



# E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS)

NAGAPATTINAM – 611 002. TAMILNADU, INDIA  
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai  
(Accredited by NAAC with 'A' Grade and NBA)

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ProgrammeName: M.E COMMUNICATION SYSTEMS

Place of Work: E.G.S Pillay Engineering, Nagapattinam.

This is to certify that the list of students undertaking field projects/Student's projects in the last completed Academic Year 2021 – 2022 are given below:

S.No	Students Name	Title
1	ASHWINI V	Detection of Ancylostomiasis and Necatoriasis in human stomach using radio pill endoscopy image.
2	GOPINATH R	Modernization of internet protocol television (IPTV) under TRAI rules.
3	KARTHIKEYAN S	Improving the wireless sensor node life time by forming the unequal clustering heads system.
4	MANIKANDAN M	An enhanced pyramid algorithm for multi exposure in image fusion.
5	MANOJBALA K	Performance enhancement of transceiver system based inner satellite optical wireless channel (IS-OWC) for ultra long distance.
6	NANDHAKUMAR K	A highly secure oblivious sparse coding-based water making system for ownership verification.
7	RAJAMANICKAM J	Secure image transmission in wireless OFDM systems using secure block compression.
8	RAMYA K	Performance analysis of MIMO OFDM for different modulation schemes(QAM,QPSK,BPSK) using link adaptation.
9	SUDARVIZHI B	Speech signal dereverberation using deep learning algorithm.
10	SUGANYA S	Real-time texture mapping of garments over 3D model of human.
11	SWETHA K S	Brain tumor detection from MRI image using K-MEANS clustering.
12	VEMBARASI K	Mixed dual – HOP FSO –RF communication systems through reconfigurable intelligent surface.

  
HOD

**Dr. B. PADMANABAN, M.E., Ph.D.,**  
HEAD OF THE DEPARTMENT  
DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING  
E.G.S. PILLAY ENGINEERING COLLEGE,  
NAGAPATTINAM - 611 002,

PRINCIPAL

ATTESTED

  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
PRINCIPAL  
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Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

# ANNA UNIVERSITY, CHENNAI

## BONAFIDE CERTIFICATE

Certified that this project titled "DETECTION OF ANCYLOSTOMIASIS AND NECATORIASIS IN HUMAN STOMACH USING RADIO PILL ENDOSCOPY IMAGES" is the bonafide work of Mr. ASWINI.V (E20COF001) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
Dr. A. Sundar Raj, M.E., Ph.D.,

PG- communication systems

Associate Professor and Head

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S. Jim Hawkinson M.E., (Ph.D)

Assitant Professor,

Department of ECE,

E.G.S. Pillay Engineering

College,

Nagapattinam.

Submitted for the Project Viva-Voce examination held on 08/07/22

  
INTERNAL EXAMINER

  
EXTERNAL EXAMINER

ATTESTED

  
Dr. S. RAMABALAN, M.E., Ph.D.,


PRINCIPAL

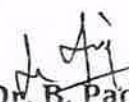
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.

Nagapattinam (Dt) Tamil Nadu.

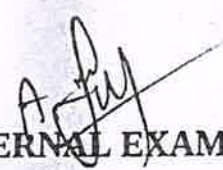
**ANNA UNIVERSITY, CHENNAI**  
**BONAFIDE CERTIFICATE**


Certified that this project titled **“MODERNIZATION OF INTERNET PROTOCOL TELEVISION (IPTV) UNDER TRAI RULES”** is the bonfire work of **Mr. R.GOPINATH (E20COF002)** who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
**Dr. A. Sundar Raj, M.E., Ph.D.,**  
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**Dr. B. Padmanaban M.E., Ph.D.,**  
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Submitted for the Project Viva-Voce examination held on 08/07/2022

  
**INTERNAL EXAMINER**


  
**EXTERNAL EXAMINER**

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
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ANNA UNIVERSITY, CHENNAI

BONAFIDE CERTIFICATE

Certified that this project report titled "IMPROVING THE WIRELESS SENSOR NODE LIFE TIME BY FORMING THE UNEQUAL CLUSTERING HEADS SYSTEMS" is the bonafide work of Mr. KARTHIKEYAN. S (E20COF003) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
Dr. A. SundarRaj, M.E., Ph.D

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Associate Professor and Head

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INTERNAL EXAMINER

  
EXTERNