



Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

**APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES**

Date of Application:31-12-2020

Department	MECHANICAL ENGINEERING	Application No.	202020227
Area of Research	COMPUTING OF RECYCLING BIO-MEDICAL WASTE	Research Mode	PART TIME

**Name** :G. UTHAYAKUMAR

**Date of Birth / Age** :02-06-1970 / 50 Years

**Gender** :MALE

**Category** :OC

**e-Mail ID** :uthaythanvi@gmail.com

**Mobile** :9488000588



*G. Uthayakumar*

<b>Father's/Husband's Name</b>	U. GUNASEKARAN	<b>Father's/Husband's Occupation</b>	RETIRED
<b>Family Income</b>	3,50000	<b>Residential Type</b>	URBAN
<b>Birth Place</b>	THENI	<b>Mother Tongue</b>	TAMIL
<b>Religion</b>	HINDU	<b>Martial Status</b>	MARRIED
<b>Aadhaar No.</b>	852661755692	<b>PAN No.</b>	ABAPU7847E
<b>Physically Challenged</b>	NO	<b>Type of Disability</b>	-

**Address for Communication:**

51,  
 THAMBA STREET  
 RAJAPALAYAM  
 VIRUDHUNAGAR DISTRICT  
 TAMILNADU  
 INDIA  
 Pin-626117

**Permenant Address:**

51,  
 THAMBA STREET  
 RAJAPALAYAM  
 VIRUDHUNAGAR DISTRICT  
 TAMILNADU  
 INDIA  
 Pin-626117

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
MS	ENGINEERING SCIENCES	LOUISIANA STATE UNIVERSITY	1995	3.7 OUT OF 4 SCALE	FIRST	REGULAR
BE	MECHANICAL ENGINEERING	ANNA UNIVERSITY	1991	67 %	FIRST	REGULAR

Experience					
Organization	Designation	Experience From	Experience TO	Work Nature	
PSR ENGINEERING COLLEGE	ASSO. PROF.	2008-04-02	2020-12-31	TEACHING	

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
202020227_201231123350	VUR29611944989	31-12-2020	600	SUCCESS

## Segregation of Medical Waste and Recycling using Soft Computing Techniques

Segregation of medical waste is possible only with development of consciousness among work-force in hospitals and strict law enforcement. By placing separate bins in each and every hospital and collective cooperation among small clinics it is possible to move the waste to separate bins. Larger private hospitals and government run hospitals can have their own waste bins to be transferred by municipalities or corporations.

It is now the role of waste management unit of each government institution that needs to come into play. Ensuring of segregation is to be done. Recycling of plastic objects like vials, bottles, trays could be done by plastic shredders. Articles made of rubber could be synthesized for reuse. Glass products can be recycled in separate units after clean up. Hazardous chemicals from medicine and radio-active materials pose a great challenge for recycling. Safe transportation of all these medical waste is very important. Moreover the location of waste management unit should be such that they don't affect the neighborhood.

Though many techniques like AHP, DEMATEL, COPRAS, ANP, MOORA have been developed to do this, still research has been going on for ensuring thorough segregation recycling. My work will concentrate on these kinds of operations management techniques where there is a lot to do.

## Segregation of Medical Waste and Recycling using Soft Computing Techniques

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# OFFICIAL TRANSCRIPT

## LOUISIANA STATE UNIVERSITY AND A & M COLLEGE BATON ROUGE, LOUISIANA 70803

UTHAYAKUMAR GUNASEKARAN  
434-85-0478

BIRTHDATE: 06/02/1970

NON-RESIDENT

DEGREES AWARDED:

05/1991 B. E.  
ANNA UNIVERSITY

08/02/1995 MASTER OF SCIENCE IN ENGINEERING SCIENCE  
LOUISIANA STATE UNIVERSITY  
COLLEGE: GRADUATE SCHOOL  
MAJOR: ENGINEERING SCIENCE

