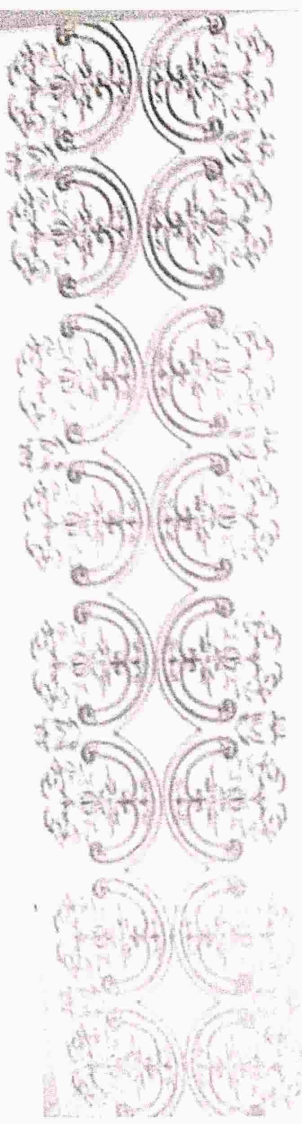


**COPY OF CERTIFICATES**  
**FULL TIME TEACHERS WITH Ph.D.**  
**ACADEMIC YEAR**  
**2022-23**



U.M.P



# UNIVERSITI MALAYSIA PERLIS

This is to certify that

**MURALI VISWANATHAN**

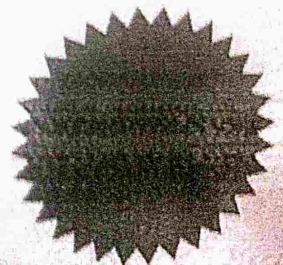
having completed all requirements set by the Senate  
is awarded

**Doctor of Philoaphy**

with all rights and privileges there to pertaining  
The Senate has authorised the Academic Seal to be affixed  
on 19th September 2015

  
Vice Chancellor

  
Registrar



# Anna University

Reg.No.20101022004/RC

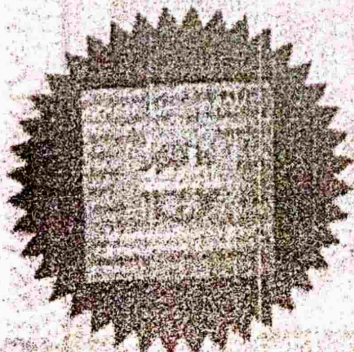


The Syndicate of the Anna University hereby makes known that **MEENAKSHI SUDARVIZHI S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Civil Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2019. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009"

*Title of the Thesis:*

**EXPERIMENTAL STUDIES ON STRENGTH AND BEHAVIOUR OF CONCRETE USING QUARRY DUST AND COPPER SLAG POWDER**

Given under the seal of the University



Chennai 600025  
 India  
 December 2019

Controller of Examinations

Registrar

Vice-Chancellor



Reg. No.:2003479703/RG

*The Syndicate of the Anna University hereby makes known that*  
**ASKARUNISA A** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2011.**

*Title of the thesis:*

**AGENT BASED ANALYSIS OF TEST CASE PRIORITIZATION TECHNIQUES FOR SOFTWARE OPERATIONS**

*Given under the Seal of the University*



Chennai 600 025  
India  
January 2012

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor



Reg.No. 1024419786/RG

*The Syndicate of the Anna University hereby makes known that*  
**PREMLATHA K R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the* **Faculty of Information and Communication Engineering**, *having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2015**. *The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009"*

*Title of the Thesis:*

**DYNAMIC COURSE COMPOSITION FOR ADAPTIVE E-LEARNING**

*Given under the Seal of the University*



# Anna University



Reg.No. 1614469245/RG

The Syndicate of the Anna University hereby makes known that **SAKTHIVEL B** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2021. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

Title of the Thesis:

**LOW POWER ACCURACY CONFIGURABLE CIRCUIT DESIGN**



Given under the Seal of the University

TRUE COPY  
/ATTESTED/

PANDIAN SAIKOVATHIYADAV  
ENGINEERING COLLEGE  
Arasanoor, Thirumansolai P.O-630 561  
Sivagangai Dist. Tamilnadu

Chennai 600 025  
India  
March 2021  
RA RB 14774

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor

# Anna University



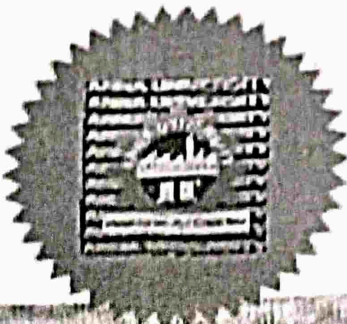
Reg No. 2011140031/RC

The Syndicate of the Anna University hereby makes known that RAJA R has been admitted to the DEGREE OF DOCTOR OF PHILOSOPHY under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2015. The degree has been awarded in compliance with the University Grants Commission, Regulations 2009.

Title of the Thesis:

NOVEL APPROACHES FOR CONTENT BASED IMAGE CLASSIFICATION AND RETRIEVAL.

Given under the Seal of the University



TRUE COPY  
ATTENDED

PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Aracanoor, Thirumansolei P.O-630 561  
Sivagangal Dist. Tamilnadu

Chennai 600 025  
India  
January 2016

Controller of Examinations

Registrar

Vice-Chancellor



# ANNA UNIVERSITY CHENNAI - 600 025

## PROVISIONAL CERTIFICATE

Folio No.: TAR013045

This is to certify that the candidate has qualified for the award of *Degree of Doctor of Philosophy* in compliance of the UGC Regulations 2009 as detailed below:

Name : REGINA S  
Registration Number : 1628389128  
Degree : Ph.D.  
Department/Centre/Subject : ELECTRONICS AND COMMUNICATION ENGINEERING  
Faculty : ELECTRICAL ENGINEERING  
Date, Month & Year of Viva-Voce Examination held : 25.11.2022  
Title of the Thesis : DESIGN AND PERFORMANCE INVESTIGATION OF METAMATERIAL-BASED ANTENNAS WITH FR-4 AND LEATHER SUBSTRATES

TRUE COPY  
ATTESTED!



PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE

Arasanoor, Thirumansolai P.O-630 531  
Chennai Sivanthi Nagar Dist. Tamilnadu  
600 025

*P. Sivasubramanian*  
Controller of Examinations

Chennai - 600 025

Date: 02-DEC-2022



# Anna University



Reg. No.18144691280/RG

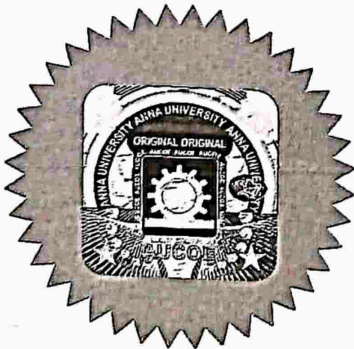


The Syndicate of the Anna University hereby makes known that **MANIKANDAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the **Faculty of Information and Communication Engineering**, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2022**. The degree has been awarded in compliance with the **“University Grants Commission, Regulations 2016”**.

*Title of the Thesis:*

**ANALYTICAL MODELING & SIMULATION OF JUNCTION LESS TRIPLE MATERIAL CYLINDRICAL SURROUNDING GATE SILICON NANOWIRE TRANSISTORS**

*Given under the seal of the University*



TRUE COPY  
/ATTESTED/

PRINCIPAL  
PANDIAN SARASWATHIYADA  
ENGINEERING COLLEGE  
Arasanoor, Thirumansolai P.O-630 5  
Sivagangai Dist. Tamilnadu

Chennai 600025  
India  
September 2023  
TAR014192

*P. Senthilvel*  
Controller of Examinations  
MANIKANDAN S

*D. S. S.*  
Registrar

*R. V. V.*  
Vice-Chancellor  
18144691280/RG

# Anna University



Reg.No. 17244791351/RG

The Syndicate of the Anna University hereby makes known that **EZHILMATHI N** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2020**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2016".

Title of the Thesis:

**IMAGE REGISTRATION AND FUSION BASED BRAIN TUMOR DETECTION METHODS USING MACHINE LEARNING ALGORITHMS**



Given under the Seal of the University

Chennai 600 025  
India  
March 2021  
EZHILMATHI N

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor

# Anna University



Reg. No.:2006589102/RG

*The Syndicate of the Anna University hereby makes known that*  
**PALANICHAMY R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2011.**

*Title of the thesis:*

**HEAT TRANSFER ANALYSIS IN A CIRCULAR TUBE WITH INTERNAL FIN BY NUMERICAL METHOD**


*Given under the Seal of the University*



Chennai 600 025  
India  
January 2012

  
Controller of Examinations

  
Registrar  
TRUE COPY  
(ATTESTED)

  
Vice-Chancellor

  
PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
(P.O. 600 056)

Sl.No: P/20037

**KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION**  
 (Deemed to be University)  
 (Under Section 3 of UGC Act 1956)



Registrar No.

201614277

The Board of Management of the Kalasalingam Academy of Research and Education hereby makes known that **Mr./Ms. JAGANATHAN K D** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the **FACULTY OF MECHANICAL ENGINEERING** having been certified by the duly appointed examiners to be qualified to receive the same in the year 2021.

The degree has been awarded in compliance with the "University Grants Commission, Regulation 2016"

Title of the thesis:

EXPERIMENTAL INVESTIGATION ON HEAT TRANSFER AUGMENTATION USING TRANSVERSE TWISTED BAFFLES IN A CONFINED RECTANGULAR CHANNEL

Given under the seal



Arundh Nagar,  
 Krishnankoil - 626 126,  
 Tamil Nadu, India

Date: 03-04-2021

Controller of Examinations

Registrar

Vice-Chancellor

TRUE COPY  
 ATTESTED!

**PRINCIPAL**  
 PANDIAN BAKASWATHI YADAV  
 MANJESWARINGU COLLEGE

# Anna University



Reg.No. 1313279268/RG



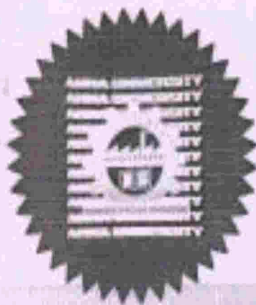
The Syndicate of the Anna University hereby makes known that **RAJAMUNEESWARAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2016**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

Title of the Thesis:

**MECHANICAL AND MACHINABILITY BEHAVIOURS OF NATURAL CALCIUM PARTICLES IMPREGNATED COIR -POLYESTER COMPOSITES**

Given under the Seal of the University

TRUE COPY  
ATTESTED!



PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Arakonam, Thirumanjalai P.O-630 651  
Sivagangal Dist. Tamilnadu



**ANNA UNIVERSITY**  
**CENTRE FOR RESEARCH**  
Sardar Patel Road, Chennai - 600 025, India



**Dr. C. UMARANI, M.E., Ph.D., PDF(NZ)**  
Director

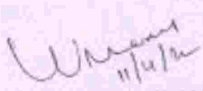
Ref : No. 2012120019/Ph.D./AR4

Date : 11.04.2022


**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Mr.C.Murugan**, has registered for Ph.D. Programme in **CAD/CAM** during January-2012. The scholar has submitted the thesis entitled, **"EXPERIMENTAL ANALYSIS AND OPTIMIZATION OF ELECTRICAL DISCHARGE MACHINING PARAMETERS WITH VARIOUS SHAPES OF TOOL ELECTRODES AND MATERIALS"** and has successfully completed the oral examination held on 04.04.2022 for the award of Ph.D. Degree under the Faculty of **Mechanical Engineering**.

The Ph.D. Degree awarded by this University is in compliance of UGC Regulations 2009.

  
**DIRECTOR (RESEARCH)**

TRUE COPY  
ATTESTED!

  
**PRINCIPAL**  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Auzampet, Tharamandal P.O-600 021  
Chennai-600 025

  
11/4/22

CPPR 101967



மதுரை காமராஜர் பல்கலைக்கழகம்  
**Madurai Kamaraj University**



தமிழ்நாடு முனை – அறிவியல்  
 FACULTY OF SCIENCE - CHEMISTRY

2020 ஆம் ஆண்டில் மதுரை காமராஜர் பல்கலைக்கழகத்தில் தரப்பட்ட பட்டம்  
 29-06-2020 நாளன்று முன்னால் உள்ள கட்டுரை எழுதியவர் மீது  
 நடந்த தேர்வுகளில் சம்பந்தம் இல்லாதது  
 உறுதிப்படுத்துகிறேன்.

மதுரை காமராஜர் பல்கலைக்கழகப் பேரவையினால் சந்திக்கப்பட்டது.

The Senate of the MADURAI KAMARAJ UNIVERSITY in the year 2020 hereby makes  
 known that SUBRAMANIAN G has been  
 conferred **DEGREE OF DOCTOR OF PHILOSOPHY** having certified by duly  
 appointed Examiners to be qualified to receive the same as on 29-06-2020

Given under the seal of the University.

Register No : PH807

Subject Area : CHEMISTRY

Title of Thesis : EFFECTS AND CHARACTERIZATION STUDIES ON VARIOUS INHIBITORS OF  
 MILD STEEL IN DIFFERENT MEDIA

This Degree Certificate is awarded in Compliance of the UGC Regulations 2009



Controller of Examinations  
 in-charge

Registrar  
 in-charge

Vice-Chancellor

Date: 13 July 2022  
 Lakshmanagar, Madurai - 625 021  
 Pakkai Nagar, Madurai - 625 021

Centre Code : 17

Reg.No. 043976-260-MUT



Code no. 7397E : S.No.



# பாரதிதாசன் பல்கலைக்கழகம் BHARATHIDASAN UNIVERSITY

(Accredited with A+ Grade by NAAC in the Third Cycle)

(Established by the Government of Tamil Nadu in 1982; Recognized by UGC under 2(f) and 12(B) of UGC Act;  
Member, Association of Indian Universities and Association of Commonwealth Universities)



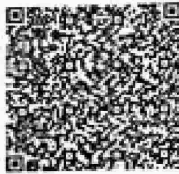
## அறிவியல் புலம் FACULTY OF SCIENCE

பாரதிதாசன் பல்கலைக்கழக ஆட்சிக்குழு செப்டம்பர் 2020  
ஆம் ஆண்டு மாரிச்சாமி அ என்பவர்  
கணிதவியல் பாடத்தில் முனைவர்  
பட்டத்திற்குத் தகுதி பெற்றவர் என்று தக்க தேர்வாளர்கள்  
சான்றளித்தபடி முனைவர் பட்டத்தை அவருக்குப்  
பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

The Syndicate of the **BHARATHIDASAN UNIVERSITY** hereby makes  
known that **MARICHAMY A** has been admitted  
to the Degree of **DOCTOR OF PHILOSOPHY,** in the subject  
**MATHEMATICS,** having been certified  
by duly appointed Examiners to be qualified to receive  
the same in **SEPTEMBER 2020.**

Place of Study: H.H. THE RAJAHS COLLEGE(Autonomous), PUDUKKOTTAI.

"Ph.D. Degree has been awarded in accordance with the Minimum Standards and  
Procedure of the Regulations of the University Grants Commission 2016".



Title of the Thesis  
"A STUDY ON GENERALIZATION OF FUZZY GRAPHS"

Given under the seal of the University.



திருச்சிராப்பள்ளி  
Tiruchirappalli

திகதி : 9th December 2021  
Date :

ISSUED ON : 09-12-2021

  
பதிவாளர் Registrar

  
துணைப்பதிவாளர் Vice - Chancellor

O 103516







செயலகம் 1975  
**FACULTY OF ARTS**

பிரதம குருகுலம் கல்வித் துறை அமைச்சர் அலுவலகம்  
சென்னை 600 009  
தமிழ்நாடு

இதன் மூலம் கீழ்க்கண்ட விவரம் குறித்து அறிவிக்கப்படுகிறது.  
தமிழ்நாடு கல்வித் துறை அமைச்சர் அலுவலகம், சென்னை 600 009.  
தமிழ்நாடு கல்வித் துறை அமைச்சர் அலுவலகம், சென்னை 600 009.

The Syndicate of the RAMONUMANIAM SUNDARAMAR UNIVERSITY  
herby makes known that **INDRA MERCE**  
has been admitted to the Degree of Doctor of Philosophy in  
**ENGLISH**

his/her being seen worked by our successful Examinee to be qualified  
to receive the same in the year **NOVEMBER 2019**



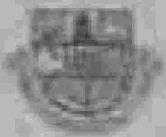
Overzeal the soul of the University

செயலகம் 1975  
தமிழ்நாடு  
பி.டி. இல. 13.02.2016

*Signature*  
(N. J. Prabhakar)  
கல்வித் துறை அமைச்சர்  
கல்வித் துறை அமைச்சர்

*Signature*  
தமிழ்நாடு கல்வித் துறை அமைச்சர்  
தமிழ்நாடு கல்வித் துறை அமைச்சர்

*Signature*  
தமிழ்நாடு கல்வித் துறை அமைச்சர்  
தமிழ்நாடு கல்வித் துறை அமைச்சர்



# MADURAI KAMARAJ UNIVERSITY

உயிரியல் அறிவு பன்னாட்டுத் தர உயர்வகை  
Kodumbarukottai - 625 002, Madurai - 625 002, Tamil Nadu - 625 002



Prof. Dr. V. S. Vasanthi, Ph.D., F.R.S.  
Director of Research and Development Cell

Madurai Nagar, Madurai - 625 002  
Tamil Nadu, India

Ref.No: SA/Chemistry/Seb.Cem/2022  
(Please quote this reference number)

Date: 22.06.2022

## TO WHOMSOEVER IT MAY CONCERN

This is to certify that Mr. S. Muthumanickam, Full Time Research Scholar, Department of Chemistry, Thiagarajar College, Madurai - 625 009 has submitted his Ph.D thesis entitled "Synthesis and characterization of heterogeneous Ti-anchored MCM-41 material for synthetic transformations and electrocatalytic application" under the guidance of Dr. K. Selvakumar, Assistant Professor, Department of Chemistry, Thiagarajar College, Madurai - 625 009 for evaluation on 04.05.2022.

