 (Host)

Sl. No.	Budget Head	Amount
1.	Fellowship	Rs. 60,000 (on completion of 90 days mandatory attendance in the host institute every year)
2.	Research Grant	Rs. 2,50,000/- per annum
3.	Overheads	Rs. 25,000/- per annum

2. Sanction of the **SERB** is also accorded to the payment of **Rs. 2,75,000/- (Rupees Two Lakh Seventy Five Thousand only)** to **Sathyabama Institute Of Science And Technology, Sathyabama University, Jeppiar Nagar, Rajiv Gandhi Road, Chennai , Rs. 3,35,000/- (Rupees Three Lakh Thirty Five Thousand only)** to **Indian Institute of Technology Chennai I.I.T. Post Office Chennai - 600036** being the first installment of the grant for the year 2019-2020 for implementation of the said research project.

3. The expenditure involved is debitable to

Fund for Science & Engineering Research (FSER)

This release is being made under Teachers Associateship For Research Excellence (TARE). (Health Sciences)

4. The Sanction has been issued to with the approval of the competent authority vide Diary No. **SERB/F/10877/2019-2020** dated **11 March, 2020**

5. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website (www.serb.gov.in).

6. Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.

7. As per rule 211 of GFR, the accounts of project shall be open to inspection by sanctioning authority/audit whenever the institute is called upon to do so.

8. The release amount of **Rs. 2,75,000/- (Rupees Two Lakh Seventy Five Thousand only)** will be drawn by the Under Secretary of the **SERB** and will be disbursed by means of RTGS transaction as per their Bank details given below:

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PFMS Unique Code	SU
Account Name	Sathyabama Institute of Science and Technology - Research
Account Number	6089858032
Bank Name & Branch	Indian bank Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Chennai - 600 119, Tamilnadu
IFSC/RTGS Code	IDIB000S201
Email address of PI	stalin8733@gmail.com
Email id of A/C Holder	registrar@sathyabama.ac.in
Email address of concerned officer	ms_tare@serbonline.in

The release amount of Rs. 3,35,000/- (Rupees Three Lakh Thirty Five Thousand only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

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PFMS Unique Code	IITM
Account Name	The Registrar, Indian Institute of Technology - Madras
Account Number	2722101016150
Bank Name & Branch	CANARA BANK Canara Bank, IIT-Madras Branch, IIT-M Campus Post Office, Sardar Patel Road, Guindy, Chennai 600036
IFSC/RTGS Code	CNRB0002722
Email address of PI	stalin8733@gmail.com
Email id of A/C Holder	deanicsr@iitm.ac.in
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9. Both the institutes will furnish Utilization certificate (UCs) financial year wise to the SERB and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.

10. The institute will maintain separate audited accounts for the fellowship. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.

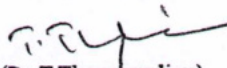
11. The File no. **TAR/2019/000247** may also be mentioned in all research communications arising from the above project with due acknowledgement of **SERB**.

12. As this is the first grant for the fellowship, no previous U/C is required.

13. The institute may refund any unspent balance to SERB by means of a Demand Draft favoring "**FUND FOR SCIENCE AND ENGINEERING RESEARCH**" payable at New Delhi.

14. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board, a statutory body of the Department of Science & Technology (DST), Government of India should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.

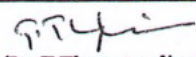
15. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by the Science & Engineering Research Board, a statutory body of Department of Science & Technology (DST), Government of India.


(Dr. T Thangaradjou)
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5.	(i) Registrar, Sathyabama Institute Of Science And Technology, Sathyabama University, Jeppiar Nagar, Rajiv Gandhi Road, Chennai (ii) The Registrar Indian Institute of Technology Chennai I.I.T. Post Office Chennai - 600036 (Receipt of Grant may be intimated by name to the undersigned)


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13 Sep 2019

Dr. Karthick Velu

Sathyabama Institute of Science and Technology
Col. Dr. Jeppiaar Research Park,
Chennai
Tamilnadu
600119
India

Dear Dr. Karthick Velu ,

We are pleased to inform you that you are accepted as a fellow of our International Fellowship Program for the fiscal year of 2020, on the basis of the recommendation made by our Selection Committee.

It is understood that you are to conduct your study on "Tumor specific peptide conjugated self-assembling dendrimer nanomicelles as innovative nanodrug candidates" at National Institute for Materials Science in Ibaraki, Japan.

You will be granted, as a fellow, the expenses of a round trip by air between international airports in India and in Japan as well as the amount of ¥250,000- a month for a period of 12 months of your study.

We wish you good luck in your endeavors.

Sincerely yours,

Yuji Iizawa

Chairman of the Board of Trustees
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Keywords

1. Introduction

2. Materials and methods

3. Results and discussion

4. Conclusion

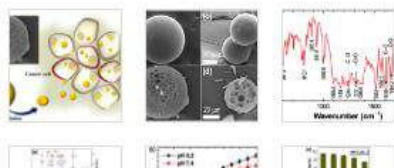
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Applied Surface Science

Volume 487, 1 September 2019, Pages 211–217



Full length article

Quercetin loaded PLGA microspheres induce apoptosis in breast cancer cells

V. Karthick ^{a, *}, Sucheta Panda ^a, V. Ganesh Kumar ^a, Dinesh Kumar ^b, Lok Kumar Shrestha ^c, Katsuhiko Ariga ^d, K. Vasanth ^e, Shanmugavel Chinnathambi ^f, T. Stalin Dhas ^a, K.S. Uma Suganya ^a^a Centre for Ocean Research, Col. Dr. Jeppiaar Research Park, Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai 600119, India^b Centre of Biomedical Research (CBMR), Sanjay Gandhi Post-Graduate Institute of Medical Sciences Campus, Raibareli Road, Lucknow 226014, India^c International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), 1-1 Namiki, Ibaraki, Tsukuba 305-0044, Japan^d Graduate School of Frontier Sciences, The University of Tokyo, 5-1-5 Kashiwanoha, Kashiwa, Chiba 277-8561, Japan^e Interdisciplinary School of Indian System of Medicine, SRM Institute of Science and Technology, Kattankulathur 603203, India^f International Center for Young Scientists, National Institute for Materials Science, 1-2-1 Sengen, Tsukuba 305-0047, Japan

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Aquaculture

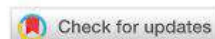
Volume 520, 15 April 2020, 734778



Development and characterization of a skin cell line (SGA) from the mosquitofish *Gambusia affinis* and its susceptibility to fish Betanodavirus

Jyotsna ^a, Parameswaran Vijayakumar ^a , M. Ravi ^a, Raja Sudhakaran ^b, Tohru Mekata ^c, T. Rajaswaminathan ^d^a Centre for Ocean Research, Col. Dr Jeppiaar Research Park, Sathyabama Institute of Science and Technology, Chennai 600 119, Tamil Nadu, India^b Aquaculture Biotechnology Laboratory, School of BioSciences and Technology, Vellore Institute of Technology, Vellore 632 014, Tamil Nadu, India^c Nansei Main station, National Research Institute of Aquaculture, Japan Fisheries Research and Education Agency, Mie 519-0193, Japan^d Peninsular and Marine Fish Genetic Resources Centre, ICAR-NBFGR, CMFRI Campus, Kochi 682 018, Kerala, India

Received 7 June 2019, Revised 16 November 2019, Accepted 23 November 2019, Available online 26 November 2019, Version of Record 22 February 2020.



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Evaluation of coastal aquaculture ponds using remote sensing and GIS

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Coastal aquaculture is one of the fast growing food production sectors worldwide, contributing to more than half of the total volume of aquatic foods for human consumption, and offering great potential for global food security. Remote sensing and GIS technologies contribute to the mapping and monitoring of changes in aquaculture providing essential information for coastal management applications. The present study investigates the growth and expansion of aquaculture and its spatiotemporal dynamics in Nagapattinam district (from Vedaranyam to Vettar River) over the last decade. Multitemporal IRS 1C and IRS P6 remote sensing data were analyzed for detecting and assessing land use and land cover (LULC) change in the Nagapattinam area (Tamil Nadu). Visual interpretations have been made with the help of field surveys, primary data collected on field, and secondary data from government departments. LULC maps were prepared to identify changes in aquaculture areas. The classified area for aquaculture in Nagapattinam is 4.02 km² in 2006 and 9.80 km² in 2016. Similarly, the salt pan area increased from 0.53 km² to 1.53 km² in 2016. The coastal wetlands and marshy lands were used for aquaculture and salt pan activities during 2006 to 2016, providing a livelihood for the people in that area. The study will assist to identify change dynamics in environmental sustainability in the context of livelihood option/development activities.

[**Keywords:** Pond aquaculture; Salt pan; Dynamics; Remote sensing; GIS]

Introduction

Aquaculture is growing more rapidly than any other segment of the animal farming industry¹. In India, the annual fisheries and aquaculture production increased from 0.75 million tonnes in 1950-1951 to 9.6 million tonnes in 2013-2014². Expansion of aquaculture is due to potentially high commercial returns and the ability to produce export earnings. The coastal belt of Nagapattinam is one such locale where aquaculture activity is expanding owing to the availability of land and water resources which are conducive for aquaculture development. These locations cannot be utilized for agriculture. Remote sensing has emerged as the most suitable tool for quantitatively measuring land-cover changes at the landscape scale³. Satellite images provide a synoptic coverage of the earth's surface in spatial and temporal scale and help us to understand how the changes have happened in various parts of the environment including coastal waters^{4,5}. An integrated Geographical Information System (GIS) and remote sensing technique deals with the spatiotemporal information of land use and land cover (LULC) features that are well recognized for decision making in the scientific realm^{6,7}. GIS and remote sensing combines the multiple spatial

datasets, such as maps, aerial photographs, and satellite images for preparing the quantitative, qualitative, and descriptive geo-databases for periodical changes of the LULC features⁸. More recently, the status of GIS, remote sensing, and mapping applications in aquaculture was reviewed from an ecosystem and management perspective⁹. Most of the existing LULC patterns replicate the interaction of human action with the environment, and because their magnitude and location can be heterogeneous, remote sensing techniques can be used for multitemporal monitoring, revealing the changes in the land cover and supplying important information on land-cover dynamics¹⁰.

The present study has been carried out in Nagapattinam coast (from Vedaranyam Canal to Vellar River) of Tamil Nadu to ascertain the changes in LULC from 2006 to 2016 along with the growth and development of aquafarming practices.

Methodology

Study area

Nagapattinam is located between 10° 40' 00", N 79° 45' 00" E and 10° 55' 00" N 79° 55' 00" E (Fig. 1). The total study area covers 71.71 sq. km.

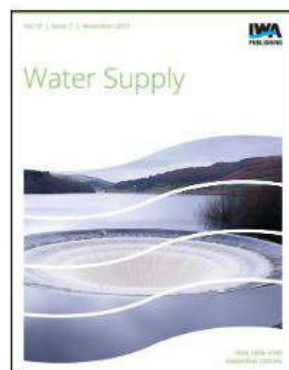


Water Supply

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1 November 2019

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Marykutty Abraham; S. Mohan



Water Supply (2019) 19 (7): 2107–2115.

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Abstract



Population growth and higher living standards have resulted in ever-increasing demand for water. For the present study natural recharge was computed from a

water balance model and daily water level fluctuations were measured to study

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Title: Bioremediation of marine oil spill using beeswax

Authors: [Mathew, Riya Ann](#)
[Lavanya, V.](#)
[Rasiga, S.](#)
[Abraham, Marykutty](#)

Keywords: Bioremediation;Biostimulation;Beeswax;Oil spill;Dissolved oxygen

Issue Date: Aug-2019

Publisher: NISCAIR-CSIR, India

Abstract: Oil spills can have devastating environmental, economical, and social impacts. The use of bioremediation is a preferred technique for cleaning up oil spills because it facilitates the process of naturally converting oil into non-toxic byproducts without any further local environmental disruption. An experimental study was conducted to degrade marine oil spill using beeswax as a biostimulant for bioremediation and also to study the chemical variation. Beeswax, a nutrient source for proliferation of olephic (oil eating) bacteria, was added in intervals of five days and the corresponding dissolved oxygen (DO) was measured using Azide Winkler's method. The recuperation of the DO concentration from 3.1 mg/l to 7.4 mg/l is an indication of the reduction in oil content. An oxygen sag curve and a graph showing temporal variation of chemical parameters such as nitrite, nitrate, and ammonium were plotted. During the period of study, the oil content reduced from 10 ml to 5 ml. As the

DOI: 10.52549/ijeei.v7i4.1459

Performance Analysis of Montgomery Multiplier using 32nm CNTFET Technology

N Mathan, S Jayashri, Nurul Ezalia Alias, Michael Loong Peng Tan

Abstract

In VLSI design vacillating the parameters results in variation of critical factors like area, power and delay. The dominant sources of power dissipation in digital systems are the digital multipliers. A digital multiplier plays a major role in a mixture of arithmetic operations in digital signal processing applications hinge on add and shift algorithms. In order to accomplish high execution speed, parallel array multipliers are comprehensively put into application. The crucial drawback of these multipliers is that it exhausts more power than any other multiplier architectures. Montgomery Multiplication is the popularly used algorithm as it is the most efficient technique to perform arithmetic based calculations. A high-speed multiplier is greatly coveted for its extraordinary leverage. The primary blocks of a multiplier are basically comprised of adders. Thus, in order to attain a significant reduction in power consumption at the chip level the power utilization in adders can be decreased. To obtain desired results in performance parameters of the multiplier an efficient and dynamic adder is proposed and incorporated in the Montgomery multiplier. The Carbon Nanotube field effect transistor (CNTFET) is a promising new device that may supersede some of the fundamental limitations of a silicon based MOSFET. The architecture has been designed in 130nm and 32nm CMOS and CNTFET technology in Synopsys HSpice. The analysed parameters that are considered in determining the performance are power delay product, power and delay and comparison is made with both the technologies. The simulation results of this paper affirmed the CNTFET based Montgomery multiplier improved power consumption by 76.47% ,speed by 72.67% and overall energy by 67.76% as compared to MOSFET-based Montgomery multiplier.

Keywords

Montgomery multiplier; Carbon nanotube; CNTFET; Power Delay Product

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Dear Sindu Ma'am,

Thanks for your confirmation.

As per our discussion, please find below the schedule of trainings for the upcoming batches.

Sr No	Module	Year	Batch	Students	No of Days	Dates
1	MR	4th Yr	1		3	10th-12th July
2	MR	4th Yr	2		3	18th-20th July
3	Leadership	4th Yr	1&2		2	22nd-23rd July

4	Xray & CT	3rd Yr	1		5	19th-24th Aug
5	Xray & CT	3rd Yr	2		5	26th-31st Aug

Kindly provide the count of students for each batch asap so we can send the training material accordingly.

One AW server is already present at the institute, I have arranged for the other one which should reach by Monday.

We will ensure that the servers are configured & connected before the training starts.

Please let me know if you have any queries.

Regards

Gaurav Sapra

From: Sindu Divakaran <sindudiva@gmail.com>

Sent: 27 June 2019 14:54

To: Sapra, Gaurav (GE Healthcare) <Gaurav.Sapra@ge.com>

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Subject: EXT: GE Training schedule - Sathyabama, Chennai

Dear Gaurav,

Sorry for the delay in providing you with the training dates.

Given below is the information you asked for.

For the 3 year training, August 12th, 15th and 23rd is a public holiday.

Kindly make sure there are only 25 in a batch during training.

For final years, i have given only 2 weeks of training. The MR training and leadership and hospital visit can be overlapped during the 2 weeks.

Regards

Sindu Divakaran

Assistant Professor,

Sathyabama

Chennai

S. No	Degree	Specialisation`	Batch	Program	Topic	No of students	Training Month	Tentative dates
1	B.Tech	Biomed	4 year	Module 3	MR & Leadership	75	July	15 – 28 July 2019
2	B.Tech	Biomed	3 year	Module 2	X-ray & CT	72	August	5 – 31 August 2019





Certificate

GE HEALTHCARE - Sathyabama Institute of Science and Technology
Centre of Excellence for Healthcare Technologies

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Sathiyanarayanan S

for having successfully completed 175 hours industry ready, Hands-On
Biomedical Engineering Skill Certification Program

"GE - Sathyabama Institute of Science and Technology
Advanced Medical Engineering Program"

Date of Certification: 30th April, 2020

Amit Khandelwal

Business Leader - Education Solutions & Professional Service
GE Healthcare, South Asia

Dr. Wilson Aruni Ph.D., FAMPV.

Pro Vice Chancellor
Sathyabama Institute of Science and Technology



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MISHRA
User Type: PD
Financial Year: 2019-2020



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Utilisation Certificate

OLD UC

Payee Details

Controller: 037-SCIENCE AND TECHNOLOGY
Sanction Number: DST/TDT/SHRI-05/2018 (G)
Sanction Type: Transfer (DDO Bill)
IFD Number: C/4011/IFD/2019-20
Scheme: 1819-INNOVATION, TECHNOLOGY DEVELOPMENT AND DEPLOYMENT
DDO: 258297-DEPARTMENT OF SCIENCE & TECHNOLOGY (INCLUDING,NCST)
Sanction Status: Approved
Sanction Date: 28/01/2020
Sanction Amount: 1208880
IFD Date: 05/11/2019
PAO: 058296-PAO(DST), New Delhi
Remarks: 1 st installment for the general

Account Details:

Grant	Department (For UT Grants Only)	Function Head	Object Head	Category	Amount	External PAO	Available Budget
086 - Department of Science and Technology		3425602007000 - INNOVATION TECHNOLOGY DEVELOPMENT AND DEPLOYMENT	31 - GRANTS-IN-AID GENERAL	5 - VOTED	1208880		-13868611

Agency	Bank Account No	Amount	Instrument Type
Kanchi Mamunivar Centre for Post Graduate Studies	212101000021970 - SHRI PROJECT ,r ▼	684,080.00	RTGS
Sathyabama University, Chennai	6089858032 - SATHYABAMA UNIVER\$ ▼	524,800.00	RTGS

ePayment Details

Accredited Bank	UNION BANK OF INDIA ▼	Amount	1208880	Not Payable Before : *	Required
Party Name	SHRI PROJECT ,r	IFSC Code	IOBA0002121	Party Account No	212101000021970
	SATHYABAMA U		IDIB000S201		6089858032
				Amount	684080
					524800
				Payee Remarks	Dr Bijaya kumar Nayak
					Dr Anima Nanda

Note: If the IFSC Code is not automatically shown it means bank A/C is not validated.If payment process is urgent please key in the IFSC Code and process payment.Please ensure IFSC Code is correct.

Back

No. DST/TDT/SHRI-05/2018 (G)

Government of India
Ministry of Science & Technology
Department of Science & Technology
(Technology Development & Transfer)

Technology Bhavan, New Delhi

Dated **28.01.2020**.

ORDER

Sub: - Financial support for the project entitled "Assessment of Fungal growth and Heritage protection from fungal bio deterioration by metal nano-materials involved in deterioration of archaeological sites of Puducherry and Mahabalipuram" by Dr. Bijaya Kumar Nayak, Assistant Professor, Department of Botany, Kanchi Mamunivar Centre for Post Graduate Studies(KMCPGS), Pondicherry-605008 and Dr. Anima Nanda, Professor, Dept. of Biomedical Engineering, Sathyabama Institute of Science & Technology (SIST), Shollinganallur, Chennai- 119- Release of the first installment regarding.

Sanction of the President is hereby accorded to the approval to the above mention project at a total cost of **Rs. 47,32,123/- (Rupees Forty-Seven Lakh Thirty-Two Thousand One Hundred Twenty-Three Only)** for the duration of **3 years**. The detailed breakup of the grant is as below:-

Total Project Cost = Rs. 47,32,123/-

Budget for KMCPGS, Pondicherry= Rs. 30,33,823/-

Recurring = **Rs.17,80,080/-**

Non-Recurring = **Rs.12,53,743/-**

Budget for SIST, Chennai=Rs. 16,98,300/-

Recurring = **Rs.13,30,800/-**

Non-Recurring = **Rs.3,67,500 /-**

Recurring Head (Host Institute-I) KMCPGS					
Sl.No	Items	Budget			
		1 st Year	2 nd Year	3 rd year	Total
1.	Manpower *	3,34,080	3,34,080	3,61,920	10,30,080
2.	Consumables	2,00,000	50,000	50,000	3,00,000
3.	Travel	50,000	50,000	50,000	1,50,000
4.	Contingencies	50,000	50,000	50,000	1,50,000
5.	Overhead expenses	50,000	50,000	50,000	1,50,000
	Total	6,84,080	5,34,080	5,61,920	17,80,080

* (1-Project fellow for 2 years @Rs.14,000/- + 16% HRA & @Rs.16,000/- + 16% HRA for 3rd year and 1-Project Assistant @Rs.10,000/- + 16% HRA)

Recurring Head (Host Institute-II) SIST, Chennai					
Sl. No.	Items	Budget (in Rs.)			
		1 st year	2 nd year	3 rd year	Total
1	Manpower **	1,84,800	1,84,800	2,11,200	5,80,800
2.	Consumables	2,00,000	1,00,000	50,000	3,50,000
3.	Travel	50,000	50,000	50,000	1,50,000
4.	Contingency	50,000	50,000	50,000	1,50,000
5.	Institute overhead	40,000	30,000	30,000	1,00,000
	Total	5,24,800	4,14,800	3,91,200	13,30,800

** (1-Project Fellow @Rs.14,000/- + 10% HRA for first 2 years and @Rs.16,000/- + 10% HRA for 3rd year)

2. The sanction of the President is also accorded to the release **₹6,84,080/- (Rupees Six Lakh Eighty-Four Thousand Eighty Only)** to the "Director, Kanchi Mamuniva, Centre for Post Graduate Studies, Pondicherry" and **₹5,24,800/- (Rupees Five Lakh Twenty-Four Thousand Eight Hundred Only)** to the "Registrar, Sathyabama Institute of Science Technology, Chennai" being the first installment of grant under "General Component" for the above mentioned project.

Handwritten signature and date:
28/01/2020

3. This sanction is subject to the condition that the grantee organization will furnish to the Department of Science & Technology, financial year wise Utilization Certificate (UC) in the proforma prescribed as per GFR 2017 and audited statement of expenditure (SE) along with up to date progress report at the end of each financial year duly reflecting the interest earned / accrued on the grant received under the project. This is also subject to the condition of submission of the final statement of expenditure, utilization certificate and project completion report within one year from the scheduled date of completion of the project.

4. The grantee organization will have to enter & upload the Utilization Certificate in the PFMS portal besides sending it in physical form to this Division. The subsequent/final installment will be released only after confirmation of the acceptance of the UC by the Division and entry of previous Utilization Certificate in the PFMS.

5. If the grant has been released under capital head through separate sanction order under the same project for purchase of equipment(s), separate SE/UC has to be furnished for the release Capital head grant.

6. The grant-in-aid being released is subject to the condition that

- a) A transparent procurement procedure in line with Provisions of General Financial Rules 2017 will be followed by the Institute/Organization under the appropriate rules of grantee organization while procuring capital assets sanctioned for the above mentioned project and a certificate to this effect will be submitted by the Grantee organization immediately on receipt of the grant.
- b) While submitting Utilization Certificate/Statement of Expenditure, the organization has to ensure submission of supporting documentary evidences with regard of the purchase of equipment/capital assets as per the provisions of GFR 2017. Subsequent release of grants under the project shall be considered only on receipt of the said documents.

7. As per the GFR 2017 Rule 230 (8) the Grantee Institute should ensure that all the interests or other earnings against Grant-in-Aid or advances (other than reimbursement) released to any Grantee institution should be mandatorily remitted to the Consolidated Fund of India immediately after finalization of the accounts. Such advances will not be allowed to be adjusted against future releases.

8. As per the GFR 2017 Rule 230 (17) "the Grantee Institute should agree to make reservations for Scheduled Castes and Scheduled Tribes or OBC in the posts or services under its control on the lines indicated by the Government of India".

9. As per the GFR 2017, it is mandatory for the grantee organization to purchase the equipment through the Government e-Marketplace (GeM), to the extent available there as the project involves government funding.

10. The grantee organization will maintain separate audited account for the project and the entire amount of grant will be kept in an interest bearing account. For Grants released during F.Y. 2017-18 and onwards, all interests and other earnings against released Grant shall be remitted to Consolidated Fund of India (through Non-Tax Receipt Portal (NTRP), i.e. www.bharatkosh.gov.in), immediately after finalization of accounts, as it shall not be adjusted towards future release of Grant. A certificate to this effect shall have to be submitted along with Statement of Expenditure/ Utilization Certificate for considering subsequent release of Grant/ Closure of Project accounts.

11. DST reserves sole rights on the assets created out of grants. Assets acquired wholly or substantially out of government grants (except those declared as obsolete and unserviceable or condemned in accordance with the procedure laid down in GFR 2017), shall not be disposed of without obtaining the prior approval of DST.

12. The account of the grantee organization shall be open to inspection by the sanctioning authority and audit (both by C&AG of India and Internal Audit by the Principal Accounts Office of the DST), whenever the organization is called upon to do so, as laid down under Rule 236(1) of General Financial Rules 2017.

Handwritten signature and date:
 28/6/2020

13. Due acknowledgement of technical support/ financial assistance resulting from this project grant should mandatorily be highlighted by the grantee organization in bold letters in all publication / media release as well as in the opening paragraphs of their Annual Reports during and after the completion of the project.

14. Failure to comply with the terms and conditions of the Bond will entail full refund with interest in terms of Rule 231 (2) of GFR 2017.

15. The expenditure involved is debatable to Demand No.86, Department of Science & Technology for the year 2019-20:

3425	Other Scientific Research (Major Head)
60	Others
60.200	Assistance to Other Scientific Bodes (Minor Head)
70	Innovation, Technology Development & Deployment
70.00.31	Grants-in-aid General for the year 2019-20
	Previous: TDP-NRDMS-3425.60.200.26.01.31

16. The amount of **₹6,84,080/- (Rupees Six Lakh Eighty-Four Thousand Eighty Only)** will be drawn by the Drawing and Disbursing Officer, DST and will be disbursed to **"Director, Kanchi Mamunivar, Centre for Post Graduate Studies, Pondicherry"**.

17. The bank details for electronic transfer of funds through RTGS are given below: -

Name of A/C Holder	SHRI Project, KMCPGS, Puducherry
Bank A/C No	212101000021970
Name of the Bank & branch	Indian Overseas Bank
RTGS/IFSC code	IOBA0002121
MICR code	605020008

18. The amount of **₹5,24,800/- (Rupees Five Lakh Twenty-Four Thousand Eight Hundred Only)** will be drawn by the Drawing and Disbursing Officer, DST and will be disbursed to **"Registrar, Satyabhama Institute of Science & Technology, Chennai "**.

19. The bank details for electronic transfer of funds through RTGS are given below: -

Name of A/C Holder	Satyabhama Institute of Science & Technology
Bank A/C No	6089858032
Name of the Bank & branch	Indian Bank, Satyabhama Institute of Science & Technology
RTGS/IFSC code	IDIB000S201
MICR code	600019229

20. As per Rule 234 of GFR 2017, the sanction has been entered at S. No **348** in the register of grants maintained in the Division for the scheme DDP.

21. This issues with the concurrence of IFD Vide their Concurring Dy. No **C/4011/IFD/2019-20** dated **-05.11.2019**

Akshay
28/01/2020

(Dr. Akhilesh Mishra)
Scientist-E
Tel: 26590254

To

The Pay and Accounts Officer,
Department of Science & Technology,
New Delhi.

Copy of information and necessary action to: -

1. The Principal Director of Audit, Scientific Department, IIIrd floor, AGCR Building, I.P. Estate, New Delhi.
2. Drawing and Disbursing Officer, DST, Cash Section. (two copies)
3. **Dr. Bijaya Kumar Nayak,**
Assistant Professor,
Department of Botany,
Kanchi Mamunivar Centre for Post Graduate Studies,
Pondicherry-605008
4. **Dr. Anima Nanda,**
Professor,
Dept. of Biomedical Engineering,
Sathyabama Institute of Science & Technology,
Sholinganallur, Chennai- 600 119
5. **Director,**
Kanchi Mamunivar Centre for Post Graduate Studies,
Pondicherry-605008
6. **Registrar,**
Sathyabama Institute of Science & Technology,
Sholinganallur, Chennai- 600 119
7. The Controller of Accounts, DST
8. Head(TDT),DST
9. Sanction folder (TDT).
10. File copy.

Mishra
28/01/2020

(Dr.Akhilesh Mishra)
Scientist-E



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Highlights

Abstract

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Keywords

1. Introduction

2. Materials and Methods

3. Results and Discussion

4. Conclusion

Acknowledgement

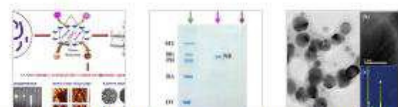
Appendix A. Supplementary data

References

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Journal of Photochemistry and Photobiology B:
Biology

Volume 194, May 2019, Pages 119–127



Bio-engineering and cellular imaging of silver nanoparticles as weaponry against multidrug resistant human pathogens

Lakshmipathy Muthukrishnan ^a , Muralidharan Chellappa ^a, Anima Nanda ^b

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- Spectroscopic and Microscopic characterization of AgNPs were

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From the journal:
RSC Advances

Bio-fabrication of pigment-capped silver nanoparticles encountering antibiotic-resistant strains and their cytotoxic effect towards human epidermoid larynx carcinoma (HEp-2) cells



[Lakshmi pathy Muthukrishnan](#)^a, [Muralidharan Chellappa](#)^a, [Anima Nanda](#)^b, [Sudhakar Thukkaram](#)^b, [Gracyfathima Selvaraj](#)^c,
[Bavanilatha Muthiah](#)^b, [Suresh Sagadevan](#) ^{*d} and [J. Anita Lett](#) ^e

 [Author affiliations](#)

Abstract

Bacterial biomolecule-mediated nanoparticle (NP) synthesis constitutes a reliable, eco-friendly approach that ameliorates green-chemistry principles. In this study, stable silver nanoparticles were synthesized by exposing aqueous silver ions to an extracellular diffusible pigment produced by *Pseudomonas aeruginosa* (PA6) under optimized laboratory conditions. Spectroscopic and microscopic analyses showed the typical characteristics of silver with an average size of ~28.30 nm and spherical shape. The particles were polydispersed and showed no definite

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Article type	Paper
Submitted	11 Feb 2019
Accepted	04 May 2019
First published	21 May 2019



This article is Open Access



Citation

RSC Adv., 2019, **9**, 15874-15886

Effect of UV-β radiation on the Growth, Pigment production and Macromolecular contents in Marine microalgae

Sneha Liya John¹, G. Prakash Williams^{1*}, Brijithlal N. D.¹, Namitha L. H², S. Krishnakumar³

¹PG Department of Botany and Biotechnology, Bishop Moore College, Mavelikara, Alapuzha Dist, Kerala- 690110

²Department of Botany, University of Kerala, Kariyavattom, Trivandrum, Kerala 695581

³Faculty of Bio and Chemical Engineering, Department of Biomedical Engineering, Sathyabama Institute of Science and Technology, Chennai, Tamilnadu, India

*Corresponding Author E-mail: prakash.gw@gmail.com

ABSTRACT:

Microalgae are free living microorganisms present in a variety of aquatic habitats. They are the primary producers of all water bodies. They have been used as a food source and for the treatment of various ailments for over two thousand years. Their nutraceutical values are recently recognized and are found as an excellent source of pigments and macromolecular contents. Nevertheless, the alarming ozone depletion causes an increase in ultraviolet radiation (UVR) in the natural environment. Among the UVR, UV-β cause adversely on the growth and metabolism of microalgae. In this study, isolated microalgae *Nannochloropsis* sp. and *Synechocystis* sp. are cultivated in walne's medium. UV-β treated cultures were examined for growth kinetics and pigments like chlorophyll, carotenoids, phycobilins etc. The impact of UVR on the macromolecular contents like protein, carbohydrates and lipids were also studied. It is found that UV-radiation seriously affected the growth, pigment production except chlorophyll a, total chlorophyll in both *Nannochloropsis* sp. and *Synechocystis* sp. Likewise the UV- β exposure decreased the carbohydrate and lipid production, but increased the protein content in both of the microalgal isolates.

KEYWORDS: Macromolecular contents, Microalgae, *Nannochloropsis* sp., *Synechocystis* sp., UV-β radiation.

INTRODUCTION:

Microalgae are the primary producers of all water bodies and are constitute mostly by the unicellular free living algae. The diversity of microalgae is vast and they are used as a potential source of food and nutraceuticals. The scientific literature indicates the existence of 200,000 to several million species of microalgae when compared to about 250,00 species of higher plants¹. Green microalgae usually grow in fresh water and sea water, whereas several species grow in extremely saline environment. A number of species of microalgae occur virtually in every type of terrestrial environment, including the walls of urban buildings², biotic crusts in hot deserts. Microalgae can also grow in rich humus soil, desert sands, rocks, snowfields *etc*^{3,4}.

Microalgae photosynthesizes directly from the Sun's radiation. This characteristic designates most algae as autotrophs in contrast to heterotrophs. The algal photosynthesis is primarily based on the Calvin cycle wherein ribulose-1,5-bisphosphate synthesize 3-phosphoglyceric acid (3-PGA), which is consumed during production of glucose and other metabolites⁵. Microalgae have better photon conversion effectiveness and can produce and build up large quantities of carbohydrate biomass^{6,7}. Microalgae can transform approximately 6% of the total incident radiation energy into fresh biomass⁸.

With the recent evidence of depletion of ozone layer in the stratosphere results in the concomitant increase in ultraviolet B radiation (UV β). The major cause of this due to anthropogenic pollution of the atmosphere⁹. Rapid industrialization in the past few decades cause an increase in pollutants such as chlorofluorocarbons (CFCs), halocarbons, chlorocarbons (CCs), organobromide (OBs), carbondioxide, methyl chloroform (MCF) and dioxins that are responsible for the depletion of the UV- screening ozone layer in the stratosphere¹⁰. Aquatic systems with high transparency of oligotrophic waters are exposed to the highest levels of ultraviolet radiation. Intertidal and epipelagic marine living forms also face the same situation. In marine water, UV-β can penetrate down to a water depth of 20- 30 m¹¹. Algae may develop numerous strategies to cope with UV radiation like vertical migration, multiple layered cell walls, absorbing screening compounds such as carotenoids, mycosporine like amino acids (MAAs), scytonemines, proteins and some repairing enzymes that enable adaptation to environmental stress^{12,13}.

UV radiation (UVR) describes the UV wavelength from 200 to 400 nm. UVR is usually of three spectral regions: UV-C (λ max= 200 to 280 nm), UV-β (λ max= 280 to 315nm) and UV-A (λ max= 315 to 400nm). In general, the studies related with the effects of UV radiation, usually concerned with a wave band from 280 to 400nm (UV -A to UV -β). The penetration of solar UV-β radiation (280 – 315 nm) to the earth surface is becoming a global concern. UV- β radiation is a small component of the solar spectrum (<1% of energy) it is highly reactive and induces significant physiological, biochemical, genetic and structural damages to the plant cells to ensuring oxidative stress¹⁴⁻¹⁶. It is hypothesized that the UV B wavebands of UV radiation affect the growth and metabolism of microalgae.

Investigating populations of microalgae under UV stress conditions is significant considering their role in ecosystems. They are involved in the primary production of biomass, biodiversity as well as being sources of valuable natural products. Hence this scientific study has been carried out among the two microalgal isolates- *Nannochloropsis* sp. and *Synechocystis* sp. to find out the impact of UV-β on their growth, pigment production and macromolecular contents.

MATERIALS AND METHODS:

Isolation of microalgal samples:

The samples were collected from Rajakkamangalam, Kanyakumari District (Lat. 8°12' N; Long. 77°36' E). Sea water contains many species of microalgae which are suspended in different layers of water column. The collection method varies according to the stratum in which the algae are present. In the present study, bottling method is followed. One litre sterile transparent water bottle was taken and the cap was removed by immersing it at less than 10cm from the surface of water column. Keep all the bottles in a sample collection bag (or) box for transportation. Microalgae



or

Article PDF Available

INFLUENCE OF PHYSICOCHEMICAL PARAMETERS ON ARTEMIA POPULATION IN SOLAR SALTPANS OF KANYAKUMARI DISTRICT, TAMILNADU, INDIA

September 2020

Authors:



Y Biju



M Krishnaveni

**Mariavincet Michael Babu**

Manonmaniam Sundaranar University

**S. Krishnakumar**

Sathyabama Institute of Science and Tec...



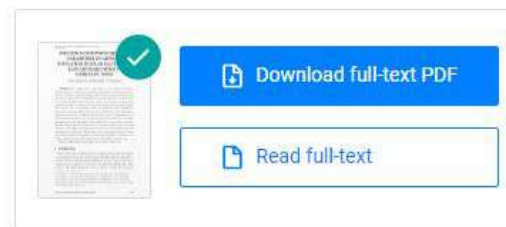
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From the journal:
RSC Advances

Bio-fabrication of pigment-capped silver nanoparticles encountering antibiotic-resistant strains and their cytotoxic effect towards human epidermoid larynx carcinoma (HEp-2) cells



[Lakshmi pathy Muthukrishnan,^a](#)
[Muralidharan Chellappa,^a](#)
[Anima Nanda,^b](#)
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[Gracyfathima Selvaraj,^c](#)
[Bavanilatha Muthiah,^b](#)
[Suresh Sagadevan](#) ^{*d} and [J. Anita Lett](#) ^e

 Author affiliations

Abstract

Bacterial biomolecule-mediated nanoparticle (NP) synthesis constitutes a reliable, eco-friendly approach that ameliorates green-chemistry principles. In this study, stable silver nanoparticles were synthesized by exposing aqueous silver ions to an extracellular diffusible pigment produced by *Pseudomonas aeruginosa* (PA6) under optimized laboratory conditions. Spectroscopic and microscopic analyses showed the typical characteristics of silver with an average size of ~28.30 nm and spherical shape. The particles were polydispersed and showed no definite

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Article type	Paper
Submitted	11 Feb 2019
Accepted	04 May 2019
First published	21 May 2019



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Citation

RSC Adv., 2019, **9**, 15874-15886



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

SCHOOL OF BUILDING AND ENVIRONMENT
DEPARTMENT OF ARCHITECTURE

in collaboration with



COUNCIL OF ARCHITECTURE
Training & Research Centre

Convened by
Prof. Jayashree Deshpande
Director, COA-TRC, Pune

Coordinated by
Ar. Ebin Harrison.S
Department of Architecture

Sathyabama Institute of Science and Technology

04th - 08th
MARCH 2019

VENUE : Student Activity Center

Department of Architecture
Sathyabama Institute of Science and Technology

LAST DATE FOR REGISTRATION
25 FEB 2019

URBAN CLIMATE AND BUILT ENVIRONMENT

TROPICAL CITIES are characterized by high temperatures, humidity and suffer extensively due to the urban heat island effect which affects the thermal comfort conditions.

The outcome of the programme will facilitate Urban planners, Architects and Decision makers in relooking at the regulations governing the urban street geometry, the thermal capacity of materials, ground cover, and orientation. It will also serve as an eye-opener in understanding the factors that influence thermal comfort in indoor environment.

REGISTRATION PROCESS

Colleges who have registered with Council of Architecture under the Collaborative Training Program for the year 2018 - 19 by payment of training fees in advance, proportionate to their average intake, can nominate teachers to participate in this Program. The nominated teachers can register for this Program by filling up the attached google form and mailing back a scanned image of the application form duly authenticated by HOD/Principal on directorcoatr@gmail.com, tpcoatr.pune@gmail.com and e_harrison@yahoo.com

Only in case nominated teachers registered for this Program require provision of accommodation, the facility of accommodation on sharing basis, breakfast and dinner for five days can be availed of by payment of Rs. 5,000/- per head by online payment/ bank challan and mailing back scanned images of the proof of payment together with application form duly authenticated by HOD/Principal on directorcoatr@gmail.com, tpcoatr.pune@gmail.com and e_harrison@yahoo.com

OR

Teachers/architects other than those nominated by schools of architecture, desirous of participating in this training Program, may register by filling up the attached google form and mailing it back along with a scanned image of receipt of online payment/ bank challan towards registration fees on directorcoatr@gmail.com, tpcoatr.pune@gmail.com and e_harrison@yahoo.com

OBJECTIVE

TO understand the impact of urbanization on climate elements in determining the thermal comfort of both indoor and outdoor urban environments.

Urban heat Island Studies
Landscape and Building Envelope
Urban Mapping and GIS
Sustainability Solutions
Green projects in the city
Alternate Building materials and techniques
Indoor thermal comfort, Adaptive comfort Models
Climatology & Building Physics
Integrated Environmental Solutions (IES)

TRAINING AREAS

Dr. Rajashree Kotharkar
VNIT, Nagpur (Urban Heat Island studies)
Dr. A. Lilly Rose
SPA Vijayawada (Urban Heat Island and its impact)
Dr. Rajasekar
IIT Roorkee (Indoor Thermal Comfort)
Ar. C.V. Subramanian
PMIST (Comfort analysis)
Ar. Mona Doctor-Pingel
Auroville (Alternative Building materials)
Ar. Sriram Ganapathy
KSM Architecture Studio

RESOURCE PERSONS

Registration fees:

- Rs. 10,000/- (inclusive of delegate kit, course material and lunch + site visits if scheduled,)
- Rs. 15,000/- (inclusive of delegate kit, course material, accommodation on sharing basis, breakfast, lunch + dinner + site visits if scheduled)

For Online Payment/Bank Challan please follow the following link:

<https://www.onlinesbi.com/sbicollect/collecthome.htm?corpId=872531>

Link for Application Form:

<https://goo.gl/forms/wAW12nIkPvKBDGHp1>

Local Coordinator:

SURYA RAJKUMAR. +91 9952939580

Email id: suryarajkumar.arch@sathyabama.ac.in

Kindly send the hard copy of registration form and receipt of online payment/bank challan (as applicable) the following address for the confirmation of participation

Prof. Jayashree Deshpande,
Director,

Council of Architecture Training & Research Centre (COA-TRC),
2nd Floor, A-4 (B), Abhimanshree, Off Pashan Road,
Pune - 411008, Maharashtra, India
Phone No: 0-9764-000-352

COA-IRC III "URBAN CLIMATE AND BUILT ENVIRONMENT"

Dates: 4/3/2019 - 8/3/2019

Venue: ACTIVITY CENTRE, DEPARTMENT OF ARCHITECTURE,

Details of Participants:

SATHYABAMA, CHENNAI

Sr. No	Name	Institute / Personal Address	Mobile	Email Id	COA Regn. No.	Require Accommodation	Signature	No. of Sessions Attended	Certificate Awarded /Returned
1.	CATHERINE SELVARAJ	Sathyabama Institute of Science & Technology	9884869091	cathyarchbq@gmail.com	CA/2009/45208	No			
2.	ARULMALAR KAMARAJ	Sathyabama Institute of Science & Technology	9444825761	arulmalar.2@gmail.com	COA/2003/31980	NO			
3.	SANGHAVI.VV	Sathyabama Institute of Science & Technology	9940599091	architect.sanghavi@gmail.com	COA/2009/44632	NO			
4.	S. KAVITHA	Sathyabama Institute of Science & Technology	9944704357	kavisureshms@gmail.com	CA/2010/49755	NO			
5.	SHEETAL KALAMKAR	Sathyabama Institute of Science & Technology	9922991404	Sheetal.amrathas31@gmail.com	COA/2001/28381	NO			
6.	RENUKA DEVI.N	Singhad College of Architecture, Pune	9157347591	origami.renuka@gmail.com	CA/2014/263878	No			
7.	PRAVEEN KUMAR BOTU	GITAM School of Architecture, Vizag.	9811050933	praveenbotu@gmail.com	CA/2005/26191	Yes			
8.	SHANKAR GIRI	PILCO MOOY COLLEGE OF ARCH. PLOT NO. 11/1/A, COA-SECTOR, CTC.	9937416934	shankargiri99@gmail.com	CA/2011/51553	YES			
9.	Dr. DEEPAJI GANGOPADHYAY	Sathyabama Institute of Science & Technology	9840753787	gangopadhyay100@yahoo.co.in	CA/96/19642	NO			
10.	AR. Mohamed Rafiq.S	ARIT, POCHAMPUR, Chennai	117666762	architectraf@gmail.com	CA/2013/60632	NO			
11.									
12.									



Signature of Coordinator
Prof. _____
Signature of Principal
Prof. _____

Fee Proposal

Submitted to

M/s. SATYABHAMA INSTITUTE OF SCIENCE AND
TECHONOLGY

for

LEED v4 Green Associate Exam Prep Course

Dated 1ST AUGUST 2018

GREEN YOUR CAREER

There is tremendous opportunity for students who integrate sustainability into their education. Sustainability knowledge can help distinguish you in a competitive marketplace. It will help showcase your domain expertise, organizing and project management skills together with sustainability as the backdrop.

Establish credibility by earning a credential. The LEED Professional Credential indicates to the marketplace that you have a clear understanding of green building principles and the implementation of LEED. Consider earning one seriously.

The Green Associate credential attests to basic knowledge and skill in understanding and supporting green design, construction and operations. Internationally, there is general agreement in the industry that a LEED credential increases chances of employment.

Eddego – Advanced Sustainability Training for the New Green Economy

Eddego is the training division of En3 and works with core partners such as the US Green Building Council to create a platform for honest credentialing. By identifying new credentialing venues, linking and clustering certification programs, conducting focus groups and engaging various stakeholders and partners, Eddego is offering new and innovative programs in energy and sustainability ranging from green project and management skills to green building, energy efficiency power and smart power.

Eddego is a proven training expert in the field of green buildings with practical experience of working on more than 200 million square feet of green buildings in various parts of the world. Our instructors are industry professionals with years of experience working with LEED and delivering training to individuals studying to pass the LEED exam.

Students across the world are just starting to look at this important area of study. Take the lead and begin your journey to a sustainable career.

Who Should Attend:

Architects | Engineers | Project Managers | Top Management | Economists | Traders | Product Manufacturers | Energy Managers | Waste Managers | Water Specialists | Landscape Artists

This is one chance you will not want to miss!!

LEED v4 Green Associate Exam Study

Course Description

The course will be delivered over two and half days. The study material and course content will cover the information necessary to successfully prepare for the LEED GA exam. You will learn about:

- Process to become a LEED GA
- Overview of exam
- Green building basics
- USGBC, GBCI and LEED
- Minimum program requirements for LEED certification
- Process for LEED building certification
- Integrated Design Process
- Commonalities and linkages between various LEED credits
- Reference standards that you need to be familiar with
- Special tips on study methods and exam-taking skills
- Detailed information about LEED credit categories and building strategies related to the various LEED sections:
 - Location and Transportation
 - Sustainable Sites
 - Water Efficiency
 - Energy and Atmosphere
 - Materials and Resources
 - Indoor Environmental Quality
 - Innovation in Design
 - Regional Priority

During the course you will have the opportunity to ask questions to your instructor. You will also be able to test your knowledge during the course through the use of practice questions posed by your instructor. You will also be provided with additional study tools, including access to online practice exams, a copy of presentation slides etc.

Course Benefits:

- Find out what you need to know to successfully pass the LEED GA exam.
- Learn from highly qualified instructors with real life experience
- Gain access to valuable knowledge and access to quality study tools
- Special discounted student fees for the course and for the exam
- The fee would include in person course delivery. USGBC would conduct the certification exam on a planned date at Prometric.

Why Eddego?

Eddego is the training division of En3. We are a long-standing USGBC member high reputation. Eddego is a proven training expert in the field of green buildings with practical experience of working on more than 200 million square feet of green buildings in various parts of the world. Our instructors are industry professionals with years of experience working with LEED and delivering training to individuals studying to pass the LEED exam.

Some of our Faculty

Karthik Narayan T S, BE (Hons.) Chemical Engineering and MSc (Hons) Biological Sciences, Birla Institute of Technology & Science, Pilani; LEED AP BD+C; LEED AP EB O+M; IGBC AP, GRIHA Evaluator and Trainer; BEE certified energy auditor (All India 3rd on the merit list)

Karthik has over 17 years of experience in executing and managing several complex Development, Maintenance and Re-engineering projects for leading multinational IT companies. Besides being a LEED AP, Karthik is a Certified Energy Auditor and Manager by Bureau of Energy Efficiency, Ministry of Energy, Government of India and a certified trainer and evaluator for the TERI-GRIHA Rating System. He is also a trained expert in conformity assessment, is an ISO 9000, ISO 14064 and ISO 50001 certified lead assessor. He is also a Certified Software Quality Analyst (CSQA), administered by the Quality Assurance Institute, USA and is also a Project Management Professional (PMP), certified by the Project Management Institute, USA.

Deepa Sathiaran, B.E. Electrical and Electronics, College of Engineering, Guindy; Master in Business Administration Great Lakes Institute of Management; LEED Fellow

Deepa is a LEED FELLOW (the highest credential offered by the US Green Building Council) and LEED AP since 2003 and a leading international sustainable design expert working with diverse project teams and creating sustainable habitats in the U.S., India, Europe and Middle East. She is a recognized HVAC and refrigeration consultant. She serves on various technical committees for U.S. Green Building Council and has been one of the key technical members that recently drafted the alternate compliance paths for international projects for the

LEED rating system. She is also a trained expert in conformity assessment, is an ISO 9000, ISO 17020 and ISO 17025 certified lead assessor and has conducted numerous assessments of certifying bodies, laboratories and inspection agencies. She is the Past President of the ASHRAE South India Chapter and also the Past National Environment Chair for the Young Indians (Yi) arm of the Confederation of Indian Industry (CII).

Sathiaran Ram, BE (Hons) Civil Engineering, Birla Institute of Technology & Science, Pilani; Master of Science in Civil Engineering, University of Southern California; Master of Business Administration, The Anderson School at the University of California at Los Angeles; LEED AP BD+C

Sathia provides direction in technical concepts for En3's major consulting assignments; maintains key-client contacts and monitors the development of projects from concept through post-occupancy operations and maintenance. He is working closely with international bodies such as International Code Council (ICC) U.S.A., The World Bank Group and governments including the Government of Abu Dhabi and Bahrain to develop sustainability and energy efficiency standards, policies and codes. He is a certified lead assessor on ISO 9000, ISO 17025 and ISO 14064. Besides being a LEED AP, he is an internationally recognized assessor for accreditation of testing and calibration laboratories, inspection agencies in the U.S. and India.

Kavin N, is a LEED AP BD+C and IGBC AP with more than 10 years of experience in Teaching Research and industrial sectors, especially in the field of energy conservation and management, Green buildings design and certifications and sustainability. Involved in implementing projects under various Green rating systems including New construction, Green Homes, Green Factories, Core and Shell, Existing Buildings and Commercial Interiors.