COURSE TITLE	DEPT	CRSE	GR	CARR	EARN	QPTS
ANNA UNIVERSITY				UG 1S/1988-2S/1991		
-----						
LOUISIANA STATE UNIVERSITY						
1ST SEM 1992-1993 GRAD 6 MME						
MATH METH IN ENGR	MATH	4038	B	3.00	3.00	9.00
FUND CORROSN SC/ENGR	ME	4763	BB	3.00	3.00	9.00
PHYSICAL METALLURGY	ME	7743	C	3.00	3.00	6.00
SEMINAR	ME	7901	P		1.00	
	SEMESTER			9.00	10.00	24.00
	LSU SYSTEM			9.00	10.00	24.00
	CUMULATIVE			9.00	10.00	24.00
						2.666
						2.666
						2.666
-----						
LOUISIANA STATE UNIVERSITY						
2ND SEM 1992-1993 GRAD 6 MME						
PRIN HIGH POLYMERS	CHE	4285	C	3.00	3.00	6.00
MFG AUTOMATION	IE	4480	A	3.00	3.00	12.00
ADV COR SCI & ENGR	ME	7763	A	3.00	3.00	12.00
SEMINAR	ME	7901	P		1.00	
	SEMESTER			9.00	10.00	30.00
	LSU SYSTEM			18.00	20.00	54.00
	CUMULATIVE			18.00	20.00	54.00
						3.333
						3.000
						3.000
-----						
LOUISIANA STATE UNIVERSITY						
1ST SEM 1993-1994 GRAD 6 MME						
OPERATING SYSTEMS	CSC	4103	A	3.00	3.00	12.00
INTERMED DYNAMICS	ME	4163	C	3.00	3.00	6.00
ENGR USE ELEC COMPT	ME	4533	BB	3.00	3.00	9.00
SEMINAR	ME	7901	P		1.00	
THESIS RESEARCH	ME	8000	S		6.00	
	SEMESTER			9.00	16.00	27.00
	LSU SYSTEM			27.00	36.00	81.00
	CUMULATIVE			27.00	36.00	81.00
						3.000
						3.000
						3.000
-----						
LOUISIANA STATE UNIVERSITY						
2ND SEM 1993-1994 GRAD 6 MME						
ADV ENGR USE EL COMP	ME	7533	B	3.00	3.00	9.00
	SEMESTER			3.00	3.00	9.00
	LSU SYSTEM			30.00	39.00	90.00
	CUMULATIVE			30.00	39.00	90.00
						3.000
						3.000
						3.000

PAGE 1 (CONT)

ISSUED 08/04/1995 TO:  
UTHAYAKUMAR GUNASEKARAN



*Robert K. Doolos*  
DIRECTOR OF RECORDS AND REGISTRATION

This official transcript is printed on security paper and does not require a raised seal.

EXPLANATORY LEGEND AND AUTHENTICITY CONFIRMATION PRINTED ON BACK

THE NAME OF THE UNIVERSITY IS PRINTED IN PURPLE ACROSS THE 8 1/2 X 11 TRANSCRIPT



OFFICIAL TRANSCRIPT

LOUISIANA STATE UNIVERSITY AND A & M COLLEGE  
BATON ROUGE, LOUISIANA 70803

UTHAYAKUMAR GUNASEKARAN

434-85-0478

COURSE TITLE	DEPT	CRSE	GR	CARR	EARN	QPTS	
LOUISIANA STATE UNIVERSITY 1ST SEM 1994-1995 GRAD 6 MES							
INTR DATABSE MGT SYS	CSC	4402	B	3.00	3.00	9.00	
ALGORTHM DSGN & ANLY	CSC	7300	B	3.00	3.00	9.00	
STRAT MGT OF TECH	IE	7720	B	3.00	3.00	9.00	
SEMINAR	ME	7901	P		1.00		
SEMESTER				9.00	10.00	27.00	3.000
LSU SYSTEM				39.00	49.00	117.00	3.000
CUMULATIVE				39.00	49.00	117.00	3.000

LOUISIANA STATE UNIVERSITY 2ND SEM 1994-1995 GRAD 6 MES							
SEL READINGS IN C SC	CSC	7999	A	3.00	3.00	12.00	
SPK ENGL INT GRD ASST	ENGL	1051	P		3.00		
IND ENGR PROBLEMS	IE	7720	A	3.00	3.00	12.00	
SEMESTER				6.00	9.00	24.00	4.000
LSU SYSTEM				45.00	55.00	141.00	3.133
CUMULATIVE				45.00	55.00	141.00	3.133