*(Signature)*  
Muthumanickam S

3



# Madurai Kamaraj University

உயிரியல் அறிவியல்  
**FACULTY OF SCIENCES**

கி. பி. 1988  
 மார்ச் 15  
 மாண்புமிகு பேராசிரியர்  
 உயிரியல் அறிவியல்  
 இயக்குநர் அலுவலகம்

கீழ்க்கண்டவர்களுக்கு  
 உயிரியல் அறிவியல்  
 இயக்குநர் அலுவலகம்

உயிரியல் அறிவியல்  
 இயக்குநர் அலுவலகம்

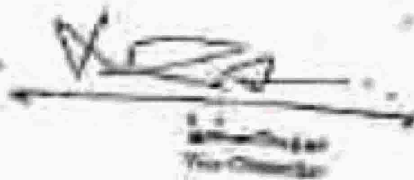
**MADURAI KAMARAJ UNIVERSITY**  
**MUNJGAN M**  
**DOCTOR OF PHILOSOPHY**  
 1988

Given under the seal of the University

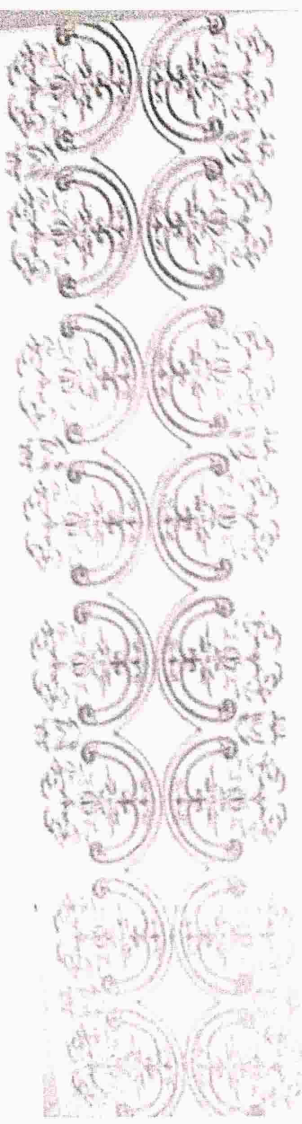


உயிரியல் அறிவியல்  
 இயக்குநர் அலுவலகம்  
 மதுரை, 625 009

  
 Registrar

  
 Vice-Chancellor

**COPY OF CERTIFICATES**  
**FULL TIME TEACHERS WITH Ph.D.**  
**ACADEMIC YEAR**  
**2021-22**



**U.M.P**



# UNIVERSITI MALAYSIA PERLIS

This is to certify that

**MURALI VISWANATHAN**

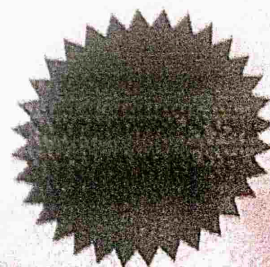
having completed all requirements set by the Senate  
is awarded

**Doctor of Philoaphy**

with all rights and privileges there to pertaining  
The Senate has authorised the Academic Seal to be affixed  
on 19th September 2015

  
Vice Chancellor

  
Registrar





Reg. No.:2003479703/RG

*The Syndicate of the Anna University hereby makes known that*  
**ASKARUNISA A** *has been admitted to the* **DEGREE OF DOCTOR OF**  
**PHILOSOPHY** *under the Faculty of Information and Communication*  
*Engineering, having been certified by the duly appointed examiners to be qualified*  
*to receive the same in the year* **2011.**


*Title of the thesis:*

**AGENT BASED ANALYSIS OF TEST CASE PRIORITIZATION  
TECHNIQUES FOR SOFTWARE OPERATIONS**

*Given under the Seal of the University*



Chennai 600 025  
India  
January 2012

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor



Reg.No. 1024419786/RG

*The Syndicate of the Anna University hereby makes known that*  
**PREMLATHA K R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the* **Faculty of Information and Communication Engineering**, *having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2015**. *The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009"*

*Title of the Thesis:*

**DYNAMIC COURSE COMPOSITION FOR ADAPTIVE E-LEARNING**

*Given under the Seal of the University*



# Anna University



Reg.No. 1614469245/RG

The Syndicate of the Anna University hereby makes known that **SAKTHIVEL B** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2021. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

Title of the Thesis:

**LOW POWER ACCURACY CONFIGURABLE CIRCUIT DESIGN**



Given under the Seal of the University

TRUE COPY  
/ATTESTED/

PANDIAN SAIKOVATHIYADAV  
ENGINEERING COLLEGE  
Arasanoor, Thirumansolai P.O-630 561  
Sivagangai Dist. Tamilnadu

Chennai 600 025  
India  
March 2021  
RA RB14774

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor



# Anna University



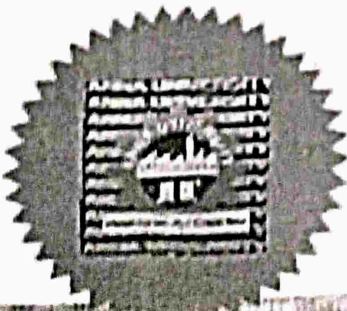
Reg No. 2011140031/RC

The Syndicate of the Anna University hereby makes known that RAJA R has been admitted to the DEGREE OF DOCTOR OF PHILOSOPHY under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2015. The degree has been awarded in compliance with the University Grants Commission, Regulations 2009.

Title of the Thesis:

NOVEL APPROACHES FOR CONTENT BASED IMAGE CLASSIFICATION AND RETRIEVAL.

Given under the Seal of the University



TRUE COPY  
ATTENDED

PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Aracanoor, Thirumansolei P.O-630 561  
Sivagangal Dist. Tamilnadu

Chennai 600 025  
India  
January 2016

Controller of Examinations

Registrar

Vice-Chancellor



# ANNA UNIVERSITY CHENNAI - 600 025

## PROVISIONAL CERTIFICATE

Folio No.: TAR013045

This is to certify that the candidate has qualified for the award of *Degree of Doctor of Philosophy* in compliance of the UGC Regulations 2009 as detailed below:

Name : REGINA S  
Registration Number : 1628389128  
Degree : Ph.D.  
Department/Centre/Subject : ELECTRONICS AND COMMUNICATION ENGINEERING  
Faculty : ELECTRICAL ENGINEERING  
Date, Month & Year of Viva-Voce Examination held : 25.11.2022  
Title of the Thesis : DESIGN AND PERFORMANCE INVESTIGATION OF METAMATERIAL-BASED ANTENNAS WITH FR-4 AND LEATHER SUBSTRATES

TRUE COPY  
ATTESTED!



PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE

Arasanoor, Thirumansolai P.O-630 531  
Chennai Sivanthi Nagar Dist. Tamilnadu  
600 025

*P. Sivasubramanian*  
Controller of Examinations

Chennai - 600 025

Date: 02-DEC-2022

# Anna University



Reg.No. 17244791351/RG

The Syndicate of the Anna University hereby makes known that **EZHILMATHI N** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2020**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2016".

Title of the Thesis:

**IMAGE REGISTRATION AND FUSION BASED BRAIN TUMOR DETECTION METHODS USING MACHINE LEARNING ALGORITHMS**



Given under the Seal of the University

Chennai 600 025  
India  
March 2021  
EZHILMATHI N

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor

# Anna University



Reg. No.:2006589102/RG

*The Syndicate of the Anna University hereby makes known that*  
**PALANICHAMY R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2011.**

*Title of the thesis:*

**HEAT TRANSFER ANALYSIS IN A CIRCULAR TUBE WITH INTERNAL FIN BY NUMERICAL METHOD**


*Given under the Seal of the University*




Chennai 600 025  
India  
January 2012

  
Controller of Examinations

  
Registrar  
TRUE COPY  
(ATTESTED)

  
Vice-Chancellor

  
PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
(P.O. 600 056)

Sl.No: P/20037

**KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION**  
 (Deemed to be University)  
 (Under Section 3 of UGC Act 1956)



Registrar No.

201614277

The Board of Management of the Kalasalingam Academy of Research and Education hereby makes known that **Mr./Ms. JAGANATHAN K D** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the **FACULTY OF MECHANICAL ENGINEERING** having been certified by the duly appointed examiners to be qualified to receive the same in the year 2021.

The degree has been awarded in compliance with the "University Grants Commission, Regulation 2016"

Title of the thesis:

EXPERIMENTAL INVESTIGATION ON HEAT TRANSFER AUGMENTATION USING TRANSVERSE TWISTED BAFFLES IN A CONFINED RECTANGULAR CHANNEL

Given under the seal



Arund Nagar,  
 Krishnankoil - 626 126,  
 Tamil Nadu, India

Date: 03-04-2021

Controller of Examinations

Registrar

Vice-Chancellor

TRUE COPY  
 ATTESTED!

**PRINCIPAL**  
 PANDIAN BAKASWATHI YADAV  
 MANJESWARINGU COLLEGE

# Anna University



Reg.No. 1313279268/RG



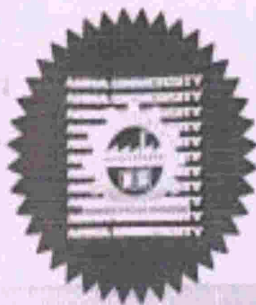
The Syndicate of the Anna University hereby makes known that **RAJAMUNEESWARAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2016**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

Title of the Thesis:

**MECHANICAL AND MACHINABILITY BEHAVIOURS OF NATURAL CALCIUM PARTICLES IMPREGNATED COIR -POLYESTER COMPOSITES**

Given under the Seal of the University

TRUE COPY  
ATTESTED!



PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Arakonam, Thirumanjore P.O-630 651  
Sivagangal Dist. Tamilnadu



**ANNA UNIVERSITY**  
**CENTRE FOR RESEARCH**  
Sardar Patel Road, Chennai - 600 025, India



**Dr. C. UMARANI, M.E., Ph.D., PDF(NZ)**  
Director

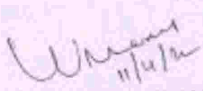
Ref : No. 2012120019/Ph.D./AR4

Date : 11.04.2022


**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Mr.C.Murugan**, has registered for Ph.D. Programme in **CAD/CAM** during January-2012. The scholar has submitted the thesis entitled, **"EXPERIMENTAL ANALYSIS AND OPTIMIZATION OF ELECTRICAL DISCHARGE MACHINING PARAMETERS WITH VARIOUS SHAPES OF TOOL ELECTRODES AND MATERIALS"** and has successfully completed the oral examination held on 04.04.2022 for the award of Ph.D. Degree under the Faculty of **Mechanical Engineering**.

The Ph.D. Degree awarded by this University is in compliance of UGC Regulations 2009.

  
**DIRECTOR (RESEARCH)**

TRUE COPY  
ATTESTED!

  
**PRINCIPAL**  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Auzumoot, Tharamaneri P.O-600 025  
Chennai-600 025

  
11/4/22

CPPR 101967



மதுரை காமராஜர் பல்கலைக்கழகம்  
Madurai Kamaraj University



தமிழ்நாடு முன் - தஞ்சாவூர்  
FACULTY OF SCIENCE - CHEMISTRY

2020 ஆம் ஆண்டில் மதுரை காமராஜர் பல்கலைக்கழகத்தில் தனது திட்டப் பரப்பில் 29-08-2020 நான்று முன்னர் உள்ள கட்டுரைக்கான பங்கு தனது தேர்வுகளைக்கொண்டு கண்டுபிடிக்கப்பட்ட சுப்பிரமணியன் G என்பவருக்கு முன்னர் உள்ள கட்டுரைக்கான பங்கு கட்டுரைக்கான தகுதி பெற்று வழங்கப்பட்டிருக்கிறது.

மதுரை காமராஜர் பல்கலைக்கழகம் இவ்வாறாகவே அறிவிக்கப்பட்டது.

The Senate of the MADURAI KAMARAJ UNIVERSITY in the year 2020 hereby makes known that SUBRAMANIAN G has been conferred **DEGREE OF DOCTOR OF PHILOSOPHY** having certified by duly appointed Examiners to be qualified to receive the same as on 29-08-2020

Given under the seal of the University.

Register No : PH402  
Subject Area : CHEMISTRY  
Title of Thesis : EFFECTS AND CHARACTERIZATION STUDIES ON VARIOUS INHIBITORS OF MILD STEEL IN DIFFERENT MEDIUM

This Degree Certificate is awarded in Compliance of the UGC Regulations 2009



*[Signature]*

Controller of Examinations  
in-charge

*[Signature]*

Registrar  
in-charge

*[Signature]*

View-Charan

Print Date: 13 July 2022  
Lakshmanagar, Madurai - 625 021  
Pakkal Nagar, Madurai - 625 021



Centre Code : 17

Reg.No. 043976-260-MUT



Code no. 7397E : S.No.



# பாரதிதாசன் பல்கலைக்கழகம் BHARATHIDASAN UNIVERSITY

(Accredited with A+ Grade by NAAC in the Third Cycle)

(Established by the Government of Tamil Nadu in 1982; Recognized by UGC under 2(f) and 12(B) of UGC Act;  
Member, Association of Indian Universities and Association of Commonwealth Universities)



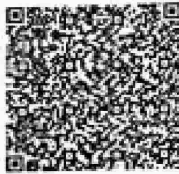
## அறிவியல் புலம் FACULTY OF SCIENCE

பாரதிதாசன் பல்கலைக்கழக ஆட்சிக்குழு செப்டம்பர் 2020  
ஆம் ஆண்டு மாரிச்சாமி அ என்பவர்  
கணிதவியல் பாடத்தில் முனைவர்  
பட்டத்திற்குத் தகுதி பெற்றவர் என்று தக்க தேர்வாளர்கள்  
சான்றளித்தபடி முனைவர் பட்டத்தை அவருக்குப்  
பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

The Syndicate of the **BHARATHIDASAN UNIVERSITY** hereby makes  
known that **MARICHAMY A** has been admitted  
to the Degree of **DOCTOR OF PHILOSOPHY,** in the subject  
**MATHEMATICS,** having been certified  
by duly appointed Examiners to be qualified to receive  
the same in **SEPTEMBER 2020.**

Place of Study : H.H. THE RAJAHS COLLEGE(Autonomous), PUDUKKOTTAI.

"Ph.D. Degree has been awarded in accordance with the Minimum Standards and  
Procedure of the Regulations of the University Grants Commission 2016".



Title of the Thesis  
"A STUDY ON GENERALIZATION OF FUZZY GRAPHS"

Given under the seal of the University.



திருச்சிராப்பள்ளி  
Tiruchirappalli

நாள் : 9th December 2021  
Date :

ISSUED ON : 09-12-2021

  
பதிவாளர் Registrar

  
துணைப்பதிவாளர் Vice - Chancellor

O 103516





செயலகம்  
FACULTY OF SCIENCES

மாணியுடன் உடனடியாக  
பெற்றுள்ள கல்வியியல்  
முனைவர் பட்டம் பெற்றுள்ள  
மாணியுடன் உடனடியாக  
பெற்றுள்ள கல்வியியல்  
முனைவர் பட்டம் பெற்றுள்ள

The Senate of the MADURAI KAMARAJ UNIVERSITY  
has been pleased to award the MURUGAN M  
the Degree of DOCTOR OF PHILOSOPHY.  
This Degree has accepted by duly appointed Examiners to be  
granted to him in the year 1981.  
Given under the seal of the University

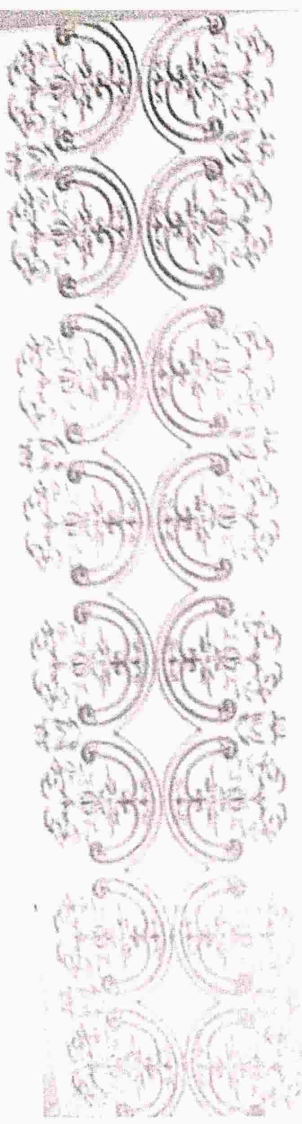


செயலகம், தஞ்சாவூர்,  
மதுரை-காமராஜ்  
பெருமை,  
தேதி: 01 நவம்பர் 1979

[Handwritten signature]

[Handwritten signature]

**COPY OF CERTIFICATES**  
**FULL TIME TEACHERS WITH Ph.D.**  
**ACADEMIC YEAR**  
**2020-21**



UMAP



# UNIVERSITI MALAYSIA PERLIS

This is to certify that

**MURALI VISWANATHAN**

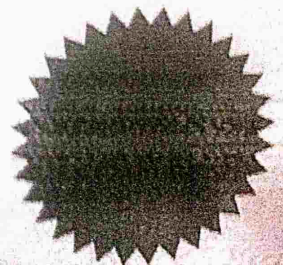
having completed all requirements set by the Senate  
is awarded

**Doctor of Philoaphy**

with all rights and privileges there to pertaining  
The Senate has authorised the Academic Seal to be affixed  
on 19th September 2015

  
Vice Chancellor

  
Registrar





Reg.No. 1024419786/RG

*The Syndicate of the Anna University hereby makes known that*  
**PREMLATHA K R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the* **Faculty of Information and Communication Engineering**, *having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2015**. *The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009"*

*Title of the Thesis:*

**DYNAMIC COURSE COMPOSITION FOR ADAPTIVE E-LEARNING**

*Given under the Seal of the University*



# Anna University



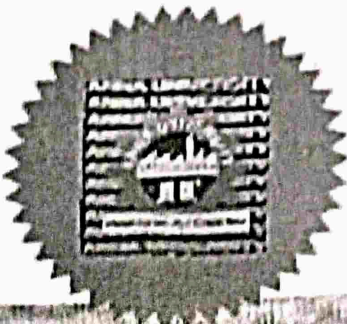
Reg No. 2011140031/RC

The Syndicate of the Anna University hereby makes known that RAJA R has been admitted to the DEGREE OF DOCTOR OF PHILOSOPHY under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2015. The degree has been awarded in compliance with the University Grants Commission, Regulations 2009.