Kavin has been involved in the design and commissioning of 80+ green projects across India to help achieve desired LEED / Green Homes / Green Factories certifications. Some of the prestigious projects include World Bank (Sudan), World Bank (Nairobi), Danfoss, Qualcomm, Oberoi group, Reliance, Tech Mahindra, Great Lakes Institute of Management (first Educational institution campus to achieve LEED NC Platinum in India), ABAD Nucleus Mall (first LEED certified project in Kerala), Grundfos Pumps, Schneider Electric, Heritage Resorts, Syntel Global Development Center, Manyata Tech Park, Embassy Tech

Square, Wockhardt Hospitals among others.

Kavin is currently a senior project manager with En3 Sustainability Solutions Pvt Ltd.

Ms. Manoranjani .R, B.Arch, MBEM, is a Project manager in En3 sustainability solutions Pvt Ltd. She completed her Masters in Building Engineering & Management in School of Planning & Architecture, New Delhi.

She has experience in working with Indian Green Building Council [IGBC] & she is an accredited IGBC AP & LEED AP [BD+C]. In addition to this she has proved her ability in handling multiple green building projects. She has been certified as GRIHA Trainer & Evaluator. She has presented about GRIHA PROJECT case studies in the GRIHA Workshop at CSIR & gave training to practicing engineering professionals @ Chennai on 21st November 2012 organised by ADARSH – GRIHA.

She is in the field of Sustainability practices for the past 4.5 years and been associated with En3 for the past 3 years and been involved in various key project of different rating system from concept to completion to Guide the team and implement the green measures and ensure the compliances with respect to the appropriate green building standards .

Scholastic Achievements:

- LEED Accredited Professional [LEED AP BD+C]
- Certified GRIHA Trainer
- Certified GRIHA Evaluator
- IGBC Accredited professional
- COA registered Architect
- Best out going student award - year 2009
- GATE scholar.(90.1 percentile score) 2009
- Best Outgoing student award – School of Planning & Architecture.
- Best student Architect award (2009) - From Builders Association,Tamil Nadu.
- Topper in under graduation (Architecture)
- Shortlisted in Green home design competition - Ethos (2007)

She has been involved in various Green projects handled by En3.

Mr.Elavarasan Govindarasu started his carrier in sustainability design and consulting practice with En3 sustainability solutions in 2010. He holds a Bachelors degree in Electrical and Electronics Engineering and a master's degree with Gold Medal in Refrigeration and Air conditioning engineering from Guindy Engineering College, Chennai. Currently he is handling 80+ Green building projects (LEED, IGBC & GRIHA) with regional and International clients in India, Afghanistan and Bangladesh. His area of expertise includes New Construction, Core & Shell, SEZs, Green Homes, Existing Building, Apparels, Schools, University Campus/College, Hotels, Healthcare and Factories. Some of the prestigious project which got LEED & IGBC certification under his supervision are Sun Carrier Omega- Platinum rating (One of the India's first Net Zero Energy Building), The Newtown School- Gold rating (One of the India's first New Green school), Shriram "The gateway-B4 & B5"- Platinum rating, Shriram "The gateway-A6"- Gold rating etc.

Mr. Bharathidhasan is an M.E. and a senior energy analyst with En3 since 2008 and has been working on several complex energy simulations and has worked on over 50 LEED certified projects till date as energy simulation expert and analyst.

Bharathidhasan is experienced in interdisciplinary approach to problem solving, with an understanding of developmental energy and environmental issues.

Besides being an IGBC AP, Bharathidhasan is a Building Energy Simulation Specialist with extensive experience in using software like DOE2 (eQuest, VisualDOE4.1), Energy Plus (Design Builder), Visual DOE-4, Design Builder CFD, Ecotect, Daysim, DiaLux amongst others.

FEES and CLOSING

The professional fee for carrying out the training program for Green Associate Exam Preparation as per the course details indicated above is as follows 2 slabs

NO of STUDENTS	FEE PER STUDENT	18%tax	COST IN TOTAL
40	7000	1260	8260
80	6500	1170	7670
120	6000	1080	7080

Taxes shall be extra as applicable. The current rate of service tax is 18%.

Exclusions: 1

- The above fee would be applicable for students only.
- Students would be required to pay 100 USD directly to USGBC for LEED GA exam registration and Certification

Terms of Payment

Total Cost of the workshop including service tax for the required number of participants to be made before the workshop.

Validity: 3 month from the date of this proposal

CLOSING

We relish the opportunity to work closely with the client to deliver a service of exceptional quality and integrity.

**Contact us at +91 9940271318 or email us at
shreeram.s@en3online.com**

About Us

En3 Sustainability Solution Pvt. Ltd. is the parent company of Eddego. En3's directors – Deepa Sathiararam and Sathiararam Ram started their sustainability design and consulting practice in 2003. Both building engineers – Sathiararam a civil and structural engineer from the U.S. and Deepa an electro-mechanical and HVAC engineer, got trained in green design while in the U.S. from the United States Green Building Council. Both are LEED Accredited Professionals and have been working on several green building projects ranging from 5000 square feet projects to 25,00,000 sq ft multi-use business parks and campuses in India, Europe, U.S. and the Middle East.

As leaders in sustainable design, En3 works with developers, architects, facility managers, and real-estate professionals to create high-performance buildings and communities that are less expensive to build (or retrofit), reduce the overall carbon footprint in your blueprints, more profitable to operate, easier to lease and healthier and more comfortable to occupy plus, they boost workforce productivity.

Core Team of En3

N. Vaidyanathan

Director, En3 Board & HVAC Consultant and Managing Director, Airfrige Engineers Pvt. Ltd.

Mr. Vaidyanathan is a ASHRAE Fellow and a renowned HVAC consultant. He consulted for diverse prestigious projects over the last four decades. He is a pioneer and proponent of energy-efficient, environment-friendly and life-cycle based systems design in India and has designed hundreds of millions of square feet of air-conditioned space. He is the Past President of the ASHRAE South India Chapter and the ISHRAE Chennai Chapter and has served on several technical committees and councils in the country. He teaches advanced courses as a visiting faculty at premier engineering schools India. He is also the MEP consultant for Ascendas for their International Tech Park project and Ascendas MIPL projects in Chennai and the upcoming Ascendas project in Coimbatore.

C. S. Ram

Director, En3 Board & Chairman and Managing Director, WELS Group of Companies

CS heads WELS group, a diverse organization with interests in electronics manufacturing, building safety and security equipment and security services. WELS manufactures and markets security and fire alarm products in technical collaboration with companies in Europe, U.S.A,

Taiwan & China. He has over 40 years of experience in the safety and security industry and has vast knowledge of international standards for design, engineering, manufacturing, installation and commissioning of building systems. He serves as Chairman, Institute of Standards Engineers (part of the Bureau of Indian Standards) and has served on several standards development and education committees in the country.

Sathiaran Ram

Managing Director, En3

Sathia provides direction in technical concepts for En3's major consulting assignments; maintains key-client contacts and monitors the development of projects from concept through post-occupancy operations and maintenance. He holds a Bachelors degree in Civil Engineering with Honors from the Birla Institute of Technology and Science, Pilani; a Master of Science in Structural Engineering from the University of Southern California , Los Angeles and a Masters in Business Administration from the Anderson School of Management at the University of California at Los Angeles. He is a trained expert in conformity assessment. Besides being a LEED AP, he is an internationally recognized assessor for accreditation of testing and calibration laboratories, inspection agencies and certifying bodies in the U.S. and India. He is a fellow of the Institute of Standard Engineers and life member of the Indian Concrete Institute.

Deepa Sathiaran

Executive Director, En3

Deepa is a LEED FELLOW and a LEED AP since 2003 and a leading international sustainable design expert working with diverse project teams and creating sustainable habitats in the U.S., India, Europe and Middle East. She is a recognized HVAC and refrigeration consultant. Deepa holds a Bachelors degree in Electrical and Electronics Engineering from Guindy Engineering College, Chennai and is currently pursuing a Masters in Business Administration from the Great Lakes Institute of Management. She is also a trained expert in conformity assessment, is an ISO 9000, ISO 17020 and ISO 17025 certified lead assessor and has conducted numerous assessments of certifying bodies, laboratories and inspection agencies. She is the Past-President of the ASHRAE South India Chapter and also the National Environment Chair for the Young Indians (Yi) arm of the Confederation of Indian Industry (CII)

Mr. Karthik Narayan

Director, En3

As Director-Operations in En3, Karthik is primarily responsible for conceptualizing, defining and maintaining the Operations in En3, that comprises of policies, processes, general and standard

operating procedures. Karthik holds a Bachelors degree in Chemical Engineering and Masters in Biological Sciences with Honors from the Birla Institute of Technology and Science, Pilani. Karthik has over 15 years of experience in executing and managing several complex Development, Maintenance and Re-engineering projects for leading multinational IT companies. Besides being a LEED AP, Karthik is a Certified Energy Auditor and Manager by Bureau of Energy Efficiency, Ministry of Energy, Government of India and a certified trainer and evaluator for the TERI-GRIHA Rating System. He is also a trained expert in conformity assessment, is an ISO 9000, ISO 14064 and ISO 50001 certified lead assessor. He is also a Certified Software Quality Analyst (CSQA), administered by the Quality Assurance Institute, USA and is also a Project Management Professional (PMP), certified by the Project Management Institute, USA.

C.P.Ramani, P.E., C.B.O

Advisor, En3 Board & President, International Accreditation Service Inc. (USA)

Chuck Ramani is the President of IAS, a subsidiary of the International Code Council in the United States. IAS is a non-profit public benefit corporation and a leading accreditation body since 1975 that accredits testing and calibration laboratories, inspection agencies, building departments, fabricator inspection programs and IBC special inspection agencies. He is an internationally renowned expert in product evaluation and has over 40 years of experience in construction quality control, including development, implementation and oversight of evaluation and testing programs. He is a registered civil and quality control engineer and certified building official in the U.S. and served on numerous committees and councils including American National Standards Institute (ANSI) and U.S. Department of Commerce.

We are Members of :



College Registration Form

Name of Institution:

Contact Person:

Address:

Tel:

Mobile:

email:

Number of students:

Preferred Dates for Course:

Preferred Dates for Exam:

Payment details:

for (institution name)

Authorized Signatory

(Seal)

For further information, contact us at +91 98402 71318 or email us at
shreeram.s@en3online.com

shreeram.s@en3online.com

Attachments

Fri, Nov 22, 11:47 AM (4 days ago)

to me, karthik.n

Dear madam

Further to the discussion had with you we can give you at a special price of 6000+18% tax which comes to total of RS 7080. we will be happy to conduct the workshop on 3 week of Jan 2020 after Pongal holidays.

Duration : 18 Hours of education session + One real time project site visit @ Chennai

Materials : One hard copy of the Entire course Program book with practice questions will be provided. The LEED Green Associate Program and the book will have all the required preparation materials with explanations covering the following data.

Process to Become LEED Green Associate Exam

Green Building design basics

About the LEED rating system

Intent implementation measures and LEED requirements to be implemented

In selection of site – Location & Transportation

LEED Measures to be implemented in site – Sustainable Site

Water efficiency measures – Water efficiency

Energy efficiency Measures In Building Design – Energy & Atmosphere

Indoor Environmental Quality &

Innovations.

Students who has attended the workshop will get the course completed certificate from us

Students has to pay \$100 extra for the LEED GA exam and it would be in chennai Prometric center(.We would help them in this process)

Value additions :

10 Mock test based on LEED Green Associate exam pattern with explanations

3 Online test in same actual exam pattern

Additional revision classes at En3 office @ T-Nagar before the actual exam in batches

	Students Names
	Group 1
	Venue: Ground Floor CAD LAB
1	Ashika P
2	Chitra S
3	Jagadish R
4	Jessy J
5	Kamalesvari S
6	Swetha S
7	Visalakshi C
8	Deepthi Krushnika A
9	Priyanga P
10	Rewanth Infant S
11	Rakesh Kumar M J
12	Ganesh Rajan S
13	Akshaya. C
14	Arkip Stelin D
15	Chandhini Menon S
16	Manjari A
17	Saptarshi Ghosh
18	Senthilvel.U
19	R.Shruthi
20	J.Trixie Leanna
21	S. Sahana
22	Subhashree .T
23	Yokesh .V
24	Arijeet Deb Roy
25	Haribalaji . K
26	Jaswanth Sakthi S A
27	Angeline Infancia D'Silva
28	Shivani S
29	Manisha S

	Students Names
	Group 2
	Venue: M Arch SUSTAINABLE LAB
1	Guruji V
2	Jasvi J
3	Kadambari L
4	Shrija S
5	Shruthilaxmi J
6	Sivamonika C
7	Kokhil S
8	Selva Priyadharshan B
9	Clintia Karen D
10	Shalini S
11	Suhail A S
12	Yazhini S
13	Aushwinlal J
14	Indravarman A
15	Manjula S
16	Aravind Balaji M P
17	Varun.M
18	DC Ligitto Miraclin
19	J.Infant Tiffancy
20	M.Sindhuja
21	M.Surya Shree
22	Jonnalagadda Rajesh
23	Lavanya .K
24	S Dinesh Aravindan
25	K.Sri Chaanthana
26	Sai Swathi Badri
27	Sneha C N
28	P Chaitanya Sai Janardhan
29	Elton Subin R E

Council of Architecture Training Program:

METHODOLOGY & EXPLORATION IN ARCHITECTURAL RESEARCH

Venue:

Activity Centre,
Department of Architecture,
**Sathyabama Institute of
Science and Technology**

Training Program dates:

3rd to 7th February 2020

Last day of registration:

Saturday 25th January 2020

SATHYABAMA



INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with "A" grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai
www.sathyabama.ac.in



Convened by:

Prof. Jayashree Deshpande;
Director, COA-TRC, Pune

Coordinated by:

Dr. Devyani Gangopadhyay;
Dean, School of Building and Environment, Sathyabama Institute
of Science and Technology

Local coordinators:

Ar. Sheetal Amraotkar;
Associate Professor, Sathyabama Institute of Science and Technology
Tel: 9922991404; **Email:** sheetal.amraotkar31@gmail.com

Ar. Jhannupriyaa M;
Assistant Professor, Sathyabama Institute of Science and Technology
Tel: 9894384718; **Email:** jhannupriyaa90@gmail.com

Eminent Speakers and Topics Covered:

Research in Architectural Practice

Ar. Sriram Ganapathi, KSM Architecture
Studio, Chennai

Theorizing and Critiquing- A Dialogue

Ar. Sathya Prakash Varanashi, Sathya
Consultants, Bengaluru

**Publishing in Journals, Project Funding
and Proposal Writing**

Dr. Iyer Vijayalakshmi, Dean (Research),
SPA Vijayawada

**Qualitative Research and Quantitative
Research**

Dr. Lakshmi Thilagam, Director, Kalasalingam
School of Architecture, Krishnankoil

Research Processes in Architecture

Dr. Devyani, Dean, School of Building and
Environment, Sathyabama Institute of
Science and Technology

**Selecting Areas of Research in
Architecture**

Dr. Suresh Kuppusamy, Design Chair,
School of Architecture, Sathyabama
Institute of Science and Technology

Intellectual Property Rights

Dr. Dilshad Shaik, Dean, School of Law,
Sathyabama Institute of Science and
Technology

**Fundamentals of Triangulation with
Outcomes of a Basic Design Studio in
Architecture**

Ar. Arulmalar, Professor, Sathyabama
Institute of Science and Technology

Graphical Representation of Data

Dr. Rajasekar, Professor, Kongu Engineering
College, Perundurai

**Identification of Appropriate Research
Methods**

Dr. Kalaselvi, Professor, Rajalakshmi School
of Architecture, Chennai

**Curating Experiences for Interpretative
Discourse**

Ar. Ishita Shah, Independent Researcher,
Designer, Curator, Historian, Bengaluru

Significance and Objective:

Architecture encompasses tangible and intangible practices involving society, culture, quality of life, economics, innovation and so on. To further contribute to architectural education and practice, the need for architectural exploration arises. This calls for well defined research processes. This training program aims to enhance the ability to explore and investigate architecture following a constructive and effective methodology.

Intent of the Program:

- To open up new avenues in Architectural Research and allow a wide spectrum of exploration.
- To have a wholesome understanding through specific interventions using appropriate methodology.

Registration Process:

Teachers/ architects who wish to register for the training program either under Collaborative Training Program (CTP) or as independent individual may do so by filling up the Google form specified in the link below.

Registration Fees:

- Rs. 10,000/- (inclusive of delegate kit, course material and lunch + site visits if scheduled,)
- Rs. 15,000/- (inclusive of delegate kit, course material, accommodation on sharing basis, breakfast, lunch & dinner + site visits if scheduled)

Only in case nominated teachers registered for this program under CTP, require provision of accommodation, the facility of accommodation on sharing basis, breakfast and dinner for five days can be availed of by payment of Rs. 5,000/- per head by online payment/ bank challan. Kindly mail back scanned images of the proof of payment together with application form duly authenticated by HOD/Principal on ttpcoatrc.pune@gmail.com, directorcoatrc@gmail.com and E-mail id of local coordinators: **sheetal.amraotkar31@gmail.com**; **jhannupriyaa90@gmail.com**

Link for Application Form: <https://goo.gl/forms/wAW12nJKpVKBDGHp1>

Payment link for Online Payment/Bank Challan:
<https://easypay.icicibank.com/homePage>
(Institution Name= "COUNCIL OF ARCHITECTURE")

Note: Registration with/without accommodation shall be confirmed on receipt of payment towards the accommodation/registration.

Kindly send the hard copy of registration form and receipt of online payment/bank challan (as applicable) on the following address for the confirmation of participation:

Prof. Jayashree Deshpande, Director,
Council of Architecture Training & Research
Centre (COA-TRC), Academic Wing of Council of
Architecture, 2nd Floor, A-4 (B), Abhimanshree,
Off Pashan Road, Pune- 411008, Maharashtra,
India; Tel: 9764000352

NATIONAL INSTITUTE OF ADVANCED STUDIES IN ARCHITECTURE, PUNE
Training Programme on "Methodology and Exploration in Architectural Research "

Tentative schedule

Co-ordinators : Ar.Sheetal.A,Ar.Jhannupriyaa.M

Dates : 3rd feb 2019 - 7th feb 2019

Venue : Sathyabama University - Chennai

Session	Day 1	Day 2	Day 3	Day 4	Day 5
8.30 - 9.30	Registration	IPR - Dr.Dilshad Shaik	site visit and onsite exerise with guidance of Ar.Thirupura sundari	Research process in Architecture- Dr.Devayani&Ar.Arulmalar	Journal paper-Dr.Vijayalakshmi
9.30 - 10.00	Introduction - Dr.Devayani				
10.00 - 10.30	Inaugural Session - by Ar.Sriram ganapathy				
10.30 - 11.00	TEA BREAK			TEA BREAK	
11.00 - 12.00	Research in Architectural Practice- Ar.Sriram ganapathy	Conversion of qualitative research into quatitative research-Dr.Lakshmi Thilagam	Hands on works of site visit-how to interpre -Ar.Ishita shah	An insight into the fundamentals of triangulation with outcomes of a basic design studion in architecture- Dr.Arulmalar	Journal paper-Dr.Vijayalakshmi
12.00 - 13.00	selecting area of research in architecture-Dr.Suresh kupusamy				Theorizing and Critiquing - A Dialogue Ar.sathyaprakash Varanasi
13.00 - 14.00	LUNCH				
14.00 - 15.00	Identification of appropriate research methods-Dr.Kalaselvi	Conversion of qualitative research into quatitative research-Dr.Lakshmi Thilagam	Interdisciplinary approach to architectural research Ar.Ishita shah	Graphical representation of data- Ar.Rajasekhar	Theorizing and Critiquing - A Dialogue Ar.sathyaprakash Varanasi
15.00 - 15.30	TEA BREAK				
15.30 - 16.00	Identification of appropriate research methods-Dr.Kalaselvi	Research process in Architecture- Dr.Devayani&Ar.Arulmalar	Interdisciplinary approach to architectural research Ar.Ishita shah	Graphical representation of data- Ar.Rajasekhar	Valedictory
16.00 - 17.00					

"Methodology and Exploration in Architectural Research "

Participant List

Please find below the updated status of registration

S r.	Comm	Name of participant	Mo bile	Email	Name of College	Registr ation/ accom modati on fees	Hard copy of Regis tratio n form	Regis tratio n confir med
1	Yes	Rashmi P S	953 878 584 9	rashmin.rvca@rvei.edu.in	RV COLLEGE OF ARCHITECTURE	Not received	Not received	Not Confirmed
2	Yes	Anupriya Saxena	987 444 734 7	anupriyas.rvca@rvei.edu.in	R V College of Architecture, Bangalore	Not received	Not received	Not Confirmed
3	No	Surya Rajkumar	995 293 958 0	suryarajkumar.arch@sathyabama.ac.in	Sathyabama Institute of Science and Technology, Chennai	Received	Received	Confirmed
4	No	Innisai Rajasabai	984 126 762 8	info.designstrategy.arch@gmail.com	School of Architecture & Planning, Anna University	Not received	Received	Not Confirmed
5	No	S. Deepalakshmi	944 250 655 4	deepamoorthy00@gmail.com	Sathyabama Institute of Science & Technology	Received	Received	Confirmed
6	No	Maya Mohan	975 145 769 9	mayamohan.ns@nehrucolleges.com	Nehru School of Architecture	Received	Received	Confirmed
7	No	Leslie Jean Dias	988 040 094 5	lesliemail100@gmail.com	Srinivas School of Architecture	Received	Received	Confirmed
8	No	T Umashankari	944 427 333 5	rumashankari@gmail.com	BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH	Received	Received	Confirmed

9	Yes	Zeeshan Haider Khan	776 067 489 3	ar.zeeshanhaid@gmail.com	SRINIVAS INSTITUTE OF TECHNOLOGY	Received	Received	Confirmed
10	No	G.Monisha	994 064 331 4	ar.monishamihail@gmail.com	Sathyabama Institute of Science and Technology	Received	Received	Confirmed
11	No	Y Satya Ravi Kishore	955 392 579 9	satyaravikishore.yandamuri@gitam.edu	GITAM SCHOOL OF ARCHITECTURE,	Received	Received	Confirmed
12	No	Ch P V Gopalakrishna	938 125 113 9	krishna.chevukupalli@gitam.edu	GITAM SCHOOL OF ARCHITECTURE, GITAM UNIVERSITY	Received	Received	Confirmed
13	No	Divya.M	984 068 359 6	divyam3@srmit.edu.in	SRM School of Environment Architecture and Design	Not received	Not received	Not Confirmed
14	No	Preethima.D	994 024 860 7	preethid@srmit.edu.in	SRM School of Environment Architecture and Design	Not received	Not received	Not Confirmed
15	No	Ar. Nareshkumar K M	988 482 381 2	nareshkm@srmit.edu.in	SRM School of Environment Architecture and Design	Not received	Not received	Not Confirmed
16	No	Prof. Venkatesh Babu P	950 097 811 0	venkatep2@srmit.edu.in	SRM School of Environment Architecture and Design	Not received	Not received	Not Confirmed
17	No	Dhivya.J	978 900 768 8	j.dhivyabharathi@gmail.com	Rajalakshmi school of architecture	Not received	Not received	Not Confirmed
18	No	Sathyaseelan.R.K	994 116 661 1	sathyask@srmit.edu.in	SRM School of Environment Architecture and Design	Not received	Not received	Not Confirmed
19	Yes	K JASMINE VIDHYA	950 097 811 3	jasminevidhya@pmu.edu	PERIYAR MANIAMMAI INSTITUTE OF SCIENCE AND TECHNOLOGY	Not received	Not received	Not Confirmed

					Y			
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C.A.R.E. School of Architecture
I Semester 2019
Basic Design / Joint Studio Exercise

Key Concepts // Understanding 3-dimensional Space / Experiencing Composition, Colour, Line quality, Depth / Sharpening Observation / Engaging Subjectivity through Interpretation and Conversation / Craft and Material Understanding

Background

“Design” is understood as a conscious, will-generated process with an active cognizance of the field in which design has to be practiced/produced. This requires the designer to cultivate the capacity to apprehend the field. Primary apprehension for the designer is the understanding of morphology, or 3D space, the objects/surfaces that make it and are contained in it. This is a sensory process, using the faculties of the whole body to “observe”. This primary step becomes the keystone of any design process, and it is crucial that this first mode of observation does not carry preconceived habits of observations that the students carry from their previous experiences. The exercises must be structured to break their habits and help them “look twice”, observe in the true sense.

The Exercise

The students will be handed a printout of a painting. In pairs, they will have to look at it's composition, elements, lines, colours and surfaces and “recompose” them as if they existed in 3D space. They will Make a frame to represent this space, and then place the objects within the frame as their personal interpretation/discussion with partner directs.

Tasks

1. The students will make a cuboidal frame to hold the contents of their work within. This frame must be stable enough to carry the weight of the contents that they decide to put in. [The frame will be made of barbecue sticks, string and binding wire. — tentative]
(Duration: 0.5 days)
2. The students in pairs will discuss the painting they have received and imagine it as a 3D space as viewed from one side, with various elements actually located at various distances from the viewer. (This can also be explained in the same way as we see the sky: the stars are all at different distances from the observer, but they appear to be in the same plane we call the blanket of the “night sky”.)
(Duration: 1.5 days)
3. Students look again at their own model and sketch is as if they were going to make the painting again: but now forgetting the original painting the task is to make 2-dimensional again their own 3D creation. This will be done using restrictive techniques to create specific modes of drawing and therefore of observational understanding of point, line, plane, space, composition.
(Duration: 1 days)
4. [Alternative to point 3] : Students are now told that the painting is a sale model of a real space (1:50?). They have to make 1:50 silhouettes of themselves, and then locate a space inside their models that seems to have potential for making a quiet hideout for two people. They make drawings that show how this space works with all the surrounding objects.



SCHOOL OF BUILDING & ENVIRONMENT
DEPARTMENT OF ARCHITECTURE

Proposal for Four Day Collaborative Workshop at BNCA, Pune for the M.Arch (SA)
Sathyabama students and M.Arch (EA) BNCA students

SCHEDULE

Date	Session	Event/Activity
04/02/2020	Morning	• Introduction • Introduction to Time Problem (Sustainable Design) • - group work • Presentation - Sustainable Design Studio works
	Afternoon	• Guest Lecture • Hands on – Manual Calculation for Sustainable Design Project by BNCA Students
05/02/2020	Morning	• Continuation of the Hands on session • Knowledge sharing on Software by Sathyabama Students
	Afternoon	• Hands on – Software Training • The students get to work on the time problem
06/02/2020	Full day	• Industrial Visit
07/02/2020	Morning	• The students get to work on the time problem
	Afternoon	• Presentation of the worked out design

SATHYABAMA							
INSTITUTE OF SCIENCE & TECHNOLOGY							
SCHOOL OF BUILDING & ENVIRONMENT							
DEPARTMENT OF ARCHITECTURE							
I YEAR NAME LIST M.Arch SA BATCH 2019-2021							
BNCA , Pune Collaborative Workshop 4th, 5th ,6th & 7th Jan 2020							
S.NO	REGNO	NAME					
1	39890001	AKSHAYA.C					
2	39890002	ARKIP STELIN.D					
3	39890003	AUSHWINLAL					
4	39890004	CHANDHINI MENON.S					
5	39890005	CLINTIA KAREN.D					
6	39890006	DEEPTHI KRUSHNIKA.A					
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8	39890008	INDRAVARMAN.A					
9	39890009	MADHUMITHA.K					
10	39890010	MANJARI.A					
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15	39890015	SEETHA VISALAKSHI.K					
16	39890016	SELVA PRIYADHARSHAN.B					
17	39890017	SHALINI.S					
18	39890019	SUHAIL.A.S					
19	39890020	YAZHINI S					
20	39890021	ARAVIND BALAJI					



ABOUT THE WORKSHOP



The Construction industry is a major labour intensive economic sector that needs a large improvement in the speed, quality and productivity of the construction work. Robotic technology, Automation and Artificial intelligence may pave the way for automated processes, increased productivity, faster work with more precision and accuracy resulting in financial savings.

The workshop aims to introduce the role of robotics and automation technologies with applications in

- Building Health Monitoring
- Application of Artificial Intelligence and Machine Vision in Building Automation
- Application of Robotics in Building Automation
- Application of Artificial Neural Network

ABOUT SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY(Deemed to be University)



Sathyabama Institute of Science and Technology (A Christian Minority Institution) formerly known as Sathyabama Engineering College was established in 1987 by Dr. Jeppiaar. It is a premier institute imparting knowledge in the areas of engineering, science, technology and education. The institution's progress and contribution to the field of technical education for over two decades resulted in granting Deemed University status on 16th July, 2001. Sathyabama Institute of Science and Technology with the blessings of Founder Chancellor Colonel Dr. JEPPIAAR has been strengthening its developmental activities in bearing fruits of research for betterment of the society.

INNOVATIVE APPLICATIONS OF ROBOTICS & AUTOMATED SYSTEMS IN CONSTRUCTION MANAGEMENT



13th & 14th MARCH 2020

Department of Architecture

In Association with

International Association for Automation and Robotics in Construction

DEPARTMENT OF ARCHITECTURE SCHOOL OF BUILDING AND ENVIRONMENT

The Department of Architecture, School of Building and Environment, is a state of the art design and management oriented school striving to create a responsive built environment through energy efficient and structurally stable infrastructure thereby fostering students to face the challenges of the dynamic World. The Department nurtures students in the exploration of skills, their creativity in design, and their expressions and creates a platform to collaborate on projects in developing innovative strategies in the built environment by integrating research skills throughout the curriculum. The School of Building and Environment consists of Department of Architecture and Department of Civil Engineering. The Department of Architecture offers Bachelor of Architecture as UG programme and Master of Architecture (Building Management) & Master of Architecture (Sustainable Architecture) as PG programmes.

IAARC

The growing interest shown internationally towards the end of the 1980's in Automation and Robotics in Construction (ARC) matters led to the formation of IAARC International Association for Automation and Robotics in Construction in 1990. By then a number of

international symposia had already been convened and the creation of IAARC satisfied the demand for an umbrella organization. IAARC is a global community with specific concern for all fields of construction including civil and building engineering, machine automation, robotics applications to construction, IT technologies, planning, logistics, etc.

RESOURCE PERSONS

Dr. Benny Raphel,
Professor, IIT Madras & Vice-president of IAARC

Mr. S. Kavin Kumar, Director, Engineering Project Management Consultancy and Research Private limited (EPMCR(P)LTD)

Dr. Devyani Gangopadhyay,
Dean, School of Building and Environment

REGISTRATION

Students: Rs.750/- per person.
Academician: Rs.1000/- per person.
Industry: Rs.1500/- per person.
Last date for Registration: 9th March 2020

Mode of Payment : All payments are to be made by demand draft payable at Chennai drawn in favour.....

For Spot Registration on 13th March, prior confirmation is required.

DAY 1 (08:30 – 15:00)

08:30 Registration
08.45 Inauguration & Welcome Address
09.00 Introduction to 'Automation in Construction' : Dr. Benny Raphel.
09.45 Tea Break.
10.00 Opportunities for Automation- Brainstorming Session: Dr. Benny Raphel.
11.00 Application Examples: Mr. S. Kavin Kumar
12.00 Lunch
01.00 Formwork Challenge : Session 1: Mr. S. Kavin Kumar & Team.
03.00 End of Day 1

DAY 2 (09:30 – 15:00)

09.00 Formwork Challenge : Session 2: Mr. S. Kavin Kumar & Team.
09.45 Tea Break.
10.00 Hands on: Session 1 : Dr. Benny Raphel & Team
12.00 Lunch
01.00 Hands on: Session 2: : Dr. Benny Raphel & Team
02.45 Distribution of Certificates
02.45 Valedictory function

CONTACT US

Ar. Sukirtha Suresh : 9444830060
Email- sukirthasuresh2000@gmail.com

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY	
SCHOOL OF BUILDING AND ENVIRONMENT	
DEPARTMENT OF ARCHITECTURE	
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39840003	ALBART.A
39840005	DARRYL CHRISTOPHER
39840006	DEEPIKA.S
39840007	DIVYAA.Y.B.
39840008	JAGADEESH PANDIAN.C
39840009	KARTHIK. P
39840011	LISHALI.K
39840012	LOKHESH.S
39840013	MANJU.R
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39840017	RAM AKSHAYA.S
39840018	SOWMIYA.R
39840019	SWATHI LAKSHMI.M
39840020	THIRUMAVAZHAVAN.S
39840021	MONISHA NAGESWARAN



Adsorptive elimination of methylene blue dye from aquatic system using biochar produced from cocoa shell

D. Prabu^a, P. Senthil Kumar^{b,*}, Kilaru Harsha Vardhan^b, S. Sathish^a, Alan Raju^a, John Mathew^a

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Received 14 April 2020; Accepted 2 June 2020

ABSTRACT

The present research aims to investigate the potential of new biochar prepared from cocoa shell (CS), through the chemical modification method [sulfuric acid-modified CS (SMCS)]. The prepared material was found to possess an excellent adsorption capacity for the elimination of Methylene blue (MB) dye from a polluted environment by experimenting the several operating parameters which include initial dye concentration, contact time, solution pH, temperature and adsorbent dose. SMCS was characterized using scanning electron microscopy-energy dispersive analysis of X-rays, thermo-gravimetric analysis, Fourier transform infrared, and Brunauer–Emmett–Teller analysis. The equilibrium data were best discussed by the Freundlich model. Langmuir model capacity was estimated at 163.5 mg/g for MB dye removal. The feasibility and spontaneous activities of the adsorption process were observed because of the negative values of Gibbs free energy obtained for SMCS-MB dye adsorption system. Pseudo-first-order, pseudo-second-order, and Elovich kinetic models have been tested for kinetic data of SMCS-MB dye system. Pseudo-first-order model showed good results for SMCS-MB dye system. Through obtained results, it was concluded that the SMCS can act as a potential low cost, environmental friendly, and effective adsorbents and which can be employed as an alternative to various commercial adsorbents.

Keywords: Adsorption; Biochar; MB dye; Equilibrium; Thermodynamics; Kinetics

* Corresponding author.



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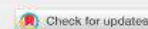
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Research Article

Potential of nanoscale size zero valent iron nanoparticles impregnated activated carbon prepared from palm kernel shell for cadmium removal to avoid water pollution

D. Prabu, P. Senthil Kumar , M. Varsha, S. Sathish, K. Vijai Anand, Joy Mercy & ...show all

Received 22 Jul 2020, Accepted 16 Sep 2020, Published online: 05 Oct 2020

 Download citation <https://doi.org/10.1080/03067319.2020.1828387>

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ABSTRACT

In this research, the palm kernel shell activated carbon (PKSAC) was prepared and it was impregnated with nano-scale size zero valent iron (PKSAC-nZVI) for the removal of cadmium [Cd(II)] ions from aquatic system. Batch adsorption experiments have been done with operating variables such as amount of Cd(II) ions, dosage, pH, thermal effect, interaction time were optimised. The prepared sorbent PKSAC-

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Mechanistic model for the batch extraction of oil from avocado seeds available for biofuel



Enhanced photocatalytic activity of environment-friendly C/ZnFe₂O₄ nanocomposites: application in dye removal

Sunitha Salla^{a,*}, Nageswara Rao Ankem^a, Ponnusamy Senthil Kumar^{b,*},
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Received 29 July 2018; Accepted 28 September 2018

ABSTRACT

A scheme toward enhancing the photocatalytic activity of ZnFe₂O₄ was achieved by shell coating of graphitic-mimic carbon stratum using solution combustion method. In the present study, the solution combustion method was used to synthesize carbon-doped zinc ferrite (C/ZnFe₂O₄) nanocomposite. X-ray diffraction (XRD), Fourier transform infrared spectroscopy, field-emission scanning electron microscopy, energy-dispersive X-ray spectroscopy (EDAX), UV-vis diffuse reflection spectroscopy (UV-vis-DRS), and Brunauer–Emmet–Teller (BET) surface analyses were utilized to pinpoint the structure and morphological evolutions. The 2θ XRD spectra suggested that the nanocomposite consists of zinc oxide nanoparticles with zincite formation, and the mean crystallite dimension was established to be 6.49 nm. EDAX analysis confirmed the existence of elements like Fe, Zn, and O. UV-vis-DRS studies have shown bandgap of 3.14 eV. The surface area of the porous C/ZnFe₂O₄ was calculated to be 65 m² g⁻¹ using BET experiment. The photocatalytic activities of C/ZnFe₂O₄ were investigated by the degradation of acid blue 113 (AB 113) under UV light irradiation. From the degradation studies, it was observed that C/ZnFe₂O₄ exhibited higher photocatalytic activity. The small size, high surface area, and synergistic effect in the C/ZnFe₂O₄ nanocomposite are responsible for high photocatalytic activity. The influence of various parameters such as the initial dye concentration, pH, and catalyst weight on the photocatalytic degradation of the dye was also investigated. The C/ZnFe₂O₄ nanocomposite is stable, easily separable, and reusable photocatalyst. Further, the possible photocatalytic degradation mechanism of AB 113 over C/ZnFe₂O₄ nanocomposite has been proposed.

Keywords: Acid blue 113; Photocatalytic degradation; Nanocomposites; Solution combustion; Kinetics

* Corresponding authors.



Enhanced photocatalytic activity of environment-friendly C/ZnFe₂O₄ nanocomposites: application in dye removal

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N. Magesh ✉, A. Annam Renita, P. Senthil Kumar

First published: 04 May 2020 | <https://doi.org/10.1002/ep.13429> | Citations: 9

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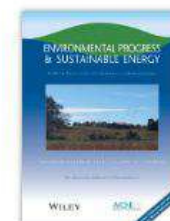
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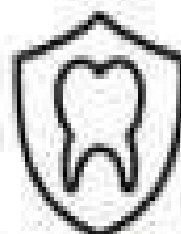
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HOD, Department of Conservative Dentistry and Endodontics
Sathyabama Dental College

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Clinical Specialist
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Evaluation of the Antibacterial Efficiency of a Combination of 1% Alexidine and Sodium Hypochlorite on *Enterococcus faecalis* Biofilm Models: An *In Vitro* Study

Anchu R Thomas¹, Rekha Mani², Tripuravaram VK Reddy³, Ashwin Ravichandran⁴, Murali Sivakumar⁵, Shobana Krishnakumar⁶

ABSTRACT

Aim: The aim of the study was to assess the antibacterial efficiency of a combination of 1% alexidine (ALX) and 5.25% sodium hypochlorite (NaOCl) against *E. faecalis* biofilm using a confocal scanning electron microscopy.

Materials and methods: An estimated 120 human root dentin disks were prepared, sterilized, and inoculated with *E. faecalis* strain (ATCC 29212) to develop a 3-weeks-old biofilm. The dentin disks were exposed to group I—control group: 5.25% sodium hypochlorite (NaOCl) ($n = 20$); group II—1% ALX + 5.25% NaOCl ($n = 40$); group III—1% alexidine (ALX) ($n = 40$) (Sigma-Aldrich, Mumbai, India); group IV—negative control: saline ($n = 20$). After exposure, the dentin disks were stained with the fluorescent live/dead dye and evaluated with a confocal scanning electron microscope to calculate the proportion of dead cells. Statistical analysis was done using the Kruskal–Wallis and Mann–Whitney U test ($p < 0.05$).

Results: The maximum proportion of dead cells were seen in the groups treated with the combination of 1% ALX + 5.25% NaOCl (94.89%) and in the control group 5.25% NaOCl (93.14%). The proportion of dead cells presented in the 1% ALX group (51.79%) and negative control group saline (15.10%) were comparatively less.

Conclusion: The antibacterial efficiency of a combination of 1% ALX and 5.25% NaOCl was more effective when compared with 1% ALX alone.

Clinical significance: Alexidine at 1% could be used as an alternative endodontic irrigant to chlorhexidine, as alexidine does not form any toxic precipitates with sodium hypochlorite. The disinfection regimen comprising a combination of 1% ALX and 5.25% NaOCl is effective in eliminating *E. faecalis* biofilms.

Keywords: Alexidine, Biofilm, Confocal laser scanning microscope, *Enterococcus faecalis*.

The Journal of Contemporary Dental Practice (2019): 10.5005/jp-journals-10024-2640

INTRODUCTION

Microorganisms play a primordial role in the pathogenesis of pulpal and periapical diseases. The success of endodontic treatment depends on complete elimination of microorganisms and their by-products from the root canal system through the combined action of mechanical instrumentation and chemical debridement.^{1–3}

It has been observed that aerobic and facultative anaerobic microorganisms are found in higher counts in endodontic flare-ups and retreatment cases. *Enterococcus faecalis* has been found predominantly in failed cases than in primary infection.⁴ *E. faecalis* is highly resistant during the starvation phase and it is probable that the physiologic state of the cells during their retreatment cases bear

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Recurrent Oral Submucous Fibrosis with Nil Mouth Opening Surgical Management and Reconstruction with Bilateral Nasolabial Flap: A Case Report and Review of Literature

Abstract

Oral submucous fibrosis [OSF] is a premalignant condition characterized by inflammation and progressive fibrosis of submucosal tissue, resulting in trismus. It is associated with chewing of areca nut in betel quid. Mortality rate is significant because it transforms into oral squamous cell carcinoma at a rate of 2.3%–7.6%. The aim of this article is to share our experience in managing a case of recurrent oral submucous fibrosis with nil mouth opening by surgical excision, coronoidotomy, and reconstruction of buccal defect using bilateral inferiorly based nasolabial flap, followed by active oral physiotherapy. The patient had reached an acceptable mouth opening with no further recurrence. The patient was observed closely for any malignant transformation. Surgical excision of bands and coronoidotomy followed by reconstruction with nasolabial flaps and active physiotherapy in the postoperative period remains a good option for recurrent and advanced cases of OSF with acceptable functional and cosmetic results.

Keywords: *Nasolabial flaps, nil mouth opening, recurrent oral submucous fibrosis, squamous cell carcinoma, surgical excision*

**Kamal Kanthan
Ravikumar^{1,2},
Nausath Khan U^{1,2},
Priyadarshini^{1,2},
Karthik
Ramakrishnan^{1,2},
Nachiappan S^{1,2}**

¹International Medical
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Tamil Nadu, India

Introduction

Oral submucous fibrosis [OSF] is a premalignant condition characterized by inflammation and progressive fibrosis of submucosal tissue, resulting in trismus. It is associated with chewing of areca

not disappear after cessation of the habit but remains permanent.^[6,7]

The severity of trismus can be graded by measuring the interincisor opening. The mouth opening is categorized into stage I (>3 cm), stage II (2–3 cm), and stage III

DOI: 10.3868/2386-5180.8.2.312

Biochemical Test of Serum Ceruloplasmin as a Biomarker for Early Detection of Oral Potentially Malignant Epithelial Lesions (PMELs) and Oral Squamous Cell Carcinoma (OSCC)

¹Dr.Ajay Chandran, ²Dr.S.Nachiappan, ³Dr. Sunil Chandra Tripuraneni, ⁴Dr.Maneesha Das, ⁵Dr.G.Manikandan, ⁶Dr. Karthik Reddy Kothakapu, ⁷Dr.Abhishek Singh Nayyar

Abstract

Context and Aim: Despite the recent advances in cancer treatments, the outcome and prognosis of the various oral cancers is still relatively poor. The lacuna for this lies in the delayed and late diagnosis of neoplasms when the tumor is already in advanced stages of the disease. An early enough diagnosis is, thus, highly warranted to initiate treatment in the initial stage itself to arrest the progression of the malignant process. Such measures, therefore, are of great help and desired fundamental for an early detection of this dreaded disease so as to ensue an early treatment. The purpose of the present study is to estimate and evaluate the efficacy of serum ceruloplasmin levels as a potential biomarker in the early detection of oral potentially malignant epithelial lesions (PMELs) and frank oral cancers.

Materials and Methods: The present observational study was conducted over a period of 2 years wherein a total of 100 subjects aged between 18 to 60 years clinically diagnosed and histopathologically confirmed with oral leukoplakia, oral submucous fibrosis (OSMF) and oral squamous cell carcinoma (OSCC) between the age range of 20-60 years were included. The patients were subjected to incisional biopsy after routine hematological investigation. The same sera samples were, then, used for the analysis of serum ceruloplasmin levels.

Statistical Analysis Used: The statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS version 17.0, EPI-INFO 6.0 version). Comparison of serum ceruloplasmin levels with the control group was performed using one

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- 4 Department of Conservative Dentistry and Endodontics, Saraswati Dhanwantari Dental College and Hospital and Post-graduate Research Institute, Parbhani, Maharashtra, India
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- 6 Department of Oral and Maxillofacial Surgery, Meghna Institute Of Dental Sciences, Nizamabad, Telangana, India
- 7 Department of Oral Medicine and Radiology, Saraswati Dhanwantari Dental College and Hospital and Post-graduate Research Institute, Parbhani, Maharashtra, India



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Ref: Ph.D./Prov.Regtn/OMR/DS/Part Time/External/August-2019/0348/DS192D007

Date: 26.08.2019

To,

Dr.Pravda C
 Professor & Head,
 Department of Oral Medicine & Radiology,
 Sathyabama Dental College & Hospital,
 Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119.
 Ph.No: 9444126489

Sub: Provisional registration-Ph.D./Part Time/Oral Medicine & Radiology – Intimation-reg

Ref: Joining report dated 05.08.2019

With reference to your application and joining report cited above I am by direction, to inform you that you are provisionally registered for doing research for the award of Ph.D. degree on Part Time basis from 05th August 2019.

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Incorporating ‘The Triple E Framework- Learning First, Technology Second’ and Cooperative Learning’ in Low Tech English Classrooms

Pushpa Nagini Sripada, Mani Ramana Cherukuri

Abstract— *In a classroom the focus of teaching is always on facilitating learning to take place for the students. In recent times, use of technology by educators and schools is gaining ground in India. The paper presents the theoretical framework for evaluating the lessons that use technology for teaching purposes. Blooms taxonomy suggests the criteria for taxonomy of learning at the cognitive domain, affective domain etc. This leads to the question of involving students in “thinking, reflecting, and effortful mental activity” but not in the mere act of “swiping, tapping, and physically engaging with an app” (Dr. Ellen Wartella). The paper presents frame work that is developed by Liz Kolb, a clinical Assistant Professor at the University of Michigan that enables the teachers to choose smart tool that suits their instructional purposes. The paper also touches Cooperative Learning strategies that can be focussed in Low tech classrooms in Indian contexts*

I. INTRODUCTION

Frame works for Using Technology: Teacher professionals made use of frameworks such as TPACK and SAMR while integrating technology into classroom learning. According to Lee Shulman (online) , “At the heart of the TPACK framework, is the complex interplay of three primary forms of knowledge: Content (CK), Pedagogy (PK), and Technology (TK). ... ffective technology integration for pedagogy around specific subject matter requires developing sensitivity to the dynamic, transactional relationship between these components of knowledge situated in unique contexts” Content Knowledge (CK) refers to “Teachers’ knowledge about the subject matter, According to Shulman (1986) , this knowledge would include knowledge of concepts, theories, ideas, organizational frameworks, knowledge of evidence and proof, as well as established practices and approaches toward developing such knowledge” (cited online). Technology Knowledge (TK) refers to knowledge about certain ways of thinking about, and working with technology, tools and resources. Pedagogical Content Knowledge (PCK) Central to Shulman’s conceptualization of PCK is the notion of the transformation of the subject matter for teaching. PCK covers the core business of teaching, learning, curriculum, assessment and reporting, such as the conditions that promote learning and the links

among curriculum, assessment, and pedagogy” (online). SAMR is a model that helps educators to infuse technology into teaching and learning. Popularized by Dr. Ruben Puentedura, the model enables teacher educators to design, develop, and infuse digital learning experiences with the use of technology with a purpose to focus on higher levels of achievement for students.(online).

As many teachers integrate technology to connect, and to engage students and also use technology to reach out to students even outside the classroom. Building on the TRACK and SAMR frameworks and also keeping teachers’ goals in integrating technology for teaching Liz Kolb, designed the Triple E Framework as a practical tool to help teachers put “learning first, technology second.” She suggests a rubric along with the framework to guide in professional thinking. To quote White Amber (2017), “After establishing clear learning goal/s and then determining what technology will be integrated into the lesson, the framework can be used to evaluate overall lesson quality by looking through the lens of the three E’s: engagement in learning goals, enhancement in learning goals and the extension of learning goals”. The rubric for evaluation is shared online to benefit teachers, who use the framework.

Use of Technology in Indian Classrooms:

Though MHRD is insisting on using technology in the classrooms, the scenario in actual contexts at the class room differ from college to college, school to school. These class rooms can be broadly categorised into three types based on the availability of the technology gadgets both to teachers and students.

High tech classroom: A high tech smart classroom with multimedia tools, internet facility allows a teacher to engage the learners in activities that involve team work and cooperative learning atmosphere. Students may solve online tasks by discussing with peers as it enables them to engage in real life situations. But such classrooms also may prove to be highly distractive if mobile phones are allowed. Low tech classroom: A classroom with limited technology, only allows a teacher to expose the students to technology, as individual experience on using technology will be

Revised Manuscript Received on May 29, 2019.

Pushpa Nagini Sripada, Professor of English, Sathyabama Institute of Science and Technology, Chennai, T.N, India

Mani Ramana Cherukuri, Assistant Professor Adikavi Nannayya University, Rajahmundry, A.P, India.





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DEPARTMENT OF CHEMISTRY

BONAFIDE CERTIFICATE

This is to certify that this project report is the bonafide work of **A.AJITHKUMAR** (37910010) carried out the project entitled **"SYNTHESIS, SPECTRAL, STRUCTURAL AND QUORUM SENSING INHIBITORY STUDIES OF 3-AMINOPROPANOL BASED AROYL THIOUREA"** under our supervision from September 2018 to March 2019.

J. Karthikeyan

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M. Muthu Tamizh

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Dr. M. Muthu Tamizh

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Dr. J. Karthikeyan

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Submitted for viva voce examination held on 01/04/2019

J. Karthikeyan

Internal Examiner

01/04/2019

M. Muthu Tamizh

External Examiner

01/04/2019

OPTIMUM CONDITION FOR PRODUCING SOLID BIOMASS FUEL FROM FRUIT AND VEGETABLE WASTE BY A SOLAR DISH ASSISTED ROTARY DRYER

J. PARTHIPAN¹, B. NAGALINGESWARA RAJU², J. JAYAPRABAKAR¹,
S. LAKSHMI SANKAR¹ & S. SENTHILKUMAR¹

¹Department of Mechanical Engineering, Sathyabama Institute of Science & Technology, Chennai, Tamil Nadu, India

²Department of Mechanical Engineering, Veltech Engineering College, Chennai, Tamil Nadu, India

ABSTRACT

The goal of this study is to optimize the parameters of producing solid biomass fuel from Fruit and Vegetable Waste (FVW) in terms of a compression strength, calorific value and Bulk Density. A Solar dish assisted rotary dryer was designed and developed for drying of FVW. The developed dryer performance was evaluated by drying mixed market waste with initial moisture content of 80 ± 20 % (w.b) in comparison to sun drying. Taguchi (L9 orthogonal array) experimental design is applied to conduct the experiments at three levels by varying four functioning parameters. The governable factors used in this study comprised of the following: (1) Inlet Air Velocity of 3 m/s, 4 m/s & 5 m/s; (2) FVW mixed market waste, dice cut size of 3 cm, 4 cm & 5 cm; (3) Hot air Temperature of 80°C, 100°C & 120°C; (4) Drying Time of 150 min, 180 min & 210 mins. The effect of the response variables such as Compression strength, Calorific value and Bulk density were determined by The S/N ratio and L9 orthogonal array tests. The validation test exhibited an overall enhancement in briquette quality. The optimal performances for the responses for biomass briquetting were obtained as 450 ± 20 psi, 17.8 ± 0.3 MJ/kg and 350 ± 20 kg/m³.

KEYWORDS: Solar Assisted Rotary Dryer, Waste to Energy, Biomass Briquetting, Fruit and Vegetable Waste to Solid Fuel & Taguchi Experimental Design

INTRODUCTION

Agriculture contributes 17% in India's GDP and provides food for more than 1.2 billion people generating a total employment of about 54.6% of the population. India holds the second-largest agricultural land (179.9 million hectares) in the world and food feed waste production covers the dominant part of the cropped area (65%) in Indian agriculture. Forecasts on future waste progress, world waste production is expected to be about 27 billions tonnes per year by 2050, one-third of which will come from Asia, with major role from India and China. Waste generation in Urban areas of India will be 0.7kg per person per day in 2025, nearly four to six times higher than 1999. The waste produced in urban areas of India is approximately 170000 tonnes per day, equivalent to about 62 million tonnes per year. Urban India generated 31.6 million tonnes of waste in 2001 and is currently generating 47.3 million tonnes. By 2041, waste generation is predicted to be 161 million tonnes, a fivefold increase in four decades.

India is densely populated and has high solar insolation providing a perfect combination for using sunlight based power in the country. Solar energy is the largest exploitable renewable resource as more energy from sunlight strikes earth in an hour than all of the energy consumed by humans in an entire year. This solar potential



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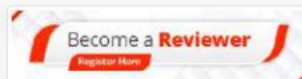
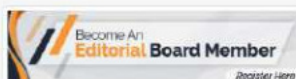
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Abstract

Background & Objective: Starch-based edible films, which are transparent, odourless, biodegradable, tasteless, and semi-permeable to gases and food additives, have attracted the attention of the research community as the alternative food packaging materials to synthetic plastics.

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Performance and Emission Analysis of Waste Cooking Oil Biodiesel added with Al₂O₃ Nanoadditive using VCR Engine

Gaikwad Pradeep Uttam et al.

Abstract

This research work reveals the effect of biodiesel Unsaturaton on its fuel properties and thereby on combustion, performance and emissions characteristics. Major part is focused on keeping the compression ration constant at 18 and analyzing different parameters of compression ignition engine. Also added the Al₂O₃ Nanoadditive in the produced biodiesel.



How to Cite:
et al., G. P. U. (2019). Performance and Emission Analysis of Waste Cooking Oil Biodiesel added with Al₂O₃ Nanoadditive using VCR Engine. *International Journal of Advanced Science and Technology*, 28(20), 122 - 132. Retrieved from <http://www.sc.org/journals/index.php/IJAST/article/view/2704>

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Thermodynamic Analysis of Diesel Engine Fuelled with Aqueous Nanofluid Blends

Authors : S. P. Venkatesan, P. N. Kadiresh

Published in: Innovative Design, Analysis and Development Practices in Aerospace and Automotive Engineering (I-DAD 2018)

Publisher: Springer Singapore

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Abstract

Thermodynamic analyses are performed on diesel engine with different types of nanofluid blend operations. Three best blends, i.e., D + 50Zn, D +



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The influence of injection parameters on the performance and emission characteristics of a DI diesel engine using biofuel-blended-pure diesel fuel

Mahalingan Selvaraj , Ganesan Subbiah & Senthil Kumar 

Pages 800-803 | Received 15 Nov 2017, Accepted 28 Nov 2017, Accepted author version posted online: 01 Dec 2017, Published online: 05 Feb 2018

 Download citation  <https://doi.org/10.1080/01430750.2017.1412352> Check for updates[Full Article](#)[Figures & data](#)[References](#)[Citations](#)[Metrics](#)[Reprints & Permissions](#)[Get access](#)

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Abstract

The transport sector is the most essential driver of growth and economic development, which is one of the biggest contributors to climate change, responsible for almost a quarter of the global carbon dioxide emissions. In this paper, the experiments were conducted for an injection timing of 21° with standard injection pressure of 220 bar at different proportions such as 20%, 40% and 60% of biodiesel blends with

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Influence of modified pent roof combustion cavity on diesel engine performance and emission characteristics >

FABRICATION OF NANOCHITOSAN BASED BIOCOMPATIBLE POLYMER BLEND FOR BONE TISSUE ENGINEERING APPLICATIONS

V. SANGEETHA^{a*}, P. N. SUDHA^b, T. GOMATHI^b, J. JAYAPRABAKAR^a

^a*Research Scholar, Sathyabama Institute of Science and Technology, Chennai 600119, India*

^b*PG and Research Department of Chemistry, D.K.M College for Women, Vellore 632001, India*

^c*School of Mechanical Engineering, Sathyabama Institute of Science and Technology, Chennai 600119, India*

In vitro cytocompatibility of nanochitosan blends was evaluated with three different assays. SEM analysis revealed the highly interconnected porous structure of the blends. Addition of Silk to nanochitosan/PVP increased both pore diameter and porosity. FTIR and XRD analysis confirm the formation of ternary blends by indicating that the two polymers interact yielding a miscible blend with strong electrostatic interaction. MTT assay, Fluorescent Spectroscopy, NRR and ALP assay on MC3T3-E1 cells studies indicated that the material is non toxic, cells are attached and proliferated on the pore surfaces of the scaffold.

(Received August 9, 2019; Accepted October 28, 2019)

Keywords: NCS/PVP/SF blends, Bone tissue engineering, In vitro studies, Biocompatibility

1. Introduction

Tissue engineering is a multidisciplinary field, in which the therapeutic products were developed as scaffolds and combined with viable human cellular systems, for repair, restoration or regeneration of cells or tissues damaged by injury or disease [1,2]. In this bone tissue engineering has emerged as a promising alternative in cases of bone loss, overcoming problems of rejection and donor scarcity associated to the clinical used bone grafts [3-4]. Bone primarily consists of living cells embedded in a mineralized organic matrix or extracellular matrix (ECM) composed of a collagen and hydroxyapatite (HA) [7,8]. It has an intrinsic capacity for regeneration, cell adhesion, migration, growth, differentiation, and apoptosis are all controlled, in part, by the transmission of signals between the cell nucleus and the ECM.

The field of tissue engineering focuses on the use of 3D scaffolds to encourage regrowth and tissue regeneration at the wound site. Therefore, many attempts have been made to develop suitable 3D bone constructs scaffold consisting of natural biomaterials in order to increase bone regeneration capacity. The key role of the 3D scaffold is to mimic natural extracellular matrix (ECM) in tissue engineering [9-12].

Biomaterials exist with precise architectural order over several length scales with unique properties such as biodegradability, non-toxicity, anti-bacterial effect and biocompatibility. Chitosan is one of them, which is widely used in wound healing because it stimulates haemostasis and accelerates tissue regeneration. Chitosan is metabolized by certain human enzymes, such as lysozyme, thus, it is biodegradable. Chitosan is an attractive material for a tissue engineering scaffold because it has structural similarities to glycosaminoglycans and is hydrophilic. Chitosan's monomeric unit, N-acetylglucosamine, occurs in hyaluronic acid, an extracellular macromolecule that is important in wound repair [13,14]. Many notable advances in technology have followed

* Corresponding author: sanchan2007@gmail.com

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[Abstract](#)
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Microstructure, Mechanical, and Electrical Properties and Corrosion Analysis of Lead-Free Solder CSI Joints on Cu Substrate Using Novel Concentrated Solar Energy Soldering (CSES) Method

Pushkaraj D. Sonawane ¹, V. K. Bupesh Raja  ² and Manoj Gupta ³

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Academic Editor: Alicia E. Ares

Received
14 Dec 2019

Accepted
06 Mar 2020

Published
26 Mar 2020

Abstract

In this study, “Concentrated Solar Energy (CSE)” is applied for soldering and is named as the “Concentrated Solar Energy Soldering (CSES) technique.” Lead-free solders are used for comparing novel CSES technique solder joints with CSI (Conventional



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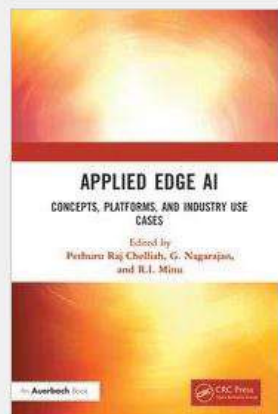


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29th June 2019

POKURI ASHOK KUMAR
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
CHENNAI

Dear Pokuri Ashok Kumar,

Subject: Letter of Evaluation

This is with reference to the Global Academic Internship Programme (GAIP) conducted by Corporate Gurukul from 1st June 2019 to 29th June 2019 on '**Designing and Implementing Secure IOT Applications**'. The course work for internship included the following:

IoT high level concepts, platforms and standards

- Demystifying the Internet of Things - Introduction, Challenges, Architectures
- Taxonomy of protocols and standards for enabling IoT and M2M
- IETF, OMA and OneM2M IoT Standards and their relationship with Internet's TCP/IP stack
- Understanding CoAP protocol
- Hands-On: Introduction to Programming Raspberry Pi installation and Headless Mode Set-up, CoAP Client/Server Data Communication

IoT Protocols

- Refresher on IPv6, Understanding 6LoWPAN, IPv6 Routing Protocol for Low-Power and Lossy Networks, MQTT
- Hands-On: 1: MQTT Client/Broker Data Communication

Secured IoT Applications

- Introduction to security and privacy
- Refresher on SSL/TLS, Using TLS/DTLS transport for securing IoT data
- Securing IoT data with JSON Object Signing and Encryption (JOSE), CBOR (Concise Binary Object Representation), COSE (CBOR Object Signing and Encryption)
- Hands-On: Secured IoT data collection and dissemination, communication over Raspberry Pi-USB/Bluetooth

IoT Data Privacy

- Privacy Preserving Data Correlation (Personal and population privacy, Privacy enhancing techniques, Data service monetisation)
- Data publication, Privacy implication of data quality, Data ownership, Data lifecycle management
- Hands-On: Measurement and monitoring tools for IoT networks

Types of sensors and applications

- Introduction to sensing and wireless network
- Understanding common sensor types and their applications - smart home, smart city, health care & fitness, agriculture, etc., sensor data processing.
- Introduction to programming on SensorTags and Contiki
- Hands-On: Introduction to programming on SensorTags and data collection

MAC protocols design and implementation

- Introduction to sensors on mobile devices
- Understanding power characteristics on mobile devices
 - Network
 - Sensing
 - Computation
 - Screen
- Processing of sensor data
- Introduction to wireless MAC protocols and network technologies (ALOHA, CSMA, TDMA, Bluetooth, Wifi, Cellular)
- Hands-On: Programming SensorTags to collect sensor data and communicates with gateway

Low power MAC Protocols

- Low power MAC protocols and network technologies (eg. S-MAC, B-MAC, X-MAC, BLE, ZigBee, LoRA)
- Evaluating and Designing MAC protocols for given application requirements

Basic Solution Development

- Introduction to IoT Solution Design and Development
- Cloud Computing and Fog/Edge Computing Architectures
- General Purpose Microcontroller (I):
 - Introduction to Micro:bit
 - Reactive System and Event-driven Programming
 - Programming Methodology with Microcontroller
 - Working with Onboard Sensors
 - Wireless Communication
 - GPIO Programming with Microbit
 - Working with Shield Device
 - Working with Add-on Sensors
- General Purpose Microcomputer (I):
 - Introduction to Raspberry Pi
 - GPIO Programming with Raspberry Pi
 - Breadboarding
 - Integration with External Devices
- Hands-On: Working with Micro:bit, GPIO Programming with Micro:bit, GPIO Programming with Raspberry Pi

Advanced Solution Development (II)

- General Purpose Microcomputer (II)
 - Working with Bluetooth Low Energy (BLE)
 - Wireless Communication with BLE
 - Wireless Communication with 2.4 GHz Radio
 - Wired Communication
- Server-side Backend Integration
 - Fog/Edge Processing with Raspberry Pi
 - Building Web Application in Python with Flask
 - Database Processing in Python with SQLite
 - Service-Oriented Architecture.
 - Building REST API in Python with Connexion



- IoT Analytics
 - General Concepts of IoT Analytics
 - Data Mining and Machine Learning in Python with SciPy Libraries.
 - Building a Data Pipeline
- Hands-on: Wireless Communication with Micro:bit and Raspberry Pi, Building Data-driven Web Application, Building REST API, Mining IoT Data

Your performance in GAIP was evaluated based on theoretical understanding and application of concepts in practical data analysis with **GRADE A-**.

We encourage you to further your knowledge, skills and research in the above areas and wish you the very best for a career ahead!

Sincerely,

Dr Tan Wee Kek
Senior Lecturer
Strategic Technology Management
Institute
National University of Singapore

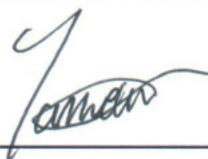
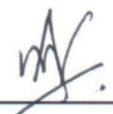
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TRANSCRIPT

GLOBAL ACADEMIC INTERNSHIP PROGRAMME JUNE 2019 DESIGNING AND IMPLEMENTING SECURE IOT APPLICATIONS	
Name: POKURI ASHOK KUMAR	Date: 29 th June 2019

Assessment Component	Score	Topic/Parameter
In-Class Assessment	12/40	IoT High Level Concepts, Platforms and Standards
	24/40	Security on IoT
	28/40	Types of Sensors and Applications
	28/40	MAC Protocols - Design and Implementation
	20/40	Solution Development
Final Comprehensive Assessment	40/80	Comprehensive Assessment for the Course
Project Assessment	37/50	Final Project Work

	Assessment			Overall Percentage (Out of 100%)
	In-Class Assessment	Final Comprehensive Assessment	Project Assessment	62
	30% weightage	20% weightage	50% weightage	Grade
Percentage	15/30	10/20	37/50	A-
Faculty Assessor Signature				
Faculty Assessor Name	Dr Tan Wee Kek		Dr Anand Bhojan	Dr Chan Mun Choon

Grading Guideline:

O	100 - 90	B	54.9 - 50
A+	89.9 - 80	B-	49.9 - 45
A	79.9 - 70	C	44.9 - 40
A-	69.9 - 60	F	<40
B+	59.9 - 55		



29th June 2019

JOEL EBENEZER T
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
CHENNAI

Dear Joel Ebenezer T,

Subject: Letter of Evaluation

This is with reference to the Global Academic Internship Programme (GAIP) conducted by Corporate Gurukul from 1st June 2019 to 29th June 2019 on '**Designing and Implementing Secure IOT Applications**'. The course work for internship included the following:

IoT high level concepts, platforms and standards

- Demystifying the Internet of Things - Introduction, Challenges, Architectures
- Taxonomy of protocols and standards for enabling IoT and M2M
- IETF, OMA and OneM2M IoT Standards and their relationship with Internet's TCP/IP stack
- Understanding CoAP protocol
- Hands-On: Introduction to Programming Raspberry Pi installation and Headless Mode Set-up, CoAP Client/Server Data Communication

IoT Protocols

- Refresher on IPv6, Understanding 6LoWPAN, IPv6 Routing Protocol for Low-Power and Lossy Networks, MQTT
- Hands-On: 1: MQTT Client/Broker Data Communication

Secured IoT Applications

- Introduction to security and privacy
- Refresher on SSL/TLS, Using TLS/DTLS transport for securing IoT data
- Securing IoT data with JSON Object Signing and Encryption (JOSE), CBOR (Concise Binary Object Representation), COSE (CBOR Object Signing and Encryption)
- Hands-On: Secured IoT data collection and dissemination, communication over Raspberry Pi-USB/Bluetooth

IoT Data Privacy

- Privacy Preserving Data Correlation (Personal and population privacy, Privacy enhancing techniques, Data service monetisation)
- Data publication, Privacy implication of data quality, Data ownership, Data lifecycle management
- Hands-On: Measurement and monitoring tools for IoT networks

Types of sensors and applications

- Introduction to sensing and wireless network
- Understanding common sensor types and their applications - smart home, smart city, health care & fitness, agriculture, etc., sensor data processing.
- Introduction to programming on SensorTags and Contiki
- Hands-On: Introduction to programming on SensorTags and data collection

MAC protocols design and implementation

- Introduction to sensors on mobile devices
- Understanding power characteristics on mobile devices
 - Network
 - Sensing
 - Computation
 - Screen
- Processing of sensor data
- Introduction to wireless MAC protocols and network technologies (ALOHA, CSMA, TDMA, Bluetooth, Wifi, Cellular)
- Hands-On: Programming SensorTags to collect sensor data and communicates with gateway

Low power MAC Protocols

- Low power MAC protocols and network technologies (eg. S-MAC, B-MAC, X-MAC, BLE, ZigBee, LoRA)
- Evaluating and Designing MAC protocols for given application requirements

Basic Solution Development

- Introduction to IoT Solution Design and Development
- Cloud Computing and Fog/Edge Computing Architectures
- General Purpose Microcontroller (I):
 - Introduction to Micro:bit
 - Reactive System and Event-driven Programming
 - Programming Methodology with Microcontroller
 - Working with Onboard Sensors
 - Wireless Communication
 - GPIO Programming with Microbit
 - Working with Shield Device
 - Working with Add-on Sensors
- General Purpose Microcomputer (I):
 - Introduction to Raspberry Pi
 - GPIO Programming with Raspberry Pi
 - Breadboarding
 - Integration with External Devices
- Hands-On: Working with Micro:bit, GPIO Programming with Micro:bit, GPIO Programming with Raspberry Pi

Advanced Solution Development (II)

- General Purpose Microcomputer (II)
 - Working with Bluetooth Low Energy (BLE)
 - Wireless Communication with BLE
 - Wireless Communication with 2.4 GHz Radio
 - Wired Communication
- Server-side Backend Integration
 - Fog/Edge Processing with Raspberry Pi
 - Building Web Application in Python with Flask
 - Database Processing in Python with SQLite
 - Service-Oriented Architecture.
 - Building REST API in Python with Connexion



- IoT Analytics
 - General Concepts of IoT Analytics
 - Data Mining and Machine Learning in Python with SciPy Libraries.
 - Building a Data Pipeline
- Hands-on: Wireless Communication with Micro:bit and Raspberry Pi, Building Data-driven Web Application, Building REST API, Mining IoT Data

Your performance in GAIP was evaluated based on theoretical understanding and application of concepts in practical data analysis with **GRADE A-**.

We encourage you to further your knowledge, skills and research in the above areas and wish you the very best for a career ahead!

Sincerely,

Dr Tan Wee Kek
Senior Lecturer
Strategic Technology Management
Institute
National University of Singapore

Dr Anand Bhojan
Senior Lecturer
Strategic Technology Management
Institute
National University of Singapore

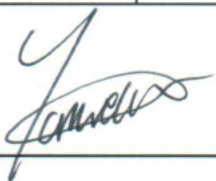
Dr Chan Mun Choon
Associate Professor
Strategic Technology Management
Institute
National University of Singapore



TRANSCRIPT

GLOBAL ACADEMIC INTERNSHIP PROGRAMME JUNE 2019 DESIGNING AND IMPLEMENTING SECURE IOT APPLICATIONS	
Name: JOEL EBENEZER T	Date: 29 th June 2019

Assessment Component	Score	Topic/Parameter
In-Class Assessment	24/40	IoT High Level Concepts, Platforms and Standards
	12/40	Security on IoT
	32/40	Types of Sensors and Applications
	40/40	MAC Protocols - Design and Implementation
	32/40	Solution Development
Final Comprehensive Assessment	28/80	Comprehensive Assessment for the Course
Project Assessment	37/50	Final Project Work

	Assessment			Overall Percentage (Out of 100%)
	In-Class Assessment	Final Comprehensive Assessment	Project Assessment	61.4
	30% weightage	20% weightage	50% weightage	Grade
Percentage	17.4/30	7/20	37/50	A-
Faculty Assessor Signature				
Faculty Assessor Name	Dr Tan Wee Kek	Dr Anand Bhojan	Dr Chan Mun Choon	

Grading Guideline:

O	100 - 90	B	54.9 - 50
A+	89.9 - 80	B-	49.9 - 45
A	79.9 - 70	C	44.9 - 40
A-	69.9 - 60	F	<40
B+	59.9 - 55		



COMPUTER SCIENCE DEPARTMENT
ERIK JONSSON SCHOOL OF
ENGINEERING AND COMPUTER SCIENCE

THE UNIVERSITY OF TEXAS AT
DALLAS

800 W. Campbell Road EC-31 RICHARDSON, TEXAS 75080-3021
Ph: 972-883-4738 fax 972-883-2399

Jan 4, 2019

Murtaza Muffaddal Sodawala
194-4A, Anna Pillai St
STS Complex 4th Floor
Broadway
Chennai - 600001
INDIA

Dear Murtaza Muffaddal Sodawala:

It is my pleasure to invite you to join the Computer Science department at The University of Texas at Dallas as a J-1 Exchange Visitor, Student Intern.

Nature of Student Internship Activities:

This internship will include lessons & projects on advanced Computer Science concepts like Big Data, Machine Learning & Programming Contests. There will be lectures in the mornings and hands-on projects in the afternoons. Internship will come to a close with project presentations during the final 2 days. You will also get to experience U.S. cultural activities in Dallas in the weekends.

Duration of Student Internship: Internship will be from June 1 to July 15, 2019.

Funding: You will be required to pay for all your expenses related to internship. UT Dallas will provide you with access to the required facilities to fulfill the requirements of your internship.

We are delighted that you will come to our university as J-1 Student Intern and look forward to meeting you.

Sincerely,

Dr. Jey Veerasamy
jeyv@utdallas.edu 972-883-4241
Director, Center for Computer Science & Outreach
Department of Computer Science, UT Dallas



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

Murtaza Mufaddal

is recognized for Successful Completion of Hands-on Workshop titled

Big Data driven Advanced Data Science

July 8-10, 2019

Dr. Jey Veerasamy
Director

Dr. Latifur Khan
Instructor

Dr. Gopal Gupta
CS Dept. head

Center for Computer Science Education & Outreach



Murtaza Mufaddal

is recognized for Successful Completion of

Programming in Java

July 8 – 12, 2019

John Cole

Prof. John Cole
Assoc. Director

Dr. Jey Veerasamy

Dr. Jey Veerasamy
Director

Dr. Gopal Gupta

Dr. Gopal Gupta
CS Dept. head

Center for Computer Science Education & Outreach



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

MURTAZA MUFADDAL

is recognized for Successful Completion of Internship on

Big Data & Deep Learning

June 1 – July 15, 2019 @ Richardson, Texas, USA

John Cole

Prof. John Cole
Assoc. Director

Dr. Jey Veerasamy

Dr. Jey Veerasamy
Director

Dr. Gopal Gupta

Dr. Gopal Gupta
CS Dept. head

Center for Computer Science Education & Outreach



COMPUTER SCIENCE DEPARTMENT

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ENGINEERING AND COMPUTER SCIENCE

THE UNIVERSITY OF TEXAS AT
DALLAS

800 W. Campbell Road EC-31 RICHARDSON, TEXAS 75080-3021
Ph: 972-883-4738 fax 972-883-2399

Jan 4, 2019

Syed Aarif Suhaib Qadri
No 18, Abdul Razzak Street Flat no 3F
Sri Vari Flats
Saidapet,
Chennai - 600015
INDIA

Dear Syed Aarif Suhaib Qadri:

It is my pleasure to invite you to join the Computer Science department at The University of Texas at Dallas as a J-1 Exchange Visitor, Student Intern.

Nature of Student Internship Activities:

This internship will include lessons & projects on advanced Computer Science concepts like Big Data, Machine Learning & Programming Contests. There will be lectures in the mornings and hands-on projects in the afternoons. Internship will come to a close with project presentations during the final 2 days. You will also get to experience U.S. cultural activities in Dallas in the weekends.

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We are delighted that you will come to our university as J-1 Student Intern and look forward to meeting you.

Sincerely,

Dr. Jey Veerasamy
jeyv@utdallas.edu 972-883-4241
Director, Center for Computer Science & Outreach
Department of Computer Science, UT Dallas



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

SYED AARIF SUHAIB QADRI

is recognized for Successful Completion of Internship on

Big Data & Deep Learning

June 1 – July 15, 2019 @ Richardson, Texas, USA

John Cole

Prof. John Cole
Assoc. Director

Dr. Jey Veerasamy

Dr. Jey Veerasamy
Director

Dr. Gopal Gupta

Dr. Gopal Gupta
CS Dept. head

Center for Computer Science Education & Outreach



COMPUTER SCIENCE DEPARTMENT
ERIK JONSSON SCHOOL OF
ENGINEERING AND COMPUTER SCIENCE

THE UNIVERSITY OF TEXAS AT
DALLAS

800 W. Campbell Road EC-31 RICHARDSON, TEXAS 75080-3021
Ph: 972-883-4738 fax 972-883-2399

Jan 4, 2019

Nachiketha Raju Nannapuraju
Gayathri Colony
RD.NO:2, H.NO: 11-25-702
80FT ROAD
Warangal
Telangana - 506002
INDIA

Dear Nachiketha Raju Nannapuraju:

It is my pleasure to invite you to join the Computer Science department at The University of Texas at Dallas as a J-1 Exchange Visitor, Student Intern.