LOUISIANA STATE UNIVERSITY 3RD SEM 1994-1995 GRAD 6 MES							
IND ENGR PROBLEMS	IE	7721	A	3.00	3.00	12.00	
SEMESTER				3.00	3.00	12.00	4.000
LSU SYSTEM				48.00	58.00	153.00	3.187
CUMULATIVE				48.00	58.00	153.00	3.187

07/11/1995 PASS MASTERS FINAL EXAM

\*\*\*\*\*END OF ACADEMIC RECORD\*\*\*\*\*



*Robert K. Doolos*  
DIRECTOR OF RECORDS AND REGISTRATION

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LOUISIANA STATE UNIVERSITY  
and A & M COLLEGE

Transcript Guide

CREDITS

Credits are reported in semester hours and are based on the number of times a course meets per week during the regular semester.

GRADING SYSTEM

4.0 (A = 4; B = 3; C = 2; D = 1; F = 0)

YEAR CLASSIFICATION CODE

1	Freshman
2	Sophomore
3	Junior
4	Senior
5	Senior - 5 year curriculum
6	Master's Program
7	Doctoral Program

GRADES

A	Satisfactory
B	Satisfactory
C	Satisfactory
D	Passing But Unsatisfactory
F	Failure
P	Passing
I	Incomplete
IP	In Progress
S	Satisfactory (Thesis and Dissertation Research Courses)
U	Unsatisfactory (Thesis and Dissertation Research Courses)
AU	Audit
*WA	Withdrawal Passing
*WB	Withdrawal Passing
*WC	Withdrawal Passing
*WF	Withdrawal Failing
W	Withdrawal
NC	No Credit

\*Beginning 1983 fall semester these grades no longer assigned.

COURSE NUMBERING SYSTEM

<u>Course Level</u>	<u>Effective Sept. 1974</u>	<u>Prior to Sept. 1974</u>
Undergraduate - Remedial	0001-0999	
Undergraduate - Freshman	1000-1999	1-49
Undergraduate - Sophomore	2000-2999	50-99
Undergraduate - Junior	3000-3999	100-199 *
Undergraduate or Graduate - Senior or Graduate	4000-4999	100-199 *
Graduate - Primarily post-baccalaureate professional courses	5000-5999	100-199 *
Graduate - Exclusively for teachers at the elementary, secondary and junior college levels	6000-6999	
Graduate - Graduate credit only	7000-7999	200-299
Graduate - Research courses exclusively for graduate students. Primarily for students working toward the Master's Degree	8000-8999	300-399
Graduate - Research courses exclusively for advanced graduate students, primarily for students working toward the doctoral degree	9000-9999	400-Above

\*Graduate credit for selected courses only.

SUPPLEMENTARY INFORMATION

Separate totals are maintained on students in nondegree programs. These include EXT (Extension); PASS (Program for Adult Special Students); PIP (Professional Improvement Program); and, effective Fall, 1987, NMATL, NMATR, NMATX (Graduate nonmatriculating).

Effective with the Fall 1986 semester, the School of Social Work falls under the jurisdiction of the Graduate School; all credit earned in social work is included in the graduate totals.

**CENTRE FOR ACADEMIC COURSES, ANNA UNIVERSITY, CHENNAI – 600 025.**

**APPLICATION FORM FOR ELIGIBILITY CERTIFICATE FOR ADMISSION TO Ph.D.**

1. Name of the Candidate (IN CAPITALS) :
2. Postal Address :
3. Mobile No. / Telephone No. :
4. Ph.D. Application No. :
5. Faculty :
6. Details of Under Graduate Degree Programme
  - a. Name of Degree & Branch studied :
  - b. Name of the Institution :
  - c. Name of the University and State :
  - d. Duration and Period of the Programme Studied :
  - e. Mode of study : Full Time / Part Time Evening / Part Time Day-time / Part time Week End / Distance Mode
7. Details of Post Graduate Degree Programme
  - a. Name of Degree & Branch studied :
  - b. Name of the Institution :
  - c. Name of the University and State :
  - d. Duration and Period of the Programme Studied :
  - e. Mode of study : Full Time / Part Time Evening / Part Time Day-time / Part time Week End / Distance Mode
8. Demand Draft No. & Date :
9. Details of Enclosures
  - i. Attested Photocopy of Mark Sheets of 10<sup>th</sup> and 12<sup>th</sup> : Yes / No
  - ii. Attested Photocopy of UG Degree Certificate & Marks Sheets : Yes / No
  - iii. Attested Photocopy of PG Degree Certificate & Marks Sheets : Yes / No
  - iv. Mode of Study Certificate both UG & PG (other than Anna University) : Yes / No
  - v. Copy of Regulations, Curriculum & Syllabi of PG Degree : Yes / No
  - vi. Demand Draft for Rs. 500/- in the name of "The Director, Centre for Academic Courses, Anna University." : Yes / No
  - vii. Copy of Ph. D. Application Form : Yes / No