Title of the Thesis:

NOVEL APPROACHES FOR CONTENT BASED IMAGE CLASSIFICATION AND RETRIEVAL.

Given under the Seal of the University



TRUE COPY  
ATTENDED

PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Aracanoor, Thirumansolei P.O-630 561  
Sivagangal Dist. Tamilnadu

Chennai 600 025  
India  
January 2016

Controller of Examinations

Registrar

Vice-Chancellor



# Dinapaka Missions University



FACULTY OF ENGINEERING AND TECHNOLOGY

The Board of Management of the Dinapaka Missions University  
hereby makes known that

**Venhalasalam C**

has been admitted to the Degree of

**Doctor of Philosophy in Computer Science and Engineering**

having been certified by the duly appointed examiners  
to have qualified to receive the same in the year

2013

for the thesis entitled

**A Study on Ultrasound Scan Images of the Liver for the Early  
Detection of Hepatocellular Carcinoma.**

Given under the seal of the University

1000, Dinapaka, District: Siddharthnagar, State: Uttar Pradesh, India.



Signature  
COE



Signature  
Vice-Chancellor

Reg. No. COMPGC 2009JARTS Registrar

Dinapaka, India.

Dated: 07-07-2014



# Anna University



Reg.No.201120007/EE



The Syndicate of the Anna University hereby makes known that **PARTHASARATHY A** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Electrical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2018. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

*Title of the Thesis:*

**CERTAIN INVESTIGATIONS ON ECONOMIC DISPATCH WITH OPTIMAL POWER FLOW USING OPTIMIZATION TECHNIQUES**

*Given under the seal of the University*



Controlled Document  
Index  
December 2018

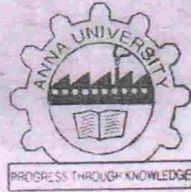
Controller of Examinations

Registrar

Vice-Chancellor



# Anna University



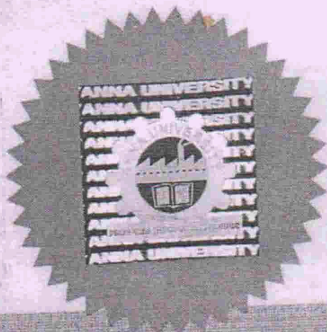
Reg.No. 20072072001/RG

The Syndicate of the Anna University hereby makes known that **NAGARAJAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2013**.


*Title of the Thesis:*


**DESIGN AND DEVELOPMENT OF KNOWLEDGE MANAGEMENT FRAMEWORK, SOLUTION AND STRATEGY FOR MANUFACTURING INDUSTRY**

*Given under the Seal of the University*



Chennai 600 025  
India  
March 2013  
LA981297

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor

# Anna University



Reg.No. 1313279268/RG



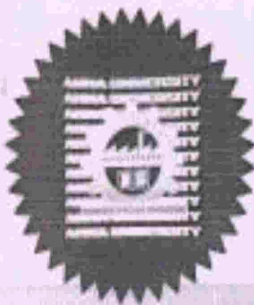
*The Syndicate of the Anna University hereby makes known that*  
**RAJAMUNEESWARAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2016**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

*Title of the Thesis:*

**MECHANICAL AND MACHINABILITY BEHAVIOURS OF NATURAL CALCIUM PARTICLES IMPREGNATED COIR -POLYESTER COMPOSITES**

*Given under the Seal of the University*

TRUE COPY  
ATTESTED!



PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Arakonam, Thirumanjore P.O-630 651  
Sivagangal Dist. Tamilnadu

CPPR 101967



மதுரை காமராஜர் பல்கலைக்கழகம்  
Madurai Kamaraj University



தமிழ்நாடு முன் - இலங்கை  
FACULTY OF SCIENCE - CHEMISTRY

2020 ஆம் ஆண்டில் மதுரை காமராஜர் பல்கலைக்கழகத்தில் தனது திட்டப் பரப்பில் ஆய்வுப்பணியை 29-08-2020 திகதியன்று முனைவர் உ.சி. சண்முகவேலு என்பவருக்கு மதுரை காமராஜர் பல்கலைக்கழகம் பட்டம் வழங்கியுள்ளது. இவருக்கு மதுரை காமராஜர் பல்கலைக்கழகம் பட்டம் வழங்கியுள்ளது. இவருக்கு மதுரை காமராஜர் பல்கலைக்கழகம் பட்டம் வழங்கியுள்ளது.

மதுரை காமராஜர் பல்கலைக்கழகம் இவருக்கு பட்டம் வழங்கியுள்ளது.

The Senate of the MADURAI KAMARAJ UNIVERSITY in the year 2020 hereby makes known that SUBRAMANIAN G has been conferred DEGREE OF DOCTOR OF PHILOSOPHY having certified by duly appointed Examiners to be qualified to receive the same as on 29-08-2020

Given under the seal of the University.

Register No : PHKT

Subject Area : CHEMISTRY

Title of Thesis : EFFECTS AND CHARACTERIZATION STUDIES ON VARIOUS INHIBITORS OF MILD STEEL IN DIFFERENT MEDIUM

This Degree Certificate is awarded in Compliance of the UGC Regulations 2009



*[Signature]*

Controller of Examinations  
in-charge

*[Signature]*

Registrar  
in-charge

*[Signature]*

View-Charan

Date: 13 July 2022  
Lakshmanagar, Madurai - 625 021  
Pakkal Nagar, Madurai - 625 021

CPPR 101588



அறிவியல் மூலம் - இயற்பியல்  
FACULTY OF SCIENCE - PHYSICS

\_\_\_\_\_ 2019 \_\_\_\_\_ ஆம் ஆண்டில் மதுரை காமராஜர் பல்கலைக்கழகத்தில், ஆய்வு நிகழ்த்தி வழங்கிய ஆய்வேடுகளை \_\_\_\_\_ 24-07-2019 \_\_\_\_\_ நாளன்று முனைவர் டீ.டம் வரத் தத்தியுடையவர் என்று தம் தேர்வாளர்களால் சான்றளிக்கப்பட்டு \_\_\_\_\_ ஏர்னஸ்ட் ஸ்டீபன் குனாடாஸ் M \_\_\_\_\_ என்பவருக்கு முனைவர் டீ.டம் சாிக்கப்படுகிறது என்று மதுரை காமராஜர் பல்கலைக்கழக ஆய்வு மேலவை அறிவிக்கின்றது.

மதுரை காமராஜர் பல்கலைக்கழக இலாசீகரணமுடன் சாிக்கப்பட்டது.

The Senate of the MADURAI KAMARAJ UNIVERSITY in the year 2019 hereby makes known that EARNEST STEPHEN GNANADOSS M has been conferred **DEGREE OF DOCTOR OF PHILOSOPHY** he/she having certified by duly appointed Examiners to be qualified to receive the same as on 24-07-2019

Given under the seal of the University.

Register No : PE177

Subject Area : PHYSICS

Title of Thesis : INVESTIGATION ON SOME METAL OXIDE AND METAL SULFIDE NANOPARTICLES

This Degree Certificate is awarded in Compliance of the UGC Regulations 2009



Print Date : 28 September 2019  
பதினாறு செப்டம்பர் - 2019  
Palani Nagar, Madurai - 625 021

*(Handwritten signature)*

தேர்வுகண்காணிப்பு  
Controller of Examinations

*(Handwritten signature)*  
பதினாறு குறுகு  
Registrar in-charge

*(Handwritten signature)*  
தலைவர் தேர்தல்  
Vice-Chancellor

Centre Code : 17

Reg.No. 043976-260-MUT



Code no. 7397E : S.No.



# பாரதிதாசன் பல்கலைக்கழகம் BHARATHIDASAN UNIVERSITY

(Accredited with A+ Grade by NAAC in the Third Cycle)

(Established by the Government of Tamil Nadu in 1982; Recognized by UGC under 2(f) and 12(B) of UGC Act;  
Member, Association of Indian Universities and Association of Commonwealth Universities)



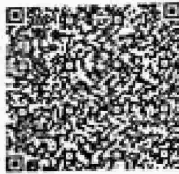
## அறிவியல் புலம் FACULTY OF SCIENCE

பாரதிதாசன் பல்கலைக்கழக ஆட்சிக்குழு செப்டம்பர் 2020  
ஆம் ஆண்டு மாரிச்சாமி அ என்பவர்  
கணிதவியல் பாடத்தில் முனைவர்  
பட்டத்திற்குத் தகுதி பெற்றவர் என்று தக்க தேர்வாளர்கள்  
சான்றளித்தபடி முனைவர் பட்டத்தை அவருக்குப்  
பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

The Syndicate of the **BHARATHIDASAN UNIVERSITY** hereby makes  
known that **MARICHAMY A** has been admitted  
to the Degree of **DOCTOR OF PHILOSOPHY,** in the subject  
**MATHEMATICS,** having been certified  
by duly appointed Examiners to be qualified to receive  
the same in **SEPTEMBER 2020.**

Place of Study: H.H. THE RAJAHS COLLEGE(Autonomous), PUDUKKOTTAI.

"Ph.D. Degree has been awarded in accordance with the Minimum Standards and  
Procedure of the Regulations of the University Grants Commission 2016".



Title of the Thesis  
"A STUDY ON GENERALIZATION OF FUZZY GRAPHS"

Given under the seal of the University.



திருச்சிராப்பள்ளி  
Tiruchirappalli

நாள் : 9th December 2021  
Date :

ISSUED ON : 09-12-2021

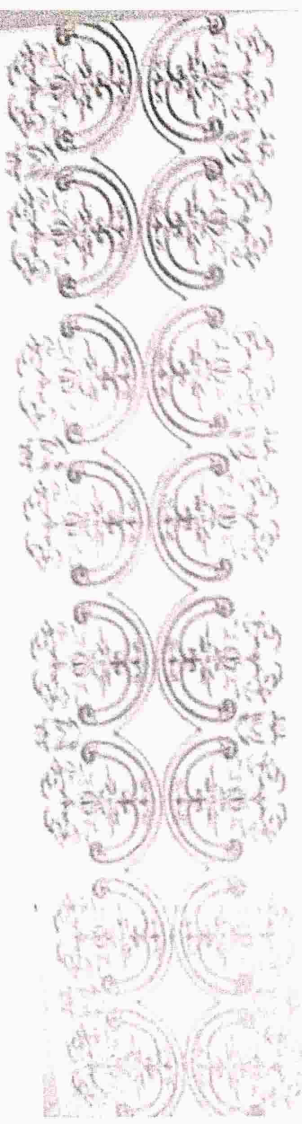
  
பதிவாளர் Registrar

  
துணைப்பதிவாளர் Vice - Chancellor

O 103516



**COPY OF CERTIFICATES**  
**FULL TIME TEACHERS WITH Ph.D.**  
**ACADEMIC YEAR**  
**2019-20**



UMAP



# UNIVERSITI MALAYSIA PERLIS

This is to certify that

**MURALI VISWANATHAN**

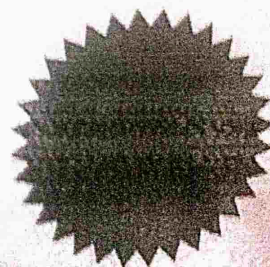
having completed all requirements set by the Senate  
is awarded

**Doctor of Philoaphy**

with all rights and privileges there to pertaining  
The Senate has authorised the Academic Seal to be affixed  
on 19th September 2015

  
Vice Chancellor

  
Registrar





Reg.No. 1024419786/RG

*The Syndicate of the Anna University hereby makes known that*  
**PREMLATHA K R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the* **Faculty of Information and Communication Engineering**, *having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2015**. *The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009"*

*Title of the Thesis:*

**DYNAMIC COURSE COMPOSITION FOR ADAPTIVE E-LEARNING**

*Given under the Seal of the University*





# Anna University



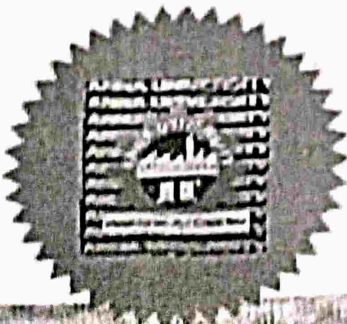
Reg No. 2011140031/RC

The Syndicate of the Anna University hereby makes known that RAJA R has been admitted to the DEGREE OF DOCTOR OF PHILOSOPHY under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2015. The degree has been awarded in compliance with the University Grants Commission, Regulations 2009.

Title of the Thesis:

NOVEL APPROACHES FOR CONTENT BASED IMAGE CLASSIFICATION AND RETRIEVAL.

Given under the Seal of the University



TRUE COPY  
ATTENDED

PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Aracanoor, Thirumansolei P.O-630 561  
Sivagangal Dist. Tamilnadu

Chennai 600 025  
India  
January 2016

Controller of Examinations

Registrar

Vice-Chancellor

# Anna University



Reg.No.201120007/REG

The Syndicate of the Anna University hereby makes known that **PARTHASARATHY A** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Electrical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2018. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

Title of the Thesis:

**CERTAIN INVESTIGATIONS ON ECONOMIC DISPATCH WITH OPTIMAL POWER FLOW USING OPTIMIZATION TECHNIQUES**

Given under the seal of the University



Controlled Document  
Index  
December 2018

Controller of Examinations

Registrar

Vice-Chancellor



# Dinapaka Missions University



FACULTY OF ENGINEERING AND TECHNOLOGY

The Board of Management of the Dinapaka Missions University  
hereby makes known that

**Venhalasalam C**

has been admitted to the Degree of

**Doctor of Philosophy in Computer Science and Engineering**

having been certified by the duly appointed examiners  
to have qualified to receive the same in the year

2013

for the thesis entitled

**A Study on Ultrasound Scan Images of the Liver for the Early  
Detection of Hepatocellular Carcinoma.**

Given under the seal of the University

1000, Dinapaka, District: Siddharthnagar, State: Uttar Pradesh, India.



Signature  
COE



Signature  
Vice-Chancellor

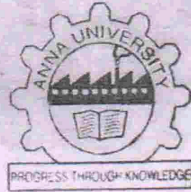
Reg. No. **CON/PAC 2009/2479** Registrar

Dinapaka, India.

Dated: **07-07-2014**



# Anna University



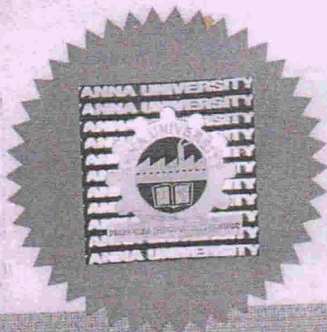
Reg.No. 20072072001/RG

The Syndicate of the Anna University hereby makes known that **NAGARAJAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2013**.


*Title of the Thesis:*


**DESIGN AND DEVELOPMENT OF KNOWLEDGE MANAGEMENT FRAMEWORK, SOLUTION AND STRATEGY FOR MANUFACTURING INDUSTRY**

*Given under the Seal of the University*



Chennai 600 025  
India  
March 2013  
LA981297

  
Controller of Examinations

  
Registrar

  
Vice-Chancellor

# Anna University



Reg.No. 1313279268/RG



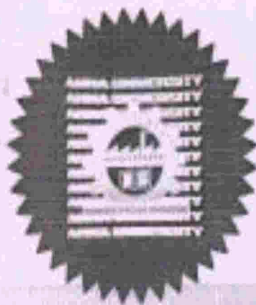
The Syndicate of the Anna University hereby makes known that **RAJAMUNEESWARAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2016**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

Title of the Thesis:

**MECHANICAL AND MACHINABILITY BEHAVIOURS OF NATURAL CALCIUM PARTICLES IMPREGNATED COIR -POLYESTER COMPOSITES**

Given under the Seal of the University

TRUE COPY  
ATTESTED!



PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Arakonam, Thirumanjore P.O-630 651  
Sivagangal Dist. Tamilnadu

# Anna University



Reg. No.:2006589102/RG

*The Syndicate of the Anna University hereby makes known that*  
**PALANICHAMY R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2011.**

*Title of the thesis:*

**HEAT TRANSFER ANALYSIS IN A CIRCULAR TUBE WITH INTERNAL FIN BY NUMERICAL METHOD**


*Given under the Seal of the University*



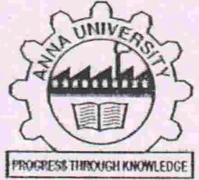
Chennai 600 025  
India  
January 2012

  
Controller of Examinations

  
Registrar  
TRUE COPY  
(ATTESTED)

  
Vice-Chancellor

  
PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
(P.O. 600 056)



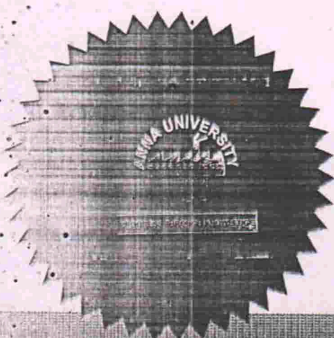
Reg.No. 20102012003/RG

The Syndicate of the Anna University hereby makes known that **ARUL KUMAR P V** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the **Faculty of Mechanical Engineering**, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2015**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

Title of the Thesis:

**DESIGN AND OPTIMIZATION OF FIXED AREA CELL LAYOUT PROBLEMS BY USING NON-TRADITIONAL OPTIMIZATION TECHNIQUES**

Given under the Seal of the University



Chennai-600 025  
India  
January 2016

*[Signature]*  
Controller of Examinations

*[Signature]*  
Registrar

*[Signature]*  
Vice-Chancellor

CPPR 101967



மதுரை காமராஜர் பல்கலைக்கழகம்  
Madurai Kamaraj University



தமிழ்நாடு முன் - தேசியம்  
FACULTY OF SCIENCE - CHEMISTRY

2020 ஆம் ஆண்டு மதுரை காமராஜர் பல்கலைக்கழகத்தில் தனது திட்டப் படிப்பை முடித்துக்கொண்ட 29-08-2020 நான்று முன்னர் உள்ள கட்டுரைகளின் மீது தனது தேர்வுகோலின்படி மதிப்பீடு செய்து சுப்பிரமணியன் G என்பவருக்கு முன்னர் உள்ள கட்டுரைகளின் மீது மதுரை காமராஜர் பல்கலைக்கழக துணி தீர்மானம் அறிவிக்கின்றது.

மதுரை காமராஜர் பல்கலைக்கழக இயக்குநரின் அறிவிப்பின்படி

The Senate of the MADURAI KAMARAJ UNIVERSITY in the year 2020 hereby makes known that SUBRAMANIAN G has been conferred **DEGREE OF DOCTOR OF PHILOSOPHY** having certified by duly appointed Examiners to be qualified to receive the same as on 29-08-2020

Given under the seal of the University.

Register No : PH402  
Subject Area : CHEMISTRY  
Title of Thesis : EFFECTS AND CHARACTERIZATION STUDIES ON VARIOUS INHIBITORS OF MILD STEEL IN DIFFERENT MEDIUM

This Degree Certificate is awarded in Compliance of the UGC Regulations 2009



*[Signature]*

Controller of Examinations  
in-charge

*[Signature]*

Registrar  
in-charge

*[Signature]*

View-Charan

Print Date : 13 July 2022  
Lakshminagar, Madurai - 625 021  
Pakkalai Nagar, Madurai - 625 021



Centre Code : 17

Reg.No. 043976-260-MAT



Code no. 7397E : S.No.



# பாரதிதாசன் பல்கலைக்கழகம் BHARATHIDASAN UNIVERSITY

(Accredited with A+ Grade by NAAC in the Third Cycle)

(Established by the Government of Tamil Nadu in 1982; Recognized by UGC under 2(f) and 12(B) of UGC Act;  
Member, Association of Indian Universities and Association of Commonwealth Universities)



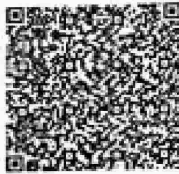
## அறிவியல் புலம் FACULTY OF SCIENCE

பாரதிதாசன் பல்கலைக்கழக ஆட்சிக்குழு செப்டம்பர் 2020  
ஆம் ஆண்டு மாரிச்சாமி அ என்பவர்  
கணிதவியல் பாடத்தில் முனைவர்  
பட்டத்திற்குத் தகுதி பெற்றவர் என்று தக்க தேர்வாளர்கள்  
சான்றளித்தபடி முனைவர் பட்டத்தை அவருக்குப்  
பல்கலைக்கழக இலச்சினையுடன் வழங்குகிறது.

The Syndicate of the **BHARATHIDASAN UNIVERSITY** hereby makes  
known that **MARICHAMY A** has been admitted  
to the Degree of **DOCTOR OF PHILOSOPHY,** in the subject  
**MATHEMATICS,** having been certified  
by duly appointed Examiners to be qualified to receive  
the same in **SEPTEMBER 2020.**

Place of Study: H.H. THE RAJAHS COLLEGE(Autonomous), PUDUKKOTTAI.

"Ph.D. Degree has been awarded in accordance with the Minimum Standards and  
Procedure of the Regulations of the University Grants Commission 2016".



Title of the Thesis  
"A STUDY ON GENERALIZATION OF FUZZY GRAPHS"

Given under the seal of the University.



திருச்சிராப்பள்ளி  
Tiruchirappalli

திகதி : 9th December 2021  
Date :

ISSUED ON : 09-12-2021

  
பதிவாளர் Registrar

  
துணைப்பதிவாளர் Vice - Chancellor

O 103516



CPPR 101588



அறிவியல் மூலம் - இயற்பியல்  
FACULTY OF SCIENCE - PHYSICS

\_\_\_\_\_ 2019 \_\_\_\_\_ ஆம் ஆண்டில் மதுரை காமராஜர் பல்கலைக்கழகத்தில், ஆய்வு நிகழ்த்தி வழங்கிய ஆய்வேடுகளை \_\_\_\_\_ 24-07-2019 \_\_\_\_\_ நாள்ன்று முனைவர் டீ.டம் வரத் ததீயுடையவர் என்று தம் தேர்வாளர்களால் சான்றளிக்கப்பட்டு \_\_\_\_\_ ஏர்னஸ்ட் ஸ்டீபன் குனாடாஸ் M \_\_\_\_\_ என்பவருக்கு முனைவர் டீ.டம் சாிக்கப்படுகிறது என்று மதுரை காமராஜர் பல்கலைக்கழக ஆட்சி குழுவை அறிவிக்கின்றது.

மதுரை காமராஜர் பல்கலைக்கழக இலாசீகரணமுடன் சாிக்கப்பட்டது.

The Senate of the MADURAI KAMARAJ UNIVERSITY in the year 2019 hereby makes known that EARNEST STEPHEN GNANADOSS M has been conferred **DEGREE OF DOCTOR OF PHILOSOPHY** he/she having certified by duly appointed Examiners to be qualified to receive the same as on 24-07-2019

Given under the seal of the University.

Register No : PE177

Subject Area : PHYSICS

Title of Thesis : INVESTIGATION ON SOME METAL OXIDE AND METAL SULFIDE NANOPARTICLES

This Degree Certificate is awarded in Compliance of the UGC Regulations 2009



Print Date : 28 September 2019  
பதினாறு செப்டம்பர் - 2019  
Palace Nagar, Madurai - 625 021

  
தேர்வுகண்காணிப்பு  
Controller of Examinations

  
பதினாறு செப்டம்பர்  
Registrar in-charge

  
தலைவர்  
Vice-Chancellor

# Indian Institute of Science

THE COUNCIL OF THE INDIAN INSTITUTE OF SCIENCE ON THE RECOMMENDATION  
OF THE SENATE HEREBY CONFERS ON

*P Arun Kumar*

THE DEGREE OF

*Doctor of Philosophy*

AWARDED AT BANGALORE ON THE 29<sup>th</sup> OF MARCH, 2014.

*P. Balaram*  
DIRECTOR



*P. Rama Rao*  
CHAIRPERSON, COUNCIL



அலகப்பா பல்கலைக்கழகம்

ALAGAPPA UNIVERSITY

(Accredited with "A" Grade by NAAC)

அறிவியல் கல்வித் துறை

FACULTY OF SCIENCE

அறிவியல் கல்விக்கழகம் - அ. அ. பல்கலைக்கழகம்

இலங்கை, 605 009

பெயர்

சுபாஷ் குமார்

பெயர்

சுபாஷ் குமார்

மாண்புமிகு கல்வித் துறை, இலங்கை

06-2013

அ. அ. பல்கலைக்கழகம்

The Students of the Alagappa University  
are hereby notified that

DOCTOR OF PHILOSOPHY IN PHYSICS.

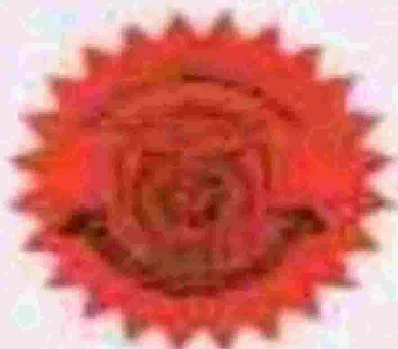
MANIKANDAN MR.

MAY 2013

அ. அ. பல்கலைக்கழகம்

சான்றிதழ் பெற்றுக்கொள்ளும் விதமாக

கீழ்க்கண்ட விவரம் போல அறிவிக்கப்படுகிறது.