Nature of Student Internship Activities:

This internship will include lessons & projects on advanced Computer Science concepts like Big Data, Machine Learning & Programming Contests. There will be lectures in the mornings and hands-on projects in the afternoons. Internship will come to a close with project presentations during the final 2 days. You will also get to experience U.S. cultural activities in Dallas in the weekends.

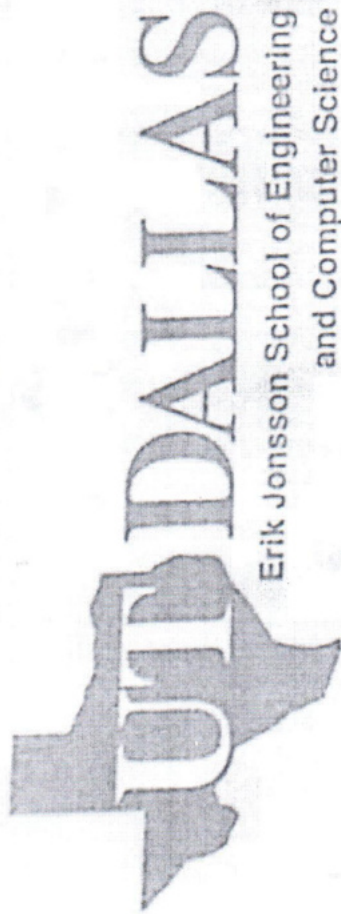
Duration of Student Internship: Internship will be from June 1 to July 15, 2019.

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We are delighted that you will come to our university as J-1 Student Intern and look forward to meeting you.

Sincerely,

Dr. Jey Veerasamy
jeyv@utdallas.edu 972-883-4241
Director, Center for Computer Science & Outreach
Department of Computer Science, UT Dallas



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

N.NACHIKETHA RAJU

is recognized for Successful Completion of Internship on

Big Data & Deep Learning

June 1 – July 15, 2019 @ Richardson, Texas, USA

John Cole

Prof. John Cole
Assoc. Director

Dr. Jey Veerasamy

Dr. Jey Veerasamy
Director

Dr. Gopal Gupta

Dr. Gopal Gupta
CS Dept. head

Center for Computer Science Education & Outreach



COMPUTER SCIENCE DEPARTMENT

ERIK JONSSON SCHOOL OF
ENGINEERING AND COMPUTER SCIENCE

THE UNIVERSITY OF TEXAS AT
DALLAS

800 W. Campbell Road EC-31 RICHARDSON, TEXAS 75080-3021
Ph: 972-883-4738 fax 972-883-2399

Jan 4, 2019

Joshua Stephen Rodrigues
No.44 First Avenue Street #44
Blue bay Villa 'C'
Vettuvankani, ECR
Chennai - 600041
INDIA

Dear Joshua Stephen Rodrigues:

It is my pleasure to invite you to join the Computer Science department at The University of Texas at Dallas as a J-1 Exchange Visitor, Student Intern.

Nature of Student Internship Activities:

This internship will include lessons & projects on advanced Computer Science concepts like Big Data, Machine Learning & Programming Contests. There will be lectures in the mornings and hands-on projects in the afternoons. Internship will come to a close with project presentations during the final 2 days. You will also get to experience U.S. cultural activities in Dallas in the weekends.

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We are delighted that you will come to our university as J-1 Student Intern and look forward to meeting you.

Sincerely,

Dr. Jey Veerasamy
jeyv@utdallas.edu 972-883-4241
Director, Center for Computer Science & Outreach
Department of Computer Science, UT Dallas



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

JOSHUA STEPHEN RODRIGUES

is recognized for Successful Completion of Internship on

Big Data & Deep Learning

June 1 – July 15, 2019 @ Richardson, Texas, USA

John Cole

Prof. John Cole
Assoc. Director

Jey

Dr. Jey Veerasamy
Director

Gopal

Dr. Gopal Gupta
CS Dept. head

Center for Computer Science Education & Outreach



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)



Accredited with "A" grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119, Tamil Nadu, India.

Phone : 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax : 044 - 2450 2344

Website : www.sathyabama.ac.in

Date : 15th May 2019

To

The Visa Officer
Consul General of Germany
Chennai 600028

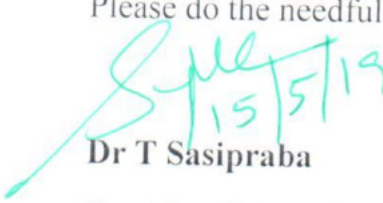
Dear Sir

Sub: Requisition for Visa Grant – reg

The following is the list of students who will undergo the Summer School/ Immersion Program at **Niuversity Germany**.

Sl.No	Name	Passport Number	Nationality
1	Abinash J	N5863032	Indian
2	Amaladoss Vinod Castro C	R9814943	Indian
3	Thangzamuana	T5936354	Indian
4	Aravind S	T4294117	Indian
5	Eric John	R4400964	Indian
6	Akash I	S1995201	Indian
7	Aby Mammen Varghese	T0734626	Indian
8	Azwan Sait. A	M2140303	Indian

Please do the needful for granting them Visa to Germany.


Dr T Sasipraba

Pro Vice Chancellor



SUMMER INTERNSHIP PROGRAM - 2019

GERMANY

BERLIN / DRESDEN



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Edu Solutions Pvt. Ltd.
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SUMMER PROGRAM - 2019

BERLIN | DRESDEN

 AMAZON, Leipzig FC (LEI 1).

STATEMENT OF EXAMINATION RESULT

NAME ADEPALLI ADHARSH
PROGRAMME B.ENG (HONS.) MECHANICAL ENGINEERING
FACULTY COLLEGE OF ENGINEERING
SEMESTER SEMESTER 1 SESSION 2019/2020

NRIC : P3123651

STUDENT ID : MA19166

STUDENT CATEGORY : MOBILITY

COURSE CODE	COURSE NAME	UMP GRADE	REMARK
BMM4783	COMPUTATIONAL FLUID DYNAMICS	A	PASS
BMM4021	ENGINEER AND SOCIETY	A-	PASS
UHF1121	GERMAN FOR BEGINNERS	B	PASS
BMM1011	INTRODUCTION TO ENGINEERING	A	PASS
BMM4833	QUALITY ENGINEERING	A	PASS
GPA : 3.88 CGPA : 3.88 Status : KC			



AP. DR. MOHD SHAHRIR BIN MOHD SANI
 DIRECTOR
 CENTRE FOR ACADEMIC MANAGEMENT
 UNIVERSITI MALAYSIA PAHANG

GRADING SYSTEM		
Marks	Common Grade	Point Value
80 - 100	A+	4.00
75 - 79	A-	3.67
70 - 74	B+	3.33
65 - 69	B	3.00
60 - 64	B-	2.67
55 - 59	C+	2.33
50 - 54	C	2.00
47 - 49	C-	1.67
44 - 46	D+	1.33
40 - 43	D	1.00
25 - 39	E	0.67
0 - 24	F	0.00

ACADEMIC STANDING	
KC	Excellent Standing
KB	Good Standing
P1	Probation 1
P2	Probation 2
KG	Fail Standing

**Universiti Malaysia Pahang, 26600 Pekan, Pahang Darul Makmur,
Malaysia**

Tel : +0609 424 5000 Fax : +0609 424 5505

STATEMENT OF EXAMINATION RESULT

NAME CRISPIN SAHAYA JEYASEELAN
PROGRAMME B.ENG (HONS.) CHEMICAL ENGINEERING
FACULTY COLLEGE OF ENGINEERING
SEMESTER SEMESTER 1 SESSION 2019/2020

NRIC : T0478273

STUDENT ID : KA19134

STUDENT CATEGORY : MOBILITY

COURSE CODE	COURSE NAME	UMP GRADE	REMARK
BKC3783	OIL & GAS TECHNOLOGY (E)	B-	PASS
BKF3553	PROCESS SIMULATION & COMPUTER AIDED DESIGN	B	PASS
BKF3923	PROCESS SYNTHESIS	C+	PASS
BKC3922	UNDERGRADUATE RESEARCH PROJECT I	B+	PASS
BKC3683	WASTEWATER TREATMENT (E)	B+	PASS
GPA : 2.90 CGPA : 2.90 Status : KB			



AP. DR. MOHD SHAHRIR BIN MOHD SANI
 DIRECTOR
 CENTRE FOR ACADEMIC MANAGEMENT
 UNIVERSITI MALAYSIA PAHANG

GRADING SYSTEM		
Marks	Common Grade	Point Value
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65 - 69	B	3.00
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55 - 59	C+	2.33
50 - 54	C	2.00
47 - 49	C-	1.67
44 - 46	D+	1.33
40 - 43	D	1.00
25 - 39	E	0.67
0 - 24	F	0.00

ACADEMIC STANDING	
KC	Excellent Standing
KB	Good Standing
P1	Probation 1
P2	Probation 2
KG	Fail Standing

**Universiti Malaysia Pahang, 26600 Pekan, Pahang Darul Makmur,
Malaysia**

Tel : +0609 424 5000 Fax : +0609 424 5505

Universiti Malaysia Pahang (UMP)

Semester SEMESTER 1 SESSION 2019/2020
Pelajar KBB19034 MUTHUMARIAPPAN KIRUBASANKARI
Kursus KBB SARJANA PENTADBIRAN PERNIAGAAN
Fakulti FIM1000 FAKULTI PENGURUSAN INDUSTRI

Jumlah Semester 1

Kod	Matapelajaran	Kredit	Gred	Nilai Gred	Status
1	KPC1123 CORPORATE GOVERNANCE	3	B-	2.67	LULUS
2	KPC1133 STRATEGIC MARKETING	3	B-	2.67	LULUS

GPA	2.67	Matanilai	16.02		Semester Lalu	Semester Ini	Keseluruhan
CPA	2.67	Matanilai	16.02		Kredit Kira	6	6
		Keseluruhan			Kredit Dapat	6	6
					Kredit Diambil	6	6
					Pengecualian Kredit		
Kelas					Status		KS

Panduan:	KC = Kedudukan Cemerlang	KS = Kedudukan Bersyarat
	KB = Kedudukan Baik	KG = Kedudukan Gagal



MAHSA
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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-01

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **MUTHARASU ABIRAMI** student from Sathyabama Institute of Science and Technology with **PASSPORT No. Z3949853** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



MAHSA
UNIVERSITY

MAHSA
UNIVERSITY
BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-02

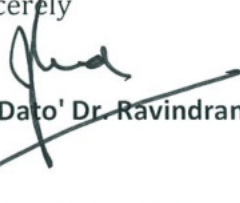
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **D R ANU PREETHI MERBIN** student from Sathyabama Institute of Science and Technology with **PASSPORT No. R3054653** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



MAHSA
UNIVERSITY

MAHSA
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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-03

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **SWATHI GURUMURTHY** student from Sathyabama Institute of Science and Technology with **PASSPORT No. P1539264** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



MAHSA
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MAHSA
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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-04

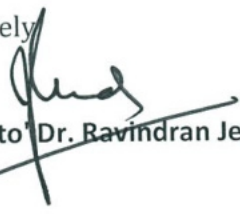
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **BASHYAM PRANEETHA** student from Sathyabama Institute of Science and Technology with **PASSPORT No. S4740990** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



MAHSA
UNIVERSITY

MAHSA
UNIVERSITY
BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-05

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **BOMMANA CHANAKYA** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T2658775** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-06

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **YENDURI RAMNADH** student from Sathyabama Institute of Science and Technology with **PASSPORT No. R5918478** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

**Level 7, Main Building, Bandar Saujana Putra,
42610 Jenjarom, Selangor. Malaysia.**



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-07

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **KOTHA APUROOP** student from Sathyabama Institute of Science and Technology with **PASSPORT No. N9891432** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-08

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **P PAVAN KUMAR** student from Sathyabama Institute of Science and Technology with **PASSPORT No. S7092797** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-09

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **NERELLA SUKANYA** student from Sathyabama Institute of Science and Technology with **PASSPORT No. S3808559** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-10

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **RISHIKA ANJALI P** student from Sathyabama Institute of Science and Technology with **PASSPORT No. R3777602** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob -11

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **NEKKANTI DEEPA SUDEESHNA** student from Sathyabama Institute of Science and Technology with **PASSPORT No. Z4929406** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

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42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-12

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **SOFICA B** student from Sathyabama Institute of Science and Technology with **PASSPORT No. Z3480791** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.**



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-13

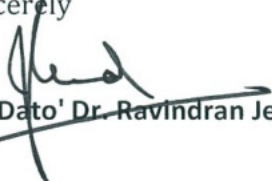
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **SAI THANUJ .G** student from Sathyabama Institute of Science and Technology with **PASSPORT No. S2156166** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-14

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **M.RAVIVARMA** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T6965835** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-15

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **S.SANJITH** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T2135459** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,
42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-16

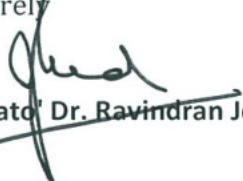
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **S.RISHAB** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T6245481** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,
42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-17

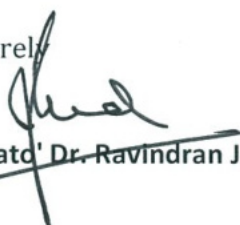
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **PAVANI KUSE** student from Sathyabama Institute of Science and Technology with **PASSPORT No. Z5139730** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely,


Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-18

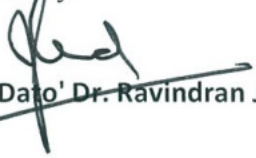
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **ANIRUDH SARANG V** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T2747130** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-19

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **ARAVIND K** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T6971028** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-20

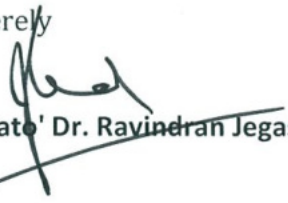
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **V.S.ESHWARNATH** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T6982220** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-21

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **VENKATA NAGA SAI GANESH PINNIKA** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T7571699** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,
42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-22

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **VENKAT SUBBU RAMA SUBBU** student from Sathyabama Institute of Science and Technology with **PASSPORT No. R8935756** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

Level 7, Main Building, Bandar Saujana Putra,

42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-23

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **J.ANGELINE** student from Sathyabama Institute of Science and Technology with **PASSPORT No. T6979298** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-24

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **SANTHOSH SARAVANAN MARUDHUPANDIAN** student from Sathyabama Institute of Science and Technology with **PASSPORT No. S2382801** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

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Dean

Faculty of Medicine & Biomedical Sciences

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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-25

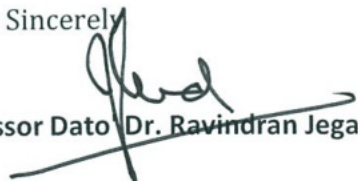
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **JONES LEO RAJ.P** student from Sathyabama Institute of Science and Technology with **PASSPORT No. P0643670** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

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BE MORE

Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-26

LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **S JEFRY NARUN** student from Sathyabama Institute of Science and Technology with **PASSPORT No. Z4211767** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely


Professor Dato' Dr. Ravindran Jegasothy
Dean

Faculty of Medicine & Biomedical Sciences

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42610 Jenjarom, Selangor. Malaysia.



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Date: 14th August 2019

Ref No. FoM/BMS/Stu/Mob-27

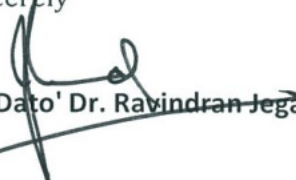
LETTER OF INVITATION

To whomsoever it may concern

We hereby confirm that **ALKA MANDAL** student from Sathyabama Institute of Science and Technology with **PASSPORT No. P6244635** has been invited for Two weeks Student Exchange Programme, within the framework of Memorandum of Understanding for Academic cooperation, entered between **SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, India** and **MAHSA UNIVERSITY, Malaysia** in the Department of Biomedical Sciences, Faculty of Medicine & Biomedical Sciences starting from 7th September to 21st September 2019.

Thank You

Yours Sincerely

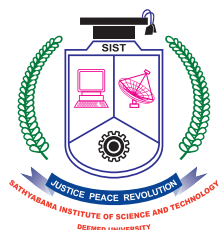

Professor Dato' Dr. Ravindran Jegasothy

Dean

Faculty of Medicine & Biomedical Sciences

MAHSA University

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42610 Jenjarom, Selangor. Malaysia.



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

(Estd. U/S(3) of UGC Act, 1956) Accredited with Grade 'A' by NAAC
Declared as Category 'A' University by Ministry of HRD, Govt. of India

In association
with



INDONESIA



INTERNATIONAL CONFERENCE ON INTELLECTUAL PROPERTY RIGHTS AND INNOVATION MANAGEMENT

Thursday 12th September to Saturday 14th September 2019

About the Conference

Creativity and innovation are new drivers of every economy. Intellectual Property Rights (IPRs) plays a vital role in enhancing the socio-economic prosperity of every country. International Conference on Intellectual Property Rights and Innovation Management is scheduled to be held on 12th, 13th and 14th of September 2019. The objective of the conference is to impart greater awareness about Intellectual Property Rights. To understand patentability criteria and viable aspects of the patent and to create an advance level of IP awareness. Lawyers and scientists are the two sides of the coin in the field of intellectual property. The planned conference is holistic in its scope covering the aspects of property Rights relevant to researchers, scientists, farmers, business planners, lawyers, teachers, academicians and different stakeholders. The conference maintains inter disciplinary focus and welcomes presenters and attendees with expertise in Law, business management, technology, engineering, humanities and Social Sciences. Academicians, Practitioners seeking a stimulating opportunity to learn and share the latest research, best practices, theories and insights in the mentioned themes should attend. The conference shall be a platform for providing and receiving constructive feedback on research progress.

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Pro Vice Chancellor

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Email ID : provc@sathyabama.ac.in

: icipr2019@gmail.com

Convener

Dr. Dilshad Shaik, Dean, School of Law.

deanlaw@sathyabama.ac.in, Mobile: +91 9849000331

For more details contact

Dr. N. Kannan :

Ms. Sofiya : +91-9176515554

Dr. T. Ambika : +91-9786963697

Mr. Mohammed Salihu : +91-8012329352



Conference Themes

- ★ IPR Concepts and Issues
- ★ IPRs and Knowledge Driven Economies
- ★ IPRs and the Enforcement Mechanism
- ★ International Protection and IPRs
- ★ IPRs and Innovation
- ★ Intellectual Property -Science& Technology
- ★ Intellectual property rights -patents
- ★ Innovation Management

Topics related to
Intellectual
Property rights
other than the
above mentioned
themes are also
welcome.

Publication

All submissions will be screened for plagiarism. Only the qualifying submissions will be peer-reviewed and the registered papers presented in the conference will be published depending on the originality, quality, relevance and other editorial considerations with additional processing charges.

Virtual Presentation (Exclusively for international participants)

Researchers from abroad are encouraged to make use of virtual presentation opportunities. For more details, please contact through icipr2019@gmail.com

Registration Fee

Delegates Category	Fees
Students / Scholars / Academicians	INR 3000
For Industry	INR 4000
For Foreign delegates	\$50

Mode of Payment :

Registration fee is accepted through: Demand Draft in favor of "Dean (Publications & Conferences) Sathyabama University" payable at Chennai, INDIA.

International wire transfer can be made favoring: Account Name "Dean (Publications & Conferences) Sathyabama University", Account Number 891734627, IFSC Code IDIB000T020, SWIFT Code IDIBINBBTLT, BRANCH CODE 098, Branch Address : Indian Bank, Thousand Lights Branch, Chennai - 600 006, India.

NOTE: Mention ICIPR2019 after your name in the Remarks column while transferring money online

Accommodation:

Accommodation for research scholars and participants will be arranged in University Hostels as per the request (first come first serve). For both Indian and foreign participants those who are interested to stay in hotels will be arranged on payment basis.

Important Dates



Abstract Submission : 30th June, 2019
Intimation of Acceptance : 5th July, 2019
Submission of Full Paper : 30th July, 2019
Last Date for Registration : 25th July, 2019
Conference Dates : 12th to 14th Sep' 2019

Call for Papers

Authors are requested to submit abstract within 300 words with 5 keywords of their original and unpublished research work on or before 30th June 2019 via email through icipr2019@gmail.com. Acceptance of peer reviewed abstracts will be intimated through email for the submission of full manuscript on or before 5th July 2019.

For other details please visit : www.icipr2019.com

Friday, 09 August 2019

Professor Subhashini Radha Krishnan
Professor & Head
Department of Information Technology
Sathyabama Institute of Science and Technology
Jeppiaar Nagar, Rajiv Gandhi Road, Chennai 600119

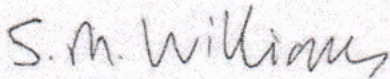
Dear Professor Subhashini,

I am very pleased to invite you to visit Nottingham Trent University (NTU) from 25 September 2019 to 1 October 2019 to meet with our academics and for a discussion on the existing partnership between Nottingham Trent University and Sathyabama Institute of Science and Technology.

Your passport details are as follows:

Surname : Radha Krishnan
Given name: Subhashini
Date of Birth: 29/03/1979
Passport Number: J5217360
Place of Issue: Chennai
Date of Expiry: 10/04/2021

Yours sincerely,



Mr Stephen Williams
Director, NTU Global

Friday, 09 August 2019

Dr.Y Bevish Jinila,
Associate Professor
Department of Information Technology
Sathyabama Institute of Science and Technology
Jeppiaar Nagar, Rajiv Gandhi Road, Chennai 600119

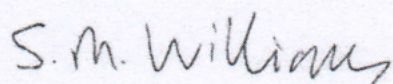
Dear Dr Bevish,

I am very pleased to invite you to visit Nottingham Trent University (NTU) from 25 September 2019 to 1 October 2019 to meet with our academics and for a discussion on the existing partnership between Nottingham Trent University and Sathyabama Institute of Science and Technology.

Your passport details are as follows:

Name: BEVISH JINILA
Date of Birth:21/11/1981
Passport Number:P1353765
Place of Issue: CHENNAI
Date of Expiry:21/06/2026

Yours sincerely,



Mr Stephen Williams
Director, NTU Global

16 September, 2019

Mathivanan Gandhi

Passport No: Z4850311

Professor

Sathyabama Institute of Science and Technology, India

Subject: Letter of Invitation as Exchange Faculty at Daffodil International University, Bangladesh

Dear Mr. Mathivanan Gandhi,

Greetings from Daffodil International University (DIU)! Bangladesh.

We are impressed by your academic accomplishments & achievements. On behalf of our University, I am pleased to offer you an invitation as an Exchange Faculty in the Department of Software Engineering of Daffodil International University (DIU) under faculty exchange program between DIU and Sathyabama Institute of Science and Technology, India for 05 days during **30th September to 04th October 2019** of Fall-2019 semester.

During your stay in DIU, you will be assigned to teach courses related to your academic background in undergraduate and graduate level.

DIU will cover the costs of your meals, accommodation, and local transport during your stay in Dhaka. Besides, as an exchange faculty you will not get any remuneration for teaching.

I am looking forward to welcoming you in DIU, Dhaka, Bangladesh.

With regards,

Mossam



Professor Dr. Md. Fokhray Hossain

Director, International Affairs

Daffodil International University, Bangladesh

Mobile: +88-01713493250

Email: international@daffodilvarsity.edu.bd

16 September, 2019

Jesudoss Arul Swamy

Passport No: K7198188

Professor

Sathyabama Institute of Science and Technology, India

Subject: Letter of Invitation as Exchange Faculty at Daffodil International University, Bangladesh.

Dear Mr. Jesudoss Arul Swamy,

Greetings from Daffodil International University (DIU)! Bangladesh.

We are impressed by your academic accomplishments & achievements. On behalf of our University, I am pleased to offer you an invitation as an Exchange Faculty in the Department of Computer Science & Engineering (CSE) of Daffodil International University (DIU) under faculty exchange program between DIU and Sathyabama Institute of Science and Technology, India for 05 days during **30th September to 04th October 2019** of Fall-2019 semester.

During your stay in DIU, you will be assigned to teach courses related to your academic background in undergraduate and graduate level.

DIU will cover the costs of your meals, accommodation, and local transport during your stay in Dhaka. Besides, as an exchange faculty you will not get any remuneration for teaching.

I am looking forward to welcoming you in DIU, Dhaka, Bangladesh.

