



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

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:24-12-2020

Department	ELECTRONICS AND COMMUNICATION ENGINEERING	Application No.	202020188
Area of Research	SIGNAL PROCESSING	Research Mode	PART TIME

Name :KALAISELVI M
Date of Birth / Age :19-05-1990 / 30 Years
Gender :FEMALE
Category :MBC
e-Mail ID :muthuselvi44@gmail.com
Mobile :9751757891



M. kalaiselvi

Father's/Husband's Name	PERUMAL P	Father's/Husband's Occupation	SITE ENGINEER
Family Income	1,80,000	Residential Type	RURAL
Birth Place	TIRUNELVELI	Mother Tongue	TAMIL
Religion	HINDU	Martial Status	MARRIED
Aadhaar No.	938246887545	PAN No.	EOFPK3833E
Physically Challenged	NO	Type of Disability	-
Address for Communication: 2/133 NORTH STREET VITILAPURAM TUTICORIN DISTRICT TAMILNADU INDIA Pin-628809		Permenant Address: 2/133 NORTH STREET VITILAPURAM TUTICORIN DISTRICT TAMILNADU INDIA Pin-628809	

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
M.E	APPLIED ELECTRONICS	ANNA UNIVERSITY	2016	7.93	FIRST	CORRESPOND
B.E	ECE	ANNA UNIVERSITY OF TECHNOLOGY	2011	79%	FIRST	REGULAR

Experience					
Organization	Designation	Experience From	Experience TO	Work Nature	
GOVERNMENT COLLEGE OF ENGINEERING	ASSISTANT PROFESSOR(TEMP)	2011-09-26	2020-12-24	TEACHING & LAB HANDLING	

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
202020188_201225153509	VCNB9593931565	25-12-2020	600	SUCCESS

Speech Background Noise Removal Using Different Linear Filtering Techniques

Abstract

Among the human beings, speech is the simplest and reliable way of communication. A speech signal transmits different information to the listener like type of language being spoken and emotion, gender and identity of the speaker. The individual characteristic like pitch, fundamental frequency, formant frequency can be distinguishing components of human speech. The three main processes by which sound generates—are twisting of nerves, wire beating of membranes or blowing of air through holes but the mechanism of human voice is different as it comes out in different languages and feelings by the control of brain. The range of frequency under which the speech signal falls is the 300–3400 Hz. However, the audible frequency range for human beings are from 20 Hz to 20 KHz. Audio signal processing often suffers from noise trouble. Speech background noise is an undesired signal which mixed with speech signal at the time of generation of speech signal or at the time of transmission. The quality and the intelligibility of the speech signal gets degraded because of the present background noise. Therefore, it becomes important to reduce this background noise from the speech. For removing or reducing the noise, different filtering techniques are there like adaptive filter, Kalman filter, sub-band coding, wavelet transform, etc. The various filters that have been designed and tested are presented in this paper. First, the different kinds of adaptive filtering techniques have been implemented on both the additive white Gaussian noise (AWGN) and the practical noise then the results of both have been compared. After the adaptive filters the optimum filter, i.e., Kalman filter is implemented for both types of the noise. Finally, the results of adaptive filters and the Kalman filter have been analyzed.

Anna University



Reg.No. 950013801008/RG

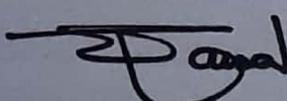
The Syndicate of the Anna University hereby makes known that **KALAISELVI M** has been admitted to the **DEGREE OF MASTER OF ENGINEERING** in **APPLIED ELECTRONICS** under the Faculty of Information and Communication Engineering, having completed the prescribed programme of study and having been certified by the duly appointed examiners to be qualified to receive the same, and has been placed in **FIRST CLASS** at the Examination held in **JUNE 2016**.

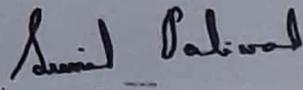
Given under the Seal of the University



Chennai 600 025
India
May 2017
MPCHE/4001/00003


Controller of Examinations


Registrar


Chairman, Convener Committee
Vice-Chancellor



Reg. No. 95507106044

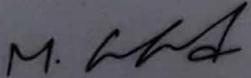


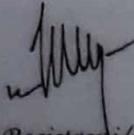
*The Syndicate of the Anna University of Technology Tirunelveli hereby makes known that **KALAISELVI M** has been admitted to the **DEGREE OF BACHELOR OF ENGINEERING** in **ELECTRONICS AND COMMUNICATION ENGINEERING** under the **FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING**, having completed the prescribed programme of study and having been certified by the duly appointed examiners to be qualified to receive the same, and has been placed in **FIRST CLASS WITH DISTINCTION** at the Examination held in **APRIL 2011**.*

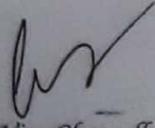
Given under the seal of the University



TIRUNELVELI-627 007
INDIA
February 2012


Controller of Examinations i/c


Registrar i/c


Vice-Chancellor



ANNA UNIVERSITY, CHENNAI - 25
M.E. DEGREE EXAMINATIONS
CONSOLIDATED STATEMENT OF GRADES



K1140030510301M

Folio No. AUW1655591

NAME OF THE CANDIDATE KALAISELVI M		REGISTER NO. 950013801008	
DATE OF BIRTH 19 MAY 90	GENDER FEMALE	MONTH & YEAR OF LAST APPEARANCE JUN 2016	
COLLEGE OF STUDY REGIONAL CENTRE OF ANNA UNIVERSITY, THIRUNELVELI		REGULATIONS 2013	
PROGRAMME & SPECIALIZATION M.E. Applied Electronics (P.T.)			

SEM. NO.	COURSE CODE	COURSE TITLE	CREDITS	LETTER GRADE	GRADE POINT	MONTH & YEAR OF PASSING
01	AP7102	Advanced Digital Logic System Design	3	B	8	JAN 2014
01	AP7103	Advanced Microprocessor and Microcontroller	3	C	7	JAN 2014
01	MA7157	Applied Mathematics for Electronics Engineers	4	D	6	JAN 2014
01	AP7111	Electronics System Design Laboratory I	2	S	10	JAN 2014
02	AP7201	Analysis and Design of Analog Integrated Circuits	3	B	8	JUN 2014
02	AP7202	ASIC and FPGA Design	3	B	8	JUN 2014
02	AP7203	Embedded Systems	3	B	8	JUN 2014
02	AP7211	Electronics System Design Laboratory II	2	S	10	JUN 2014
03	AP7101	Advanced Digital Signal Processing	4	D	6	NOV 2014
03	AP7005	Quantum Electronics	3	A	9	NOV 2014
03	IF7301	Soft Computing	3	B	8	NOV 2014
04	CP7103	Multicore Architectures	3	C	7	JUN 2015
04	AP7007	Fiber Optic Sensors	3	C	7	JUN 2015
04	NC7101	High Performance Networks	3	C	7	JUN 2015
05	AP7301	Electromagnetic Interference and Compatibility	3	B	8	NOV 2015
05	CU7002	MEMS and NEMS	3	C	7	NOV 2015
05	VL7013	VLSI for Wireless Communication	3	C	7	NOV 2015
05	AP7311	Project Work (Phase I)	6	A	9	NOV 2015
06	AP7411	Project Work (Phase II)	12	A	9	JUN 2016

*** End of Statement ***

Cumulative Grade Point Average : 7.93

Classification : FIRST CLASS



Medium of Instruction : ENGLISH

Chennai - 25.

Date : 03/10/2016

M. Kalaiselvi
SIGNATURE OF THE STUDENT



[Signature]
CONTROLLER OF EXAMINATIONS



ANNA UNIVERSITY OF TECHNOLOGY TIRUNELVELI
TIRUNELVELI - 627 007



B.E.DEGREE EXAMINATIONS
CONSOLIDATED STATEMENT OF MARKS

Folio No: HUG0701507

NAME OF THE CANDIDATE	KALAISELVI M	REGISTER NO	95507106044
COLLEGE OF STUDY	FRANCIS XAVIER ENGINEERING COLLEGE	MONTH & YEAR OF LAST APPEARANCE	APRIL 2011
PROGRAMME & BRANCH	B.E. - Electronics and Communication Engineering	REGULATIONS	2007

SEM. NO.	SUBJECT CODE	SUBJECT TITLE	MAX.	MIN.	MARKS SECURED	MONTH & YEAR OF PASSING	SEM. NO.	SUBJECT CODE	SUBJECT TITLE	MAX.	MIN.	MARKS SECURED	MONTH & YEAR OF PASSING
01	CY101	Engineering Chemistry	100	50	065	JAN 2008	05	EC1303	Microprocessors and Microcontrollers	100	50	059	DEC 2009
01	GE102	Engineering Graphics	100	50	084	JAN 2008	05	EC1304	Electronic Circuits - II	100	50	074	DEC 2009
01	GE104	Fundamentals of Computing	100	50	070	JAN 2008	05	EC1305	Transmission Lines and Waveguides	100	50	073	DEC 2009
01	GE107	Engineering Practise Lab	100	50	078	JAN 2008	05	EC1306	Digital Signal Processing Lab	100	50	093	DEC 2009
01	HS106	Technical English - I	100	50	072	JAN 2008	05	EC1307	Microprocessors and Microcontrollers Lab	100	50	095	DEC 2009
01	MA105	Mathematics - I	100	50	081	JAN 2008	05	EC1308	Electronic circuits - II and Simulation Lab	100	50	092	DEC 2009
01	PC108	Physics & Chemistry Lab	100	50	091	JAN 2008	05	GE1302	Communication Skills and Seminar	100	50	076	DEC 2009
01	PH103	Engineering Physics - I	100	50	062	JAN 2008	05	MA1251	Numerical Methods	100	50	084	DEC 2009
02	CY201	Engineering Chemistry - II	100	50	064	MAY 2008	06	CS1251	Computer Architecture	100	50	067	JUN 2010
02	GE202	Basic Engineering	100	50	061	MAY 2008	06	CS1302	Computer Networks	100	50	070	JUN 2010
02	GE204	Engineering Mechanics	100	50	078	MAY 2008	06	EC1351	Digital Communication	100	50	081	JUN 2010
02	GE208	Computer Laboratory	100	50	083	MAY 2008	06	EC1352	Antenna and Wave Propagation	100	50	061	JUN 2010
02	HS206	Technical English - II	100	50	067	MAY 2008	06	EC1353	Control systems	100	50	075	JUN 2010
02	MA205	Mathematics - II	100	50	068	MAY 2008	06	EC1354	Communication System Lab	100	50	095	JUN 2010
02	ME207	Engineering Drawing Laboratory	100	50	089	MAY 2008	06	EC1355	Networks Lab	100	50	092	JUN 2010
02	PCP209	Physics and Chemistry Laboratory - II	100	50	097	MAY 2008	06	EC1356	Electronic System Design Lab	100	50	097	JUN 2010
02	PH203	Engineering Physics - II	100	50	074	MAY 2008	06	GE1351	Professional Skill and Seminar	100	50	079	JUN 2010
03	CS1151	Data Structures	100	50	061	DEC 2008	06	MG1351	Principles of Management	100	50	073	JUN 2010
03	CS1152	Data Structures Lab	100	50	085	DEC 2008	07	CY1201	Environmental Science and Engineering	100	50	072	DEC 2010
03	EC1201	Electron Devices	100	50	063	DEC 2008	07	EC1008	High Speed Networks	100	50	087	DEC 2010
03	EC1202	Circuit Analysis	100	50	072	DEC 2008	07	EC1009	Digital Image Processing	100	50	064	DEC 2010
03	EC1203	Digital Electronics	100	50	056	DEC 2008	07	EC1401	VLSI Design	100	50	083	DEC 2010
03	EC1204	Electrical Devices and electric Circuits Lab	100	50	093	DEC 2008	07	EC1402	Optical Communication	100	50	072	DEC 2010
03	EE1211	Electrical Machines	100	50	071	DEC 2008	07	EC1403	Microwave Engineering	100	50	077	DEC 2010
03	EE1261	Electrical Machines Lab	100	50	093	DEC 2008	07	EC1404	VLSI Lab	100	50	094	DEC 2010
03	GE1202	Communication Skills & Technical Seminar - I	100	50	070	DEC 2008	07	EC1405	Optical & Microwave Lab	100	50	094	DEC 2010
03	MA1201	Mathematics III	100	50	073	DEC 2008	07	EC1406	RF Lab	100	50	098	DEC 2010
04	EC1251	Electronic Circuits I	100	50	071	MAY 2009	08	EC1013	Wireless networks	100	50	062	APR 2011
04	EC1252	Signals and Systems	100	50	077	MAY 2009	08	EC1015	Satellite Communication	100	50	063	APR 2011
04	EC1253	Electromagnetic Fields	100	50	075	MAY 2009	08	EC1451	Wireless Communication	100	50	080	APR 2011
04	EC1254	Linear Integrated Circuits	100	50	076	MAY 2009	08	EC1452	Project Work	200	100	186	APR 2011
04	EC1255	Measurements and Instrumentation	100	50	078	MAY 2009	08	EC1453	Comprehension	100	50	098	APR 2011
04	EC1256	Electronics circuits I Lab	100	50	098	MAY 2009	08	IT1353	Embedded Systems	100	50	065	APR 2011
04	EC1257	Linear Integrated Circuit Lab	100	50	095	MAY 2009							
04	EC1258	Digital Electronics Lab	100	50	092	MAY 2009							
04	GE1251	Communication skills and Technical Seminar-II	100	50	074	MAY 2009							
04	MA1254	Random Process	100	50	078	MAY 2009							
05	EC1301	Communication Theory	100	50	078	DEC 2009							
05	EC1302	Digital Signal Processing	100	50	063	DEC 2009							

*** End of Statement***
Classification : **FIRST CLASS WITH DISTINCTION**
Total Marks (from 3rd to 8th semester) : **4423 / 5600**
Percentage (rounded to nearest integer) : **79**



M. G. A.
CONTROLLER OF EXAMINATIONS

Previously Anna University Tirunelveli

Tirunelveli - 627 007
Date : 20/05/2011

H. Kalaiselvi
SIGNATURE OF THE STUDENT

ANNA UNIVERSITY REGIONAL CAMPUS - TIRUNELVELI

TIRUNELVELI - 627007



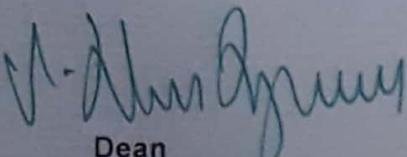
TRANSFER CERTIFICATE

No. : 16403

- 1) Name of the Student : KALAISELVI M
- 2) Name of the Father/Mother/Guardian : K. Murugan
19-05-1990 (Nineteen - Five-
- 3) Date of Birth as Entered in the University Records : Nineteen Ninety)
- 4) Date of Admission : 10-09-2013
- 5) Degree to Which the Student was Admitted : M.E Applied Electronics (part Time)
- 6) Duration of Degree : 3 years (vi semester)
- 7) Semester Studied at the Time of Leaving : vi semester
- 8) Whether Completed the Degree Successfully : Completed
- 9) Actual Date of Leaving : June 2016
- 10) Whether Paid All the Fees and Cleared the Dues to the University : Yes
- 11) Character and Conduct : Good

Office Seal




Dean

Date of Issue : 17 AUG 2017

Anna University Regional Campus - Tirunelveli
Tirunelveli - 627007

ANNEXURE-I

CERTIFICATE FROM THE ORGANISATION WHERE THE CANDIDATE IS EMPLOYED

Certified that Mr./Ms./Mrs. M. KALAISELVI is employed as Temporary Assistant Professor (Designation) in the Electronics and communication Engineering (Department/Division Name) of Government college of Engineering, Tirunelveli-7 (Institution/Industry Name).

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

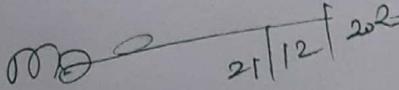
FOR FULL TIME:

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: 21/12/2020


Signature of the Head of Organization with office seal

Head of the Department
Electronics and Comm.. Engg..
Government College of Engineering
Tirunelveli - 627 007

आयकर विभाग
INCOME TAX DEPARTMENT
KALAISELVI
MURUGAN
19/05/1990
Permanent Account Number
EOPPK3833E
Signature
19/05/2016



M. Kalaiselvi



இந்திய தேர்தல் ஆணையம்
வாக்காளர் அடையாள அட்டை

ELECTION COMMISSION OF INDIA
IDENTITY CARD

XQP0169979



வாக்காளர் பெயர் : கலைச்செல்வி

Elector's Name : Kalaiselvi

தகப்பனார் பெயர் : முருகன்

Father's Name : Murugan

பாலினம் / **Sex** : பெண் / Female

பிறந்த தேதி / **Date of Birth**: 19/05/1990

முகவரி: 7

XQP0169979

போஸ்ட் ஆபீஸ் தெரு
திம்மராஜபுரம்
கீழநத்தம்-627353

Address : 7

POST OFFICE STREET
THIMMARAJAPURAM
KEELANATHAM-627353

நாள் / Date : 03/02/2009

வாக்காளர் புதிவு அதிகாரியின்
கையொப்ப: முத்திரை
226 - பாளையங்கோட்டை

சட்டமன்ற தொகுதி
Facsimile Signature of
Electoral Registration Officer
226 - Palayankottai
Assembly Constituency

முகவரியில் மாற்றம் ஏற்பட்டால், வாக்காளர் பட்டியலில்
புதிய முகவரியில் உங்கள் பெயரை மாற்றக்கான
உரிய படிவத்தில் இந்த அட்டையை எண்கை
குறிப்பிட்டு, இதே எண்ணுள்ள அட்டையை சிபரலாம்.

In case of change of address, mention this
card No. in the relevant form for including
your name in the roll at the changed address
and to obtain the card with same number.

23/ 767

ANNEXURE-I

CERTIFICATE FROM THE ORGANISATION WHERE THE CANDIDATE IS EMPLOYED

Certified that Mr./Ms./Mrs. M. KALAISELVI is employed as Temporary Assistant Professor (Designation) in the Electronics and communication Engineering (Department/Division Name) of Government college of Engineering, Tirunelveli-7 (Institution/Industry Name).

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

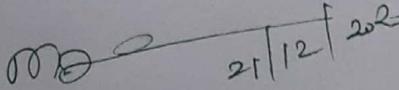
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**Head of the Department
Electronics and Comm.. Engg..
Government College of Engineering
Tirunelveli - 627 007**