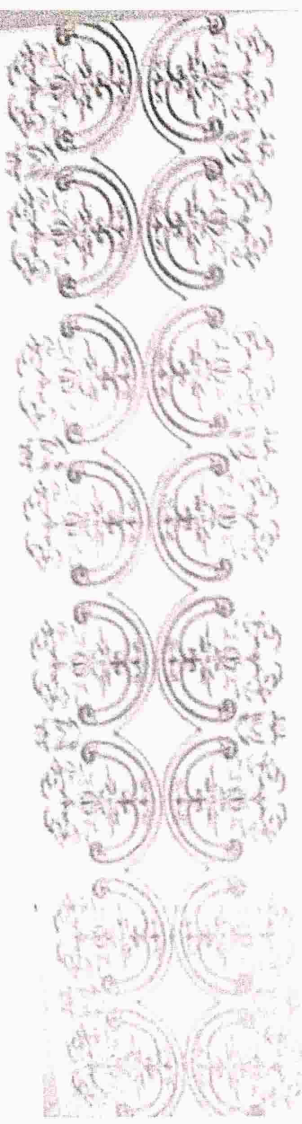


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Handwritten signature

சான்றிதழ் பெற்றுக்கொள்ளும் விதமாக  
Date: 18-02-2014

**COPY OF CERTIFICATES**  
**FULL TIME TEACHERS WITH Ph.D.**  
**ACADEMIC YEAR**  
**2018-19**



**U.M.P**



# UNIVERSITI MALAYSIA PERLIS

This is to certify that

**MURALI VISWANATHAN**

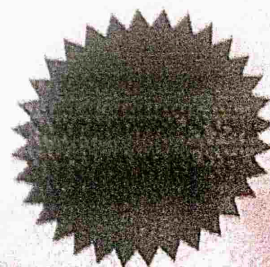
having completed all requirements set by the Senate  
is awarded

**Doctor of Philoaphy**

with all rights and privileges there to pertaining  
The Senate has authorised the Academic Seal to be affixed  
on 19th September 2015

  
Vice Chancellor

  
Registrar





Reg.No. 1024419786/RG

*The Syndicate of the Anna University hereby makes known that*  
**PREMLATHA K R** *has been admitted to the* **DEGREE OF DOCTOR OF PHILOSOPHY** *under the* **Faculty of Information and Communication Engineering**, *having been certified by the duly appointed examiners to be qualified to receive the same in the year* **2015**. *The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009"*

*Title of the Thesis:*

**DYNAMIC COURSE COMPOSITION FOR ADAPTIVE E-LEARNING**

*Given under the Seal of the University*



# Anna University



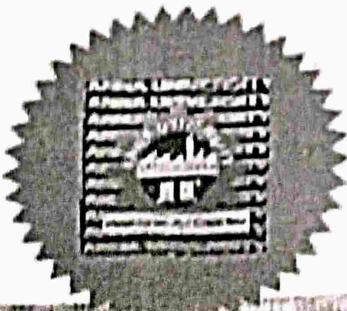
Reg No. 2011140031/RC

The Syndicate of the Anna University hereby makes known that RAJA R has been admitted to the DEGREE OF DOCTOR OF PHILOSOPHY under the Faculty of Information and Communication Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2015. The degree has been awarded in compliance with the University Grants Commission, Regulations 2009.

Title of the Thesis:

NOVEL APPROACHES FOR CONTENT BASED IMAGE CLASSIFICATION AND RETRIEVAL.

Given under the Seal of the University



TRUE COPY  
ATTENDED

PRINCIPAL  
PANDIAN SARASWATHI YADAV  
ENGINEERING COLLEGE  
Aracanoor, Thirumansolei P.O-630 561  
Sivagangal Dist. Tamilnadu

Chennai 600 025  
India  
January 2016

Controller of Examinations

Registrar

Vice-Chancellor





# Dinapaka Missions University



FACULTY OF ENGINEERING AND TECHNOLOGY

The Board of Management of the Dinapaka Missions University  
hereby makes known that

**Venhalasalam C**

has been admitted to the Degree of

**Doctor of Philosophy in Computer Science and Engineering**

having been certified by the duly appointed examiners  
to have qualified to receive the same in the year

2013

for the thesis entitled

**A Study on Ultrasound Scan Images of the Liver for the Early  
Detection of Hepatocellular Carcinoma.**

Given under the seal of the University

1000, Dinapaka, District, West Bengal, India

For the Registrar, Dinapaka Missions University



Signature  
COE



Signature  
Vice-Chancellor

Reg. No. **CONPAC 2009JARTS** Registrar

Dinapaka, India.

Dated: **07-07-2014**



# Anna University



Reg.No.201120007/EE



The Syndicate of the Anna University hereby makes known that **PARTHASARATHY A** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Electrical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2018. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

*Title of the Thesis:*

**CERTAIN INVESTIGATIONS ON ECONOMIC DISPATCH WITH OPTIMAL POWER FLOW USING OPTIMIZATION TECHNIQUES**

*Given under the seal of the University*



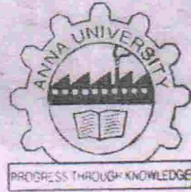
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# Anna University



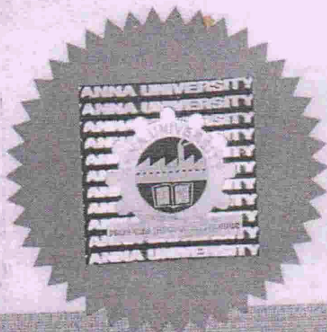
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The Syndicate of the Anna University hereby makes known that **NAGARAJAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2013**.


*Title of the Thesis:*


**DESIGN AND DEVELOPMENT OF KNOWLEDGE MANAGEMENT FRAMEWORK, SOLUTION AND STRATEGY FOR MANUFACTURING INDUSTRY**

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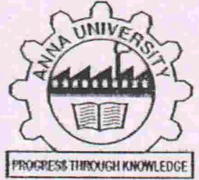


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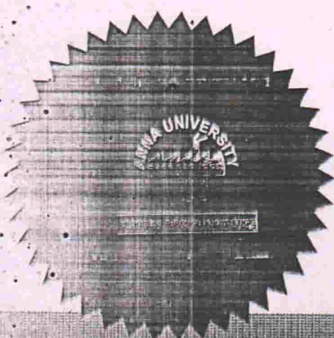
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*The Syndicate of the Anna University hereby makes known that ARUL KUMAR P V has been admitted to the DEGREE OF DOCTOR OF PHILOSOPHY under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year 2015. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".*

*Title of the Thesis:*

**DESIGN AND OPTIMIZATION OF FIXED AREA CELL LAYOUT PROBLEMS BY USING NON-TRADITIONAL OPTIMIZATION TECHNIQUES**

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*The Syndicate of the Anna University hereby makes known that*  
**PALANICHAMY R** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2011**.

*Title of the thesis:*

**HEAT TRANSFER ANALYSIS IN A CIRCULAR TUBE WITH INTERNAL FIN BY NUMERICAL METHOD**

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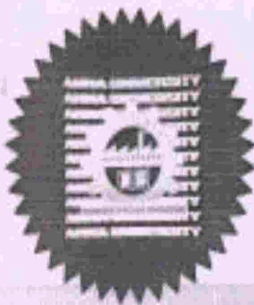
*The Syndicate of the Anna University hereby makes known that*  
**RAJAMUNEESWARAN S** has been admitted to the **DEGREE OF DOCTOR OF PHILOSOPHY** under the Faculty of Mechanical Engineering, having been certified by the duly appointed examiners to be qualified to receive the same in the year **2016**. The degree has been awarded in compliance with the "University Grants Commission, Regulations 2009".

*Title of the Thesis:*

**MECHANICAL AND MACHINABILITY BEHAVIOURS OF NATURAL CALCIUM PARTICLES IMPREGNATED COIR -POLYESTER COMPOSITES**

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**DOCTOR OF PHILOSOPHY IN PHYSICS**

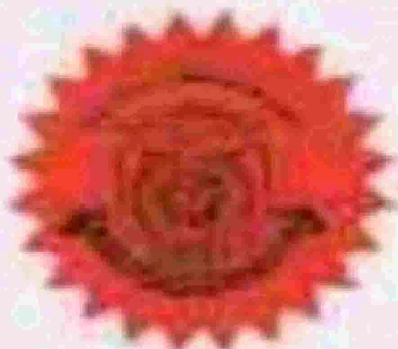


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**MAY 2013**

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 Date: 18-02-2014

# Indian Institute of Science

THE COUNCIL OF THE INDIAN INSTITUTE OF SCIENCE ON THE RECOMMENDATION  
OF THE SENATE HEREBY CONFERS ON

*P Arun Kumar*

THE DEGREE OF

*Doctor of Philosophy*

AWARDED AT BANGALORE ON THE 29<sup>th</sup> OF MARCH, 2014.

*P. Balaram*  
DIRECTOR



*P. Rama Rao*  
CHAIRPERSON, COUNCIL





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ਮੰਬਯਾਨ, ਜਲੰਧਰ  
ਯੂਨੀਵਰਸਿਟੀ

MAMBAYYAN JINDANAGAR UNIVERSITY

Phone: 0191-427914  
Fax: 0191-427914

Roll No. 42  
Register No. 5028

Roll No. 4278  
Date: 15 DEC 2015

Ph.D  
PROVISIONAL CERTIFICATE

This is to certify that Satyvan Kumar, R. has qualified

for the Degree DOCTOR OF PHILOSOPHY IN Chemistry

This award was given him on the date of Public Examination held on 20-11-2015

Controller of Examinations