With regards,

Mossam



Professor Dr. Md. Fokhray Hossain

Director, International Affairs

Daffodil International University, Bangladesh

Mobile: +88-01713493250

Email: international@daffodilvarsity.edu.bd

ROMÂNIA

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII

Universitatea din Craiova

RECTORAT

Str. Al.I.Cuza, nr.13

Tel./Phone: +40 251 414398; Fax: +40 251 411688; E-Mail: rectorat@central.ucv.ro

**SISTEMUL EUROPEAN DE CREDITE TRANSFERABILE
ECTS - EUROPEAN CREDIT TRANSFER SYSTEM****SITUAȚIE ȘCOLARĂ
TRANSCRIPT OF RECORDS**Nume student
Name of student

REDDY

Prenume student
First name

AJAY SHIVSHARAN

Data nașterii (ziua/luna/anul)
Date of birth (day/month/year)

11 | 01 | 1999

Locul nașterii
Place of birth

SOLAPUR, MAHARASHTRA, INDIA

Numărul matricol
Student enrollment number

I/95

Anul înmatriculării
Year of enrollment

2019

Durata stagiului
Period of stay

10-10-2019 - 09-02-2020

Numele instituției partenere
Name of sending institution

SATHYABAMA UNIVERSITY OF CHENNAI, INDIA

Facultate/Departament
Faculty/Department

AUTOMOBILE ENGINEERING

Coordonator

ECTS departmental coordinator

PRO VICE CHANCELLOR DR.T SASIPRABA

E-Mail: 04424503150

Numele instituției
Name of receiving institutionUniversitatea din Craiova, RO CRAIOVA 01, Craiova, Romania
University of CraiovaFacultate/Departament
Faculty/DepartmentFacultatea de Mecanică
Faculty of Mechanics

Coordonator

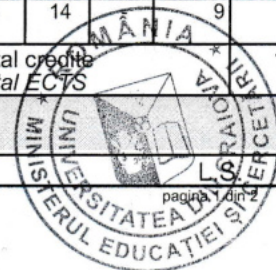
ECTS departmental coordinator

CRĂCIUNOIU NICOLAE

E-Mail: ncraciunoiu@yahoo.com

**DETALII ALE PROGRAMULUI DE STUDIU ȘI NOTELE OBTINUTE
DETAILS OF THE STUDY PROGRAMME ABROAD AND GRADES**

Nr. crt.	Denumirea disciplinei Subject	Sem Sem	1) Total ore/sem Hours/Sem				2) Nota Grade	ECTS
			C	S	LP	P		
1	Optimizarea constructiv-funcțională a motoarelor pentru automobile Functional design optimization of automobiles engines	1	28	-	14	-	10	5
2	Diagnosticarea asistată de calculator a automobilelor Computer assisted automobiles diagnosis	1	14	-	14	-	10	5
3	Proiectare pentru siguranța și confort Design for Safety and Comfort	1	14	-	14	-	10	4
4	Măsurări și modelări de ergonomie în industria auto Measurements and ergonomic modeling in automotive industry	1	14	-	14	-	9	4
Total credite Total ECTS								18



LEGALITATEA DOCUMENTULUI CERTIFICATION OF THE DOCUMENT

Funcția
Position

Semnătura
Signature

RECTOR
RECTOR

Prof. univ.dr. Cezar-Ionut SPÎNU

DECAN
DEAN

Prof. univ. dr. ing. Nicolae
DUMITRU

³⁾Nr. și data eliberării
No., dated.

Scrisoarea Nr. 6 / 04.02.2020

Acest document conține un număr de 2 pagini
This document contains a number of 2 pages

Funcția
Position

Semnătura
Signature

Secretar șef universitate
University Registrar

Alina - Sorina PISTRITU

Secretar șef facultate
Faculty Registrar

Alina PRUNĂ

Stampila sau sigiliul original
Official stamp or seal

L.S.

¹⁾Se va menționa numărul total de ore din care: numărul total de ore curs (C); numărul total de ore seminar (S); numărul total de ore lucrări practice (LP); numărul total de ore proiect (P); etc.
To mention total number of hours, of which: total number of courses (C), total number of seminars (S), total number of work courses (LP), total number of projects (P) etc.

²⁾Notarea unei discipline se face pe o scală de la 1 la 10, notele acordate fiind numere întregi; nota minimă de promovare este 5, iar nota maximă este 10. Disciplinele notate cu calificative pot lua valorile: Adm (Admis), Rsp (Respins), Exc (Exceptional), FB (Foarte Bine), B (Bine), Satisfăcător (S), Nesatisfăcător (NS), Scutit (Sc)
Grades are integer numbers given on a scale from 1 (the lowest grade) to 10 (the highest grade). The lowest passing grade is 5. Subjects marked with qualifiers can take values: Adm (Admitted), Rsp (Rejected), Exc (Exceptional), FB (Very Good), B (Good), S (Satisfactory), NS (Unsatisfactory), Sc (Exemption)

³⁾Se va completa de către instituția care a asigurat școlarizarea titularului, care va menționa în continuare numărul de pagini pe care le conține documentul.
To be filled out by the institution which provided enrollment of the holder and will further mention the number of pages of the present document.





高雄醫學大學



環境醫學研究中心

Kaohsiung Medical University

Research Center for Environmental Medicine



FET-RCEM/STRI@KMU Acceptance and Invitation Letter

Date: Sep 20, 2019

Student Name: Sekar Manigandan (Passport No: N2143145)

Studentship/University: Sathyabama University

Country: India

Dear Sekar Manigandan:

We are pleased to inform you on behalf of Research Center of Environmental Medicine, Kaohsiung Medical University that your application and proposal for Short-Term Research Internship (STRI) Program has been **accepted** by our review committee.

This letter is to confirm that you have been offered with STRI program under Prof. Ming-Tsang Wu, and Prof. Vinoth Kumar as your supervisors, and your duties and assignments for this position will be described to you at program opening orientation by your internship supervisors.

Program details as follows:

Program:	Short-Term Research Internship (STRI) Program
Fields:	Food & Environmental Toxicology, Analysis, Environmental Medicine
Organizer:	Research Center of Environmental Medicine, Kaohsiung Medical University (KMU), Taiwan
Co-Organizer:	Taiwan Experience Education Program (TEEP), MOE, Taiwan
Internship Period:	2~6 months (Minimum term should be at least 2 months)
Internship Period:	Starts at 2019/10/01 and ends at 2020/01/31
Internship covers:	1) Free Medical & Accident Insurance during your intern stay at KMU 2) Free access to Research facilities and High instruments 3) Attending Conferences and Special Lectures at KMU

Please report to the Research Center of Environmental Medicine, Kaohsiung Medical University, Taiwan on or before Oct 15, 2019 along with the appropriate original documents as you submitted with application for review. If you have any further questions, please feel free to contact your supervisors or coordinator staff Dr. Yu-Ming Hsu. We look forward to seeing you soon in KMU and offer a very warm welcome.

Sincerely,

Ming-Tsang Wu, MD, ScD, MOH

Director

Research Center for Environmental Medicine

Kaohsiung Medical University

100, Shih-Chuan 1st Road, Kaohsiung, 80708, Taiwan





KEMENTERIAN RISET, TEKNOLOGI, DAN PENDIDIKAN TINGGI
UNIVERSITAS SYIAH KUALA

FAKULTAS HUKUM

Darussalam, Banda Aceh 23111

Telepon : (0651) 7552295, Faximile : 7552295

E-mail: law.unsyiah.ac.id ; Surel: hukum@unsyiah.ac.id

No. 02169/UN11.1.3/TU/2019

Banda Aceh, 5th August 2019

Re: Invitation to be a keynote speaker

To,

Prof. Dr. Dilshad Shaik

Dean, School of Law,

Sathyabama Institute of Science and Technology

(Deemed to be University)

Chennai, India

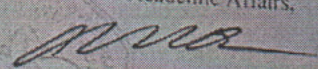
Dear Madam, on behalf of Dean Faculty of Law, Syiah Kuala University would like to invite you to be a keynote speaker for the first International Conference on Law, Governance and Islamic Society (ICOLGIS 2019) which is organized by the Faculty of Law, Syiah Kuala University, scheduled from 21-22 October 2019 in Banda Aceh, Indonesia. This Conference will examine research and development both locally, nationally and globally on Law, Governance and Islamic Society. The Conference will facilitate your travel, accommodation and modest per diem based on Indonesian standard.

We look forward to hearing from you promptly and your cooperation is highly appreciated. Should you have any inquiry please do not hesitate to contact me at azharyahya@unsyiah.ac.id, mobile: +6285372669420.

Best Regards,

Dean,

Vice Dean for Academic Affairs,


Dr. Azhari, S.H., MCL., M.A.
ID No. 196108241989031002



Tel: +(6)07-5538001 Fax: +(6)07-5536847/5536849 Email: international@utm.my
<http://www.utm.my/international/>

UTM.J.01.34/19.11/1Jld. 2 (15)
25 September 2019

Dr. A Chitra Devi
Dr. Preethi Sheshadri
Centre for Academic Partnership and International Relations
Sathyabama Institute of Science and Technology
India

Dear Dr.,

INVITATION TO INTERNATIONAL STAFF WEEK 2019, OCTOBER 28th TO NOVEMBER 3rd 2019, MALAYSIA

It gives us great pleasure to invite you to International Staff Week 2019 (ISW2019) with the theme "Sustainable Partnerships for Universal Prosperity" organised by Universiti Teknologi Malaysia (UTM). ISW 2019 will be held at our campus in Johor Bahru, Johor, Malaysia from 28th October – 3rd November 2019.

The programme features a Mini Seminar 'Internationalisation for Sustainability' where participants can submit and present their abstract on topics related to the theme. There will also be a Meet & Greet session in Townhall style where participants can share information about their university to UTM staff and students.

In addition, they will also be participating in various campus activities including UTM campus and Johor Bahru city tour, our 63rd Convocation Ceremony, convocation festival and convocation dinner.

Please note that the organiser will not be responsible for any visa application, flight arrangements and any personal expenses incurred throughout the duration of the programme.

Should you have any further inquiries, please feel free to email us at isw@utm.my. Further information and latest updates can be found at www.utm.my/international/isw2019.

Thank you. We look forward to welcoming you at ISW 2019.

I, who uphold trust,

DR FARHANA DIANA DERIS
Secretariat International Staff Week 2019
Manager (International Alliances)
UTM International
Universiti Teknologi Malaysia
Tel: +607 5536842 / 46



Tel: +(6)07-5538001 Fax: +(6)07-5536847/5536849 Email: international@utm.my
<http://www.utm.my/international/>

UTM.J.01.34/19.11/1Jld. 2 (15)
25 September 2019

Dr. A Chitra Devi
Dr. Preethi Sheshadri
Centre for Academic Partnership and International Relations
Sathyabama Institute of Science and Technology
India

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I, who uphold trust,

DR FARHANA DIANA DERIS
Secretariat International Staff Week 2019
Manager (International Alliances)
UTM International
Universiti Teknologi Malaysia
Tel: +607 5536842 / 46



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

Vuyyuru Karthik Reddy

is recognized for Successful Completion of Internship on
Artificial Intelligence, Machine Learning & Deep Learning

Jan 15 – Feb 19, 2020 @ Richardson, Texas, USA

Prof. John Cole
Assoc. Director

Dr. Jey Veerasamy
Director

Dr. Gopal Gupta
CS Dept. head



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

Viswas Puli

is recognized for Successful Completion of Internship on
Artificial Intelligence, Machine Learning & Deep Learning
Jan 15 – Feb 19, 2020 @ Richardson, Texas, USA

Prof. John Cole
Assoc. Director

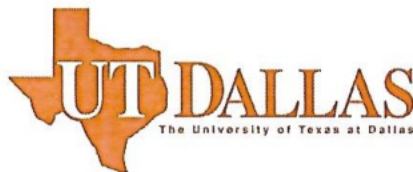
Dr. Jey Veerasamy
Director

Dr. Gopal Gupta
CS Dept. head

COMET EXPERIENCE CERTIFICATE

This certificate is awarded to
MANOJ REDDY ERIGELA

IN RECOGNITION OF PARTICIPATION AND ENGAGEMENT OF CROSS-CULTURAL ACTIVITIES
DURING THE UT DALLAS J-1 STUDENT INTERN PROGRAM.





THE UNIVERSITY OF TEXAS AT DALLAS

Department of Computer Science
800 West Campbell Rd. Richardson, TX 75080-3021
972.883.2185 | fax 972.883.2349 | utdallas.edu

It gives me immense pleasure to recommend Mr. Erigela Manoj Reddy to your esteemed institution. My associate with Mr. Erigela Manoj Reddy is in the capacity of Sr. Lecturer in the department of Computer Science and Director at the Centre for CS Education and Outreach at The University of Texas at Dallas where he joined as a J1 Student Intern. My interaction with him began from the very first day of the internship training on Machine Learning and Artificial Intelligence. Mr. Erigela Manoj Reddy has consistently shown such a desire to learn the subject that I could not turn down his request for recommendation.

Mr. Erigela Manoj Reddy is a sensible and punctual who was very regular in this internship training. During the internship he worked on "Face Recognition Based Attendance System (Python and Machine Learning)" under my tutelage to improve the Attendance system and also "pathfinding visualizer". He is sociable person with good communication skill who can present complex ideas in a very simple fashion. He usually depict creative ideas which are distinctly different and innovative than that of an average student. He is very quick to learn and has clear enthusiasm towards research.

On the while I find Mr. Erigela Manoj Reddy to be highly motivated and committed individual who will fit very well into the graduate school. His in-depth knowledge in subject domain coupled with diligence, perseverance and a positive attitude and hard working nature in the Internship Project gave me the impression that Mr. Erigela Manoj Reddy has the potential, the tenacity and the drive needed to excel in any rigorous academic program or his workplace. Further he has the capacity of adapting himself to the new and challenging environment.

I strongly recommend him to your esteemed institution with maximum assistantship. I wish him a very happy and successful life ahead.

Dr. Jey Veerasamy Feb 18, 2020



THE UNIVERSITY OF TEXAS AT DALLAS

Dr. Jey Veerasamy

Director, Center for CS Education & Outreach
Associate Professor of Instruction, CS

Department of Computer Science
cs.utdallas.edu
800 W. Campbell Rd., EC 31
Office: ECSS 4.602
Richardson, TX 75080-3021
fb.com/UTDCSDept/events, fb.com/UTDCSOR/events

T: 972.883.4241 | C: 214.924.2148
jeyv@utdallas.edu

utdallas.edu



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

Erigela Manoj Reddy

is recognized for Successful Completion of Internship on
Artificial Intelligence, Machine Learning & Deep Learning
Jan 15 – Feb 19, 2020 @ Richardson, Texas, USA

A handwritten signature in black ink, reading 'John Cole'.

Prof. John Cole
Assoc. Director

A handwritten signature in black ink, reading 'Jey'.

Dr. Jey Veerasamy
Director

A handwritten signature in black ink, reading 'Gopal'.

Dr. Gopal Gupta
CS Dept. head



Department of
**COMPUTER
SCIENCE**
THE UNIVERSITY OF TEXAS AT DALLAS

Anurag Kumar

is recognized for Successful Completion of Internship on
Artificial Intelligence, Machine Learning & Deep Learning

Jan 15 – Feb 19, 2020 @ Richardson, Texas, USA

A handwritten signature in black ink, reading 'John Cole'.

Prof. John Cole
Assoc. Director

A handwritten signature in black ink, reading 'Jey'.

Dr. Jey Veerasamy
Director

A handwritten signature in black ink, reading 'Gopal'.

Dr. Gopal Gupta
CS Dept. head



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)



Accredited with "A" grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119, Tamil Nadu, India.

Phone : 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax : 044 - 2450 2344

Website : www.sathyabama.ac.in

Ref No. SU/CAPIR/2019/0100

30/10/2019

INVITATION LETTER

Dr. Wilson Missina Faria,
Professor,
Faculty of Information Technology,
UNIS, Brazil.

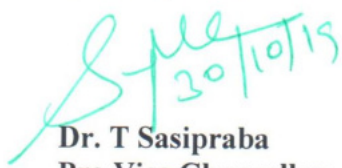
Dear Dr. Wilson,

We are happy to invite you to our Institution as Exchange Faculty in the School of Computing under the scope of Faculty Exchange agreement signed between Sathyabama Institute of Science & Technology, Chennai, India and UNIS, Brazil from 27th January to 3rd February 2020.

Sathyabama Institute of Science & Technology will provide Housing, Meals, Local transportation during your stay in our Institution.

We will be delighted to welcome you as a member of our faculty.

Sincerely Yours


Dr. T Sasipraba
Pro Vice Chancellor





SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)



Accredited with "A" grade by NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119, Tamil Nadu, India.

Phone : 044 - 2450 3150 / 3151 / 3152 / 3154 / 3155 Fax : 044 - 2450 2344

Website : www.sathyabama.ac.in

Ref No. SU/CAPIR/2019/0101

30/10/2019

INVITATION LETTER

Dr. Adriana Rodrigues Pereira,
Professor,
Faculty of Civil Engineering,
UNIS, Brazil.

Dear Dr. Adriana,

We are happy to invite you to our Institution as Exchange Faculty in the School of Building and Environment under the scope of Faculty Exchange agreement signed between Sathyabama Institute of Science & Technology, Chennai, India and UNIS, Brazil from 27th January to 3rd February 2020.

Sathyabama Institute of Science & Technology will provide Housing, Meals, Local transportation during your stay in our Institution.

We will be delighted to welcome you as a member of our faculty.

Sincerely Yours

[Handwritten signature: S. T. Sasipraba]
Dr. T Sasipraba
Pro Vice Chancellor



Registration Form

Name :
Designation :
Institution :
Educational Qualifications :
Address :
Mobile No :
Email Id :
D.D.No & Date :
Name of the bank :
Amount :

Registration fee	Early Bird	Standard
Faculty / Research Scientist	2,500 INR	3,000 INR
Students / Scholars	2,000 INR	2,500 INR
Industrial Participants	4,000 INR	5,000 INR
Foreign Participants	150 USD	175 USD

Mode of Payment

DD drawn in favour of

"Dean (Publications & Conferences), Sathyabama Institute of Science and Technology" payable at Chennai.

Wire Transfer

Account Name: Dean (Publications & Conferences), Sathyabama Institute of Science and Technology

Account Number: 891734627

IFSC CODE: IDIB000T020

SWIFT CODE: IDIBINBBTLT

Branch Code: 098

Bank: Indian Bank

Branch: Thousand Lights, Chennai - 600 006, India

Patron

Dr. MARIE JOHNSON, B.E., M.B.A., Ph.D.

President
Sathyabama Institute of Science and Technology

Dr. MARIAZEENA JOHNSON, B.E., M.B.A., Ph.D.

Chancellor
Sathyabama Institute of Science and Technology

Dr. S. Sundar Manoharan, Ph.D.,

Vice Chancellor
Sathyabama Institute of Science and Technology

Organising Secretary

Dr. T. Sasipraba, M.E., Ph.D.,

Pro Vice-Chancellor
Sathyabama Institute of Science and Technology

Convener

Dr. M. Nirmala

Professor and Head
Department of Mathematics

Co-Convenor

Dr. R. Rajeswari

Professor
Mobile: 9444126406

Dr. E. Priyadarshini

Associate Professor
Mobile: 9841221350

Dr. M. Vidhya

Assistant Professor
Mobile: 8825920783

For Details Contact

Sathyabama Institute of Science and Technology
(Deemed to be University)

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119,
Tamilnadu, INDIA.

Phone: +91-44-24503065 / 3814

Fax: +91-44-2450 3814 / 2344

E-mail: sathyabamaimcs2020@gmail.com

Website: www.icms2020.com



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE A UNIVERSITY)
Accredited with 'B' grade by NAAC
www.sathyabama.ac.in



INTERNATIONAL CONFERENCE ON MATHEMATICAL SCIENCES (ICMS 2020)

Organised by

DEPARTMENT OF MATHEMATICS
SCHOOL OF SCIENCE AND HUMANITIES

In Association with



UNIVERSITI
TEKNOLOGI
MARA

MALAYSIA

March 4th - 6th, 2020



About Sathyabama

Sathyabama Institute of Science & Technology is a Pioneer Institution, imparting knowledge in the areas of Engineering, Science, Technology and Management. It is accredited with "A" grade by NAAC. The Institution offers multi-disciplinary academic programmes at Under Graduate, Postgraduate and Doctoral level.

Sathyabama's standing in rankings and ratings are excellent at national and international level. Sathyabama has been ranked in 41st position by the National Institutional Ranking Framework (NIRF), Government of India among the Universities in India for the year 2019 and ranked one among the top 50 Universities for the last four consecutive years.

Sathyabama Institute of Science & Technology has been featuring in Times Higher Education Global Ranking for the past four years and is ranked among the top institutions globally in Times Higher Education World Ranking 2020 and Asia Ranking 2019. The Institution is also placed in a good position in the Global Subject Ranking for Engineering and Physical Sciences by Times Higher Education.

Sathyabama Institute of Science & Technology has all the features of a world class University and is a potential destination for students across the globe.

About Conference

The Department of Mathematics has been conducting ICMS successfully since 2014. The International Conference on Mathematical Sciences aims to bring academicians, scientists, leading engineers, research scholars and students together to exchange and share their experiences and research findings about all aspects of Mathematics and discuss the practical challenges encountered and the solutions adopted. The Conference is the premier platform to create a future strategic development in application of Mathematics in various fields of Engineering and Technology and give new directions to young researchers in applying innovative ideas in their research areas. In ICMS'14, a good number of articles were published in reputed Scopus indexed journals. The Conference includes keynote addresses and plenary sessions by experts and the presentation of the conference papers.

Call for Papers

Authors are requested to submit full paper of their original and unpublished research work to sathyabamaicms2020@gmail.com. Acceptance of peer reviewed abstracts will be intimated through email for the submission of full manuscript. All peer – reviewed research papers of the conference will be published in JOP (CPCI), scopus/web of science indexed journals.

*Publication in journals will be at extra cost.

Conference Themes

- Algebra and Number Theory
- Analysis (Real, Complex & Functional)
- Discrete Mathematics and Combinatorics
- Financial and Industrial Mathematics
- Networks and Simulation
- Fluid Dynamics
- Fuzzy Sets and Logic
- Optimization and control
- Graph Theory
- Numerical Analysis and Scientific computing
- Probability, Applied Statistics and Stochastic Process
- Mathematical Biology
- Modelling and Simulation
- Applied Mathematics

Conference Highlights

*All accepted papers will be published in any one of the following journals

1. Journal of Physics -Conference Series (CPCI)
2. Mathematics and Statistics (SCOPUS)
3. Journal of Discrete Mathematical Sciences and Cryptography(WOS)
4. Journal of Interdisciplinary Mathematics (WOS)

* Virtual presentation facilities are available

* Keynote address by eminent International and national speakers

Accommodation

Accommodation will be arranged free of cost in the University hostels for delegates.

If required hotel rooms can be arranged in hotels near the campus on chargeable basis.

Mention ICMS 2020 after your name in the Remark as column while transferring the registration fees.