Place :

Date :

Signature of the Candidate

For Office Use only

**ELIGIBLE / NOT ELIGIBLE** for Admission to Ph.D. Programme

under the Faculty of \_\_\_\_\_

Signature

## CHECK-LIST FOR COURSE EQUIVALENCE

To consider Eligibility Certificate for admission to Ph.D. Programme, the following documents must be submitted at the office of the Director, Centre for Academic Courses, Anna University, Chennai.

1. The copy of the Regulations, Curriculum and Syllabi of the programme undergone by the Candidate at the PG level duly attested by the Head of the Department concerned, for which equivalency is applied for.
2. The attested copy of the SSLC, HSC Mark Sheet, Transfer Certificate, Under Graduate Degree and Consolidated / Semester wise Mark sheets and Post Graduate Degree and Consolidated / Semester wise Mark Sheets
3. A certificate regarding Mode of Study of the said programme issued by the competent authority of the respective **(Registrar)** University / College. (i.e.)
  - Full-Time (Regular Mode)
  - Part-Time (Evening Mode / Day-Time Part-Time Mode / Week end Mode - Class Timings)
  - Distance Education
  - Open University
4. If the candidate has studied under Distance Education, the Distance Education Council (DEC) approval for the programme for the period of study, must be submitted.
5. Copy of the Approval from UGC/AICTE for conducting Part time programmes by the University, where the candidate studied.
6. If the candidate has studied the UG/PG Programme in the Universities abroad, the photocopy of the Passport and Visa as Proof for having stayed in the specified Country must also be submitted.
7. Copy of Ph.D. application form duly filled in, with signature of the approved supervisor of Anna University.
8. A Demand Draft for Rs.500/- **(Non-Refundable)** drawn in favour of "The Director, Centre for Academic Courses, Anna University", towards the processing fee for the issue of the Eligibility Certificate.
9. For further details, Contact 044-2235 7076 / 77, Mail : [dac@annauniv.edu](mailto:dac@annauniv.edu), Web : <https://cac.annauniv.edu>

**DIRECTOR  
ACADEMIC COURSES**



# P.S.R. ENGINEERING COLLEGE

Autonomous Institution - Affiliated to Anna University, Chennai.

Approved by AICTE, New Delhi & Accredited by National Board of Accreditation (NBA),

Accredited by NAAC listed under 12(B) of the UGC Act, 1956

An ISO 9001 : 2008 Certified Institution



**Sevalpatti, Sivakasi - 626 140.**

Office : 04562 - 239600  
04562 - 239091, 92  
Principal : 04562 - 239610

Virudhunagar District, Tamilnadu, India.  
Website : www.psr.edu.in

Fax : 04562 - 239284  
E-mail : contact@psr.edu.in

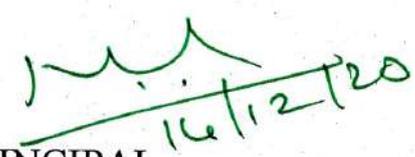
Ref: PSREC/STC/2020

Date: 14.12.2020

## CERTIFICATE

This is to certify that Mr. G. Uthayakumar, Associate Professor, Department of Mechanical Engineering, is working in our college since 02.04.2008 to till date. The college has 'No Objection' in permitting him, to undergo Part -Time Ph.D Programme in Arulmigu Kalasalingam University, Krishnankovil.



  
14/12/20  
PRINCIPAL  
PRINCIPAL  
P.S.R. ENGINEERING COLLEGE  
SIVAKASI-626 140.