IMPORTANT DATES

Last date for submission of abstract	10/01/2020
Intimation of acceptance	13/01/2020
Early bird Registration	31/01/2020
Last date for Registration	15/02/2020
Last day for submission of full paper	28/02/2020

Conference Dates: March 4th - 6th 2020



Sathyabama

Institute of Science and Technology

Chennai, India

in Association with

MAHSA University, Malaysia



Organises an Online Five Day Faculty
Development Programme on

Education for Sustainable Development

Resource Persons

- **Dr. Jaiprakash Mohanraj, MBBS., MD., Associate Professor, Faculty of Medicine and Bio Medical Sciences, MAHSA University**
- **Dr S S Dawn, Scientist E & Head, Centre for Waste Management, Sathyabama Institute of Science and Technology**
- **Dr. Haymond Prasad Narayanan, Lecturer, Primary Care Unit & Manager of Medical Education, Research Development & Quality Assurance, Faculty of Medicine, Bioscience & Nursing, MAHSA University**
- **Dr. Annam Renita. A, Professor, School of Bio and Chemical Engineering, Sathyabama Institute of Science and Technology**
- **Dr. Antony V Samrot, Senior Lecturer and Program Coordinator (BioTechnology), School of Bio Science, MAHSA University**

Date: 12th-16th May, 2020 Time: 11 a.m - 1 p.m (IST)

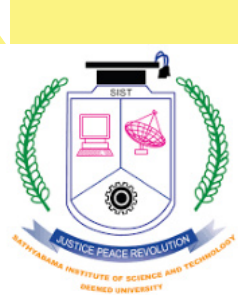
For Registrations Scan QR Code or
<https://forms.gle/fvQ57SS6ZVdLwuLG8>
(First 300 Participants only)

Contact:

internationalrelations@sathyabama.ac.in (India)
antony.s@mahsa.edu.my (Malaysia)



All Participants
will get
E- Certificate



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

CHENNAI, INDIA

SCHOOL OF LAW

IN ASSOCIATION WITH

SYIAH KUALA UNIVERSITY

BANDA ACEH, INDONESIA

FACULTY OF LAW



**Organises Five day Online
Faculty Development Programme on
GENDER SENSITIZATION AND HUMAN RIGHTS
18th - 22nd May 2020 / Time: 11 a.m - 1 p.m (IST)**

On Successful
Completion,
All participants
will receive
E- Certificates

For
Registration
Scan QR Code
or



No Registration Fees

Live and
Recorded
Sessions

<https://forms.gle/jmkwsAfJ1YaWz9HZ7>

Contact

- Dr.Dilshad Shaik, Dean, School of Law, Sathyabama
Institute of Science and Technology
+919849000331 (India)
deanlaw@sathyabama.ac.in
- Dr.Azhari Yahya, Vice Dean, for Academic Affairs,
Faculty of Law, Syiah Kuala University, Indonesia
+62 85372669420 (Indonesia)
azhari.yahya@unsyiah.ac.id

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
CHENNAI, INDIA
SCHOOL OF LAW
IN ASSOCIATION WITH
SYIAH KUALA UNIVERSITY
BANDA ACEH, INDONESIA
FACULTY OF LAW

Day 1
18/05/20

Understanding
Gender ideology and its practice



Dr.Gowri Ramesh, Principal,
Dr.Ambedkar Governement Law College, Pudupakkam

Recorded Session - 11 a.m

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
CHENNAI, INDIA
SCHOOL OF LAW
IN ASSOCIATION WITH
SYIAH KUALA UNIVERSITY
BANDA ACEH, INDONESIA
FACULTY OF LAW

Day 2 - 19/05/20

Recorded Session - 11 a.m- 1 p.m

**Women's rights in public
and private sphere**

**Gender equality and
Women empowerment**



**Dr. Kayalvizhi, Principal
Govt. Law College,
Villupuram**



**Dr. Vijayalakshmi
Ramalingam, Principal ,
Govt. Law College
Chengalpattu**

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
CHENNAI, INDIA
SCHOOL OF LAW
IN ASSOCIATION WITH
SYIAH KUALA UNIVERSITY
BANDA ACEH, INDONESIA
FACULTY OF LAW

Day 3
20/05/20

Advancing
Gender and Human Rights in Digital age



Dr. Elayaraja, Assistant Professor
Department of International Law and Organisation
The Tamil Nadu Dr. Ambedkar Law University

Recorded Session - 11 a.m

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
CHENNAI, INDIA
SCHOOL OF LAW
IN ASSOCIATION WITH
SYIAH KUALA UNIVERSITY
BANDA ACEH, INDONESIA
FACULTY OF LAW

Day 4 - 21/05/20

Live Session - 11 a.m - 1 p.m

**Human Rights Advocacy
on Gender Issues**

**Gender Equality at Work and
International Labour Laws**



**Dr. Azhari Yahya,
Assoc. Prof, Vice Dean for
Academic Affairs,
Faculty of Law, Syiah Kuala
University, Indonesia**



**Dr. Yakub Aiyub Kadi
Head of Academic
Quality Assurance, .
Faculty of Law, Syiah
Kuala University Indonesia**

SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
CHENNAI, INDIA
SCHOOL OF LAW
IN ASSOCIATION WITH
SYIAH KUALA UNIVERSITY
BANDA ACEH, INDONESIA
FACULTY OF LAW

Day 5 - 22/05/20

Recorded Session - 11a.m- 1 p.m

**Strengthening the Health
Sector Response to Gender
Based Violence**



**Dr.Revathi, HoD
Constitutional Law&Human
Rights The Tamil Nadu
Dr. Ambedkar Law
University, Chennai**

**Gender and Identity
Sexual Orientation and
Human Rights**



**Dr.Dilshad Shaik, Dean
School of Law
Sathyabama
Institute of Science and
Technology**



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)



School of Management Studies

Organises One Week Webinar Series for Faculty

25th May 2020-30th May 2020

6.00 p.m - 7.00 p.m (Indian Time) 9.30 a.m - 10.30 a.m (Brazil time)

Resource Persons



25/05/2020

**Mr. Diego Henrique
Alexandre**
Professor
UNIS Grupo
Varginha, Brazil
Topic: Creativity blocks



26/05/2020

Dr. T R Kalailakshmi
Associate Professor,
Sathyabama Institute of
Science and Technology
Chennai, India
Topic: Ethics in Research



27/05/2020

Dr. Vilson Martins Filho
Professor
UNIS Grupo
Varginha, Brazil
**Topic: Service Dominant
Logic in Education**



28/05/2020

Dr. Nithya Shankar
Assistant Professor,
Sathyabama Institute of
Science and Technology
Chennai, India
Topic: Emotional Intelligence



29/05/2020

**Ms. Estela Cristina Vieira
de Siqueira**
Professor, UNIS Grupo
Varginha, Brazil
**Topic: International Law,
World Health Organization
and Covid-19**



30/05/2020

Mr. John Paul
Assistant Professor,
Sathyabama Institute of
Science and Technology
Chennai, India
**Topic: Decoding Happiness
for better relationship**

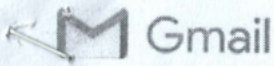
Free Registration (First 300 Participants only)
Scan QR Code or Register with Link

<https://forms.gle/RG2EabxV5PJoppS9>



Contact : internationalrelations@sathyabama.ac.in / talita@unis.edu.br

Participants will be issued E-Certificates



lesitha john <lesitha@gmail.com>

Sanction Order : PDF/2017/001192

SERB_Administrator@serbonline.in <SERB_Administrator@serbonline.in>
To: info@serbonline.in

Tue, Jul 30, 2019 at 11:06 AM



Science and Engineering Research Board
(Statutory Body Established Through an Act of Parliament : SERB Act 2008)
Department of Science and Technology, Government of India

Dear Dr. Lesitha Jeeva Kumari,

The below details for **Science & Engineering Research Board (SERB)** Sanction Order (*attached to this mail*)

Sanction Order No PDF/2017/001192
Sanction Date 15 July, 2019
PI Name Dr. Lesitha Jeeva Kumari
Institute/University Sathyabama University , Rajiv Gandhi Road, Jeppiaar Nagar, Solinganallur, Chennai, Chennai, Tamil Nadu-600119
PI Account Number 6089858032
Bank & Branch Name INDIAN BANK INDIAN BANKSATHYABAMA UNIVERSITY BRANCHJEPPIAAR NAGAR, RAJIV GANDHI SALAICHENNAI 600 119
Amount INR 900796/-
In Rupees Nine Lakh Seven Hundred and Ninety Six
UTR No 000020750469
Transaction Date 26 July, 2019

SERB Reference Number:

Bill No GIA/2501

Diary No / Finance No SERB/F/2448/2019-2020

Confirmation of receipt of funds may be sent by email only.

IMPORTANT:

1. **SEPARATE Utilization Certificates (UCs)** for Recurring and Non Recurring (even if **DISBURSED BY SERB THROUGH ONE SANCTION ORDER** for your project) should be sent directly to the grant Sanctioning Authority by name (signatory of the sanction order) **within twelve months of the closure of the financial year in which the grants were released irrespective of whether the subsequent instalment of grant is due for release or not.**

2. However, if any unspent balance is to be **refunded**, kindly ensure that the unutilized amount may be refunded immediately by way of an **a/c payee cheque/DD** drawn in favour of "**Fund for Science & Engineering Research**", payable at New Delhi and forwarded to the undersigned at the address given below:

--
Under Secretary

Science & Engineering Research Board (SERB)

(A statutory body under the Government of India's Department of Science & Technology)

5 & 5A, Lower Ground Floor, Vasant Square Mall

Vasant Kunj, New Delhi 110070

FILE NO. PDF/2017/001192
SCIENCE & ENGINEERING RESEARCH BOARD(SERB)
(a statutory body of the Department of Science & Technology, government of India)

5 & 5A, Lower Ground Floor
Vasant Square Mall
Plot No. A, Community Centre
Sector-B, Pocket-5, Vasant Kunj
New Delhi-110070

Dated: 15-Jul-2019

ORDER

Subject: Research project entitled "ATOMISTIC MODELLING AND SIMULATION OF MUCIN I AUTOPROTEOLYSIS USING UMBRELLA SAMPLING AND REPLICA EXCHANGE ALGORITHMS" under the guidance of **Dr. Lesitha Jeeva Kumari**, Sathyabama University, Rajiv Gandhi Road, Jeppiaar Nagar, Solinganallur, Chennai, Chennai, Tamil Nadu-600119.

1. This is in continuation of SERB's sanction order No. "PDF/2017/001192" dated "16 August, 2018" of Science and Engineering Research Board (SERB).
2. Sanction of the competent authority is hereby accorded to the payment of a sum of **Rs. 9,00,796/-** (Rupees Nine Lakh Seven Hundred and Ninety Six only) under 'Grants-in-aid General' to **Sathyabama University, Rajiv Gandhi Road, Jeppiaar Nagar, Solinganallur, Chennai** being the 2nd grant for the financial year 2019-2020 for implementation of the above said project.
3. Sanction of the competent authority is also accorded to the carry forward of unspent balance of **Rs. 47390/-** (Rupees Forty Seven Thousand Three Hundred and Ninety only) to Sathyabama University, Rajiv Gandhi Road, Jeppiaar Nagar, Solinganallur, Chennai from FY 2018-2019 to FY 2019-2020 for the same purpose for which it was sanctioned
4. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in).
5. It is certified that provision of GFR 212 relating to Utilization Certificates (Ucs) for the funds released under the grant have been satisfied and the UC/s is/are enclosed herewith.
6. The expenditure involved is debitable to **Fund for Science & Engineering Research (FSER)**. This release is being made under **National Post Doctoral Fellowship (N-PDF)**. (EC Life Sciences)
7. The Sanction has been issued to with the approval of the competent authority vide Diary No. **SERB/F/2448/2019-2020** dated **04 July, 2019**
8. The release amount of **Rs. 9,00,796/-** (Rupees Nine Lakh Seven Hundred and Ninety Six only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	NA
Account Name	SATHYABAMA UNIVERSITY - RESEARCH
Account Number	6089858032
Bank Name & Branch	INDIAN BANK INDIAN BANKSATHYABAMA UNIVERSITY BRANCHJEPPIAAR NAGAR, RAJIV GANDHI SALAICHENNAI 600 119
IFSC/RTGS Code	IDIB000S201
Email id of A/C Holder	provc@sathyabamauniversity.ac.in
Email id of PI	lesitha@gmail.com
Email id of Mentor	chellamjaynthy@gmail.com

9. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.

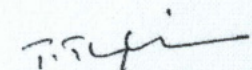
10. As per rule 211 of GFR the accounts of Grantee Institution shall be open to inspection by the sanctioning authority / audit whenever the institute is called upon to do so.

11. The institute will furnish to the SERB, Utilization certificate(separate for Recurring & Non-Recurring) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.

12. After completion of the project unspent balance if any should be returned as Demand Draft drawn in favour of "Fund for Science and Engineering Research" payable at New Delhi.

13. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board, a statutory body of the Department of Science & Technology (DST), Government of India should invariably be highlighted/acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.

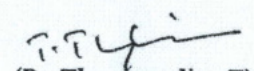
14. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by the Science & Engineering Research Board, a statutory body of Department of Science & Technology (DST), Government of India.


(Dr. Thangaradjou T)
Scientist E
msls@serb.gov.in

To,
Under Secretary
SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB , New Delhi.
3.	File Copy
4.	Dr. Lesitha Jeeva Kumari Department of Bioinformatics Sathyabama University , Rajiv gandhi road, jeppiaar nagar, solinganallur, chennai, Chennai, Tamil nadu-600119 Email: lesitha@gmail.com Mobile: 919840965438 Dr. Jaynthy Chellam Professor and Head Department of Bioinformatics Sathyabama University, Rajiv gandhi road, jeppiaar nagar, solinganallur, chennai, Chennai, Tamil nadu-600119 chellamjaynthy@gmail.com
5.	THE REGISTRAR, Sathyabama University, Rajiv Gandhi Road, Jeppiaar Nagar, Solinganallur, Chennai


(Dr. Thangaradjou T)
Scientist E
msls@serb.gov.in

SCI-SB-MN
Laboratory of MN Group

EPFL Valais Wallis
SB ISIC / SCI-SB-MN
Rue de l'Industrie 17
Case Postale 440
CH-1951 Sion

Tel. : +4121 695 8251
Contact : Dr. Md. K. Nazeeruddin
Email : mdkhaja.nazeeruddin@epfl.ch
Website : <http://gmf.epfl.ch>

EPFL

Sathyabama Institute of Science and Technology
Vengatesh Panneerselvam
Centre of Excellence for Energy Research, International Research Centre,
Sathyabama Institute of Science and Technology, Chennai
IN 600119 Chennai
INDIA

Date: 21/08/2019

INVITATION LETTER

TO WHOM IT MAY CONCERN

This is to certify that **Vengatesh Panneerselvam** is invited to participate at the 5th International Conference on Perovskite Solar Cells and Optoelectronics (PSCO-2019) which will be held in Lausanne, Switzerland from 30th September to 2nd October 2019.
(<https://www.pSCO-conference.org/>)

Sincerely,

EPFL VALAIS WALLIS
SB ISIC SCI-SB-MN
Dr. Md. K. Nazeeruddin
Rue de l'Industrie 17, CP 440
CH-1951 Sion



Professor Md. K. Nazeeruddin
PSCO-2019 Conference organizer



May 29, 2019

Madan Kumar Arumugam, Ph.D.
No. 5005, F3, GK Homes, Ram Nagar North Extn.
Madipakkam
Chennai, India 600091

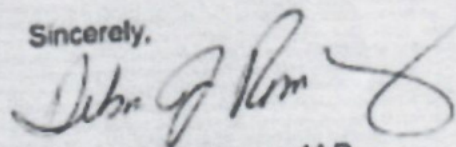
Dear Dr. Arumugam:

As per your communications with Dr. Kusum Kharbanda, I am pleased to enclose an offer of employment for you to join the Department of Internal Medicine, Division of Gastroenterology, at the University of Nebraska Medical Center. Please sign and initial the accompanying agreement, where indicated, and return to me in the enclosed self-addressed envelope.

Please sign and initial the accompanying agreement, where indicated, and return to me in the enclosed self-addressed envelope as soon as possible so that your appointment may be processed. Should you have any questions, please feel free to contact Angela Peppers, Department Administrator, at 402/559-6314 or by email to angela.peppers@unmc.edu.

We look forward to you joining our department.

Sincerely,



Debra J. Romberger, M.D.
Henry J. Lehnhoff Professor and Chair
Department of Internal Medicine

DJR/rl

Enclosures



Date of Issue : July 10th 2019

CERTIFICATE

Korea Research Fellowship Program

This is to certify that the following person has been selected as a "Korea Research Fellowship (KRF) program" postdoctoral fellow by the National Research Foundation of Korea (NRF)

Name in Full : Theerthagiri Jayaraman

Date of Birth : 1988.09.02

KRF Grant No. : 2019H1D3A1A01071209

Host Institution in Korea : Gyeongsang National University

**Research Title : Development and applications of hydrogen energy conversion catalysts
using eco-friendly light reduction pulse laser technique**

Program Duration : 2019-08-01 ~ 2023-12-31

*** Program duration can be adjusted or the program withdrawn according to the result
of the annual evaluation**

Roe, Jung-Hye

President,

National Research Foundation of Korea



National Research Foundation of Korea(NRF)

Headquarters : 165 Gajeong-ro, Yuseong-gu, Daejeon 305-350, Korea Tel +82 42 869 6114 Fax +82 42 869 6777

Seoul Office : 25 Haeileungno, Seocho-gu, Seoul 137-748, Korea Tel +82 2 3460 5500

May 15, 2019

Dear Consular Officer:

We are pleased to invite Dr. Rajesh Kannan Rajaretnam to visit the campus of Purdue University, West Lafayette, Indiana, USA from July 21 – August 21, 2019. The applicant is a Research Professor in the Molecular and Nanomedicine Research Unit at Sathyabama Institute of Science and Technology, in Chennai.

Rajesh's PhD student, Arjun Pitchai, is a visiting scholar at Purdue, where he is working under the supervision of Dr. Jennifer Freeman. The chief purpose of the visit is to discuss opportunities for research collaboration in Molecular Epigenetic studies in zebrafish models. You can read more about the partnership between Purdue University and India's Science and Engineering Research Board (SERB) at this link: <https://partners.purdue.edu/global-partnerships/india/overseas-visiting-doctoral-fellowship/>

All expenses (including hotel rooms, meals, transportation, medical insurance, etc.) incurred during this business visit to West Lafayette, Indiana, USA will be covered by SERB. Rajesh will be traveling on a B1/B2 visa and is aware that he will not have access to a Purdue email address or ID card, neither of which are required for these informal meetings and discussions.

Please do not hesitate to contact me if you have any questions regarding the applicant's visit to Purdue.

Sincerely,



Heidi Arola
Managing Director, Global Partnerships
India Engagement Coordinator
Purdue University
West Lafayette, IN 47907
Voice: +1-765-494-0563
Email: harola@purdue.edu
www.purdue.edu/india



LUND
UNIVERSITY

Chemistry Department

Physical Chemistry

Professor Ulf Olsson

LETTER OF INVITATION

To: S. Sanjeevi Prasath
Centre for Nanoscience & Nanotechnology
Sathyabama Institute of Science and Technology
Jeppiaar Nagar, Rajiv Gandhi Salai
Chennai – 600 119, Tamil Nadu, India.

Dear Sanjeevi Prasath,

It is my pleasure to hereby invite you to spend 1 month at the Physical Chemistry Division of the Chemistry Department, Lund University, from June 25 to July 25 2019, as visiting research student. We will cover your travel costs, accommodation, visa costs and medical insurance. In addition, we will give you a tax free stipend of 10.000 SEK. During your time in Lund we want you to develop your research project on block copolymer self-assembly under the supervision of Dr. J. Brijitta and myself. For this, you will have access to laboratory and research equipment within the division.

Lund May 31, 2019.

Ulf Olsson, Professor
Head of Physical Chemistry Division.



LUND
UNIVERSITY

22 November 2019

Department of Chemistry
Physical Chemistry and
Lund Institute of advanced Neutron and X-ray Science
Professor Peter Schurtenberger

To: Dr. Brijitta Joseph Boniface
Centre for Nanoscience and Nanotechnology
Sathyabama Institute of Science and Technology
Chennai 600 119
Tamil Nadu, India

Invitation Letter

Dear Brijitta

it is with great pleasure that I send you this official letter of invitation for a research stay during the period of 6 January – 31 March 2020 at the Division of Physical Chemistry, Lund University, Sweden. We will be able to cover your travel costs as well as your accommodation, but unfortunately we will not be able to provide you with an additional fellowship during this period. I'm very much looking forward to a mutually beneficial collaboration on directed self-assembly of responsive nanoparticles.

Sincerely yours

Peter Schurtenberger

Postal address
Physical Chemistry
Chemical Center
P.O. Box 124
S-221 00 LUND

Visiting address
Physical Chemistry
Chemical Center
Naturvetarvägen 16
LUND C, SWEDEN

Telephone
University exchange
Int +46 46 222 0000
Direct
Int +46 46 222 8219

E-mail
Peter.Schurtenberger@fkem1.lu.se
Web
<http://www.physchem.lu.se/>
<http://www.linxs.se>

वी.ए.बी.एक्स./PABX : 26588980, 26588707, 26589336, 26589745,
26589873, 26589414
फैक्स/FAX : 011-26588662, 011-26589791, 011-26589258

हॉर / GRAM : विज्ञानी / SCIENTIFIC
Web-site : www.icmr.nic.in
E-mail : icmrhqds@sansad.nic.in



भारतीय आयुर्विज्ञान अनुसंधान परिषद INDIAN COUNCIL OF MEDICAL RESEARCH

स्वास्थ्य अनुसंधान विभाग (स्वास्थ्य एवं परिवार कल्याण मंत्रालय)
वी. रामलिंगस्वामी भवन, अन्सारी नगर, नई दिल्ली - 110 029

DEPARTMENT OF HEALTH RESEARCH (MINISTRY OF HEALTH & FAMILY WELFARE)
V. RAMALINGASWAMI BHAWAN, ANSARI NAGAR, NEW DELHI - 110 029

No. INDO/FRC/452/(Y- 5)/2019-20-IHD

Dated: 07/8/2019

To,

Dr. Maharshi Bhaswant Cheethirala
Scientist C
Molecular and Nanomedicine Research Unit
Sathyabama Institute of Science and Technology
Jeppiaar Nagar, Rajiv Gandhi Salai,
Chennai - 600 119.

Subject: Long Term ICMR-DHR International Fellowship for Young Bio-medical Scientists 2019-20

Sir,

This is with reference to your application (Ref. ID. 2019-00037) submitted to the ICMR for Long Term ICMR-DHR International Fellowship for Young Bio-medical Scientists.

I am directed to inform you that the Selection Committee of the Council has selected you for the above fellowship for a period of **ten months**.

The terms and conditions for the fellowship are as under:

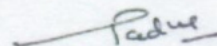
1. You will be provided a monthly stipend of US\$ 2000 per month for the above period and contingency of Rs.50,000/-. The expenses on visa charges, overseas mediclaim insurance and taxi fare from the place of duty to airport & back will be reimbursed as per actual on production of original receipts under the contingency grant. No other charges/expenses are admissible.
2. You will be entitled to travel by air (both ways) by Air India in economy class (excursion fare) by the shortest route from the place of duty.
3. The advance fellowship amount will be released on receipt of a copy of visa. All necessary formalities to obtain visa should be taken care of by the Fellow.
4. Total claim bills on the budget head of fellowship should not exceed the fellowship amount specified above.
5. The Fellow is required to intimate to this office the **exact date of travel**. Any penalty or cancellation charges due to change of date are to be borne by the Fellow.

6. You will not be allowed to change the foreign mentor and place of laboratory.
7. You should get the overseas mediclaim insurance covered before leaving the country.
8. Parent Institute shall continue to pay salary and other benefits such as leave, medical gratuity, GPF, pension as applicable to you during your fellowship period. However it should be governed according to the rules of parent Institute. No liability on any of these accounts will be borne by ICMR. You will not draw any salary/stipend outside India, while on ICMR-DHR fellowship.
9. You are required to submit progress/work report (in the prescribed format) within 2 weeks after your return on the research and training activities undertaken in the foreign laboratory/Institute during the fellowship period.
10. You are required to execute a service/legal bond for Rs.5.00 lacs to the parent Institute that you belong to, for serving the parent Indian Institute for a period of at least 3 years after return from overseas fellowship. A copy of bond should be submitted to ICMR (if not already submitted).
11. If you do not return to India or get a job overseas on completion of the fellowship or fail to fulfill any of the above requirements, you will be liable to reimburse the whole of the expenditure incurred during the fellowship period, including the airfare, from the Guarantees in one lump- sum within one month of the completion of the term of the Fellowship and remit it to ICMR.
12. In case, due to some reasons, the Fellow returns to India before completion of committed duration of training, the balance amount of fellowship grant will be required to be reimbursed to ICMR within 15 days of return to India.
13. An undertaking to cover issues mentioned against points 11 & 12 above by two Guarantees on Rs.50/-non-judicial stamp paper are required to be submitted to ICMR.
14. The training should be initiated before 31st March, 2020. No extension of date to avail fellowship will be granted beyond 31st March, 2020. However, the ICMR will require at least 2 months advance notice for obtaining Political clearances & booking of air tickets etc.
15. You are expected to implement and establish training acquired and utilize the expertise into the ongoing/future programmes of your parent Indian Institute after availing the ICMR-DHR International fellowship. The publications, research grants, projects developed and infrastructure/capacity strengthening of your parent Institute shall be reported upon to ICMR during the consequent years of availing the fellowship since it is the basic objective of this Fellowship programme.
16. It may please be noted that the refusal by a Fellow to undertake the ICMR International Fellowship award for a given year will de-bar him/her to avail the fellowship for the succeeding two years.

If the above terms & conditions are acceptable to you, kindly confirm your acceptance and sent the following documents (if not already submitted) by e-mail to chawlap.hq@icmr.gov.in for taking further necessary action at our end:

- a) The exact date of visit.
- b) Proforma duly filled in and signed for political clearance (format already sent by mail).
- c) Undertaking by 2 Guarantees on Rs. 50/- non-judicial stamp paper.
- d) A copy of service/legal bond for Rs.5.00 lacs submitted to the parent Institute that you belong to, for serving the parent Indian Institute for a period of at least 3 years after return from International fellowship.
- e) A scanned copy of Passport details.
- f) A copy of visa as issued.
- g) A copy of attached Mandate Form duly filled in by the Fellow and a copy of cancelled cheque.

Yours faithfully,



(Padamavati Chawla)
Administrative Officer
International Health Division
For Director General
Telefax: 011-26589492
E-mail: chawlap.hq@icmr.gov.in

HUMAN RESOURCES

January 9, 2018

65 York Street
Sackville, NB E4L 1E4
Tel: (506) 364-2280
Fax: (506) 364-2385
www.mta.ca/hr

Dr. Vinitha Ebenezer
Centre for Climate Change Studies
International Research Centre
Sathyabama University
Jeppiaar Nagar
Rajiv Gandhi Road
Chennai – 600119
India

Dear Dr. Ebenezer,

I am pleased to confirm our offer of employment as Postdoctoral Research Associate in the Department of Geography and Environment at Mount Allison University.

The terms of the appointment are shown on the enclosed form. If they are acceptable, please sign and return one copy to my attention.

This offer is conditional on you being legally entitled to work in Canada as of the effective date of this appointment and for the duration of the appointment. As a Postdoctoral Research Fellow, this position is exempt from validation from Human Resource Development Canada (HRDC) under regulation R20(5)(e)(iii), however as your prospective employer, once you have accepted the offer we are required to submit an Offer of Employment form and pay a compliance fee to HRDC. After we have completed this step we will notify you with the pertinent information and you will be required to obtain a work permit from Citizenship and Immigration Canada if you are not a permanent resident of Canada. Information about obtaining a work permit may be found at: <http://www.cic.gc.ca/english/work/permit.asp>

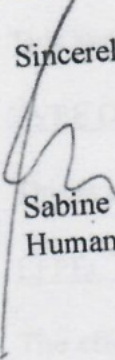
I have also enclosed a summary of our benefit plans, as well as some related brochures.

This offer remains open until January 17, 2018. If you require more time to consider this offer, please contact me as soon as possible and in any event before the offer expires.

Please note in the enclosed offer the requirement that you furnish proof of educational credentials. All appointments at Mount Allison are conditional upon this requirement being fulfilled. The requirement can be met by personally bringing the original degree or diploma to the Human Resources Department for photocopying, or by the educational institution submitting directly to my office either a transcript or a certification that the stated degree or diploma has been granted.

If you have any questions, please do not hesitate to call me.

Sincerely,


Sabine Beisser
Human Resources Consultant