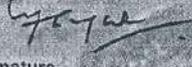
(18)

आयकर विभाग  
INCOME TAX DEPARTMENT

भारत सरकार  
GOVT. OF INDIA

G UTHAYAKUMAR  
GUNASEKARAN

02/06/1970  
Permanent Account Number  
ABAPU7847E

  
Signature

  
  
  
10082007

इस कार्ड के खोने/पाने पर कृपया सूचित करें/लौटाएं:  
आयकर पैन सेवा इकाई, एन एस डी एल  
पहली मंजिल, टाइम्स टॉवर, कमला मिल्स कम्पाउंड,  
एस. बी. मार्ग, लोअर परेल, मुंबई - 400 013.

*If this card is lost / someone's lost card is found,  
please inform / return to :*

**Income Tax PAN Services Unit, NSDL**  
1st Floor, Times Tower,  
Kamala Mills Compound,  
S. B. Marg, Lower Parel, Mumbai - 400 013.

Tel: 91-22-2499 4650, Fax: 91-22-2495 0664,  
email: [tininfo@nsdl.co.in](mailto:tininfo@nsdl.co.in)





UNION OF INDIA Driving Licence (Tamil Nadu)



DL. No. **TN67Z20090002511**

(NT)



Date of Issue

**06-05-2009**

Valid Till

**01-06-2030**



Date of Birth

**02-06-1970**

Blood Group

**A+**

Name

**UTHAYAKUMAR G**

Son/Daughter/Wife of

**GUNASEKARAN G**



\*CERTIFICATE No.

2232665



DISTRICT CODE 17

TALUK CODE 02

VILLAGE CODE 00A

# COMMUNITY CERTIFICATE

This is to certify that.. GI: UTHAYAKUMAR.....  
 son/daughter of Thiru.. GU NASEKARAN.....  
 of RAJAPALAYAM... village/town RAJAPALAYAM taluk  
 ..... KAMARAJAR district of the State of Tamil Nadu  
 belongs to HINDU... DEVANAR..... community, which  
 is recognised as a ~~Most Backward Class/Denotified Community/~~  
~~Backward Class/Scheduled Caste/Scheduled Tribe~~ as per  
 G.O. Ms. No 242. S.W.D. .... Dated 28.3.89... /The  
 S.C. and S.T. Orders (Amendment) Act, 1976, vide Sl: No... 022..

2. It is certified that.. GI: UTHAYAKUMAR..... and  
 his/her family ordinarily reside(s) at RAJAPALAYAM.....  
 village/town RAJAPALAYAM... taluk..... KAMARAJAR....  
 district of the State of Tamil Nadu.

Seal :



Signature :

Date :

Name in capital letters :

Designation :

*(Handwritten signature)*  
 (V. NEERAR)  
 Addl Head Quarters  
 of Tahsildar, Rajapalayam

\* This Certificate should be filed in the Application Forms.

NOTE.—Competent Authorities for issue of Certificate : For SC/STs, except Konda Reddis,  
 Taluk Tahsildars; for Konda Reddis, R.D.O.'s; for B.Cs. and O.Cs., Head Quarter's  
 Deputy Tahsildars/Special Deputy Tahsildars.

5/215/89

ANNEXURE-I

CERTIFICATE FROM THE ORGANISATION WHERE THE CANDIDATE IS EMPLOYED

Certified that Mr./Ms./Mrs. G. LITHAYAKUMAR is  
employed as ASSOCIATE PROFESSOR (Designation) in the  
MECHANICAL ENGINEERING (Department/Division Name)  
of P.S.R. ENGINEERING COLLEGE, SIVAKASI  
(Institution/Industry Name).

We have no objection in forwarding his/her application for the Ph.D. Research Programme.

FOR FULL TIME:

The candidate will be sanctioned leave for the duration of the research programme and will be relieved from duty from \_\_\_\_\_ to \_\_\_\_\_ to undertake the full time research work in the University.

FOR PART TIME:

The candidate will be permitted to undertake part time study in the University/College and will be allowed to be present for discussions with the supervisor, attending course works, conduct of experiments and participations in seminars and related presentations. Further the required facilities at our organization will also be provided to the candidate for doing research.

Date: 14/12/20.

Signature of the Head of Organization with office seal



**PRINCIPAL**  
**P.S.R. ENGINEERING COLLEGE**  
**SIVAKASI-626 140.**

14/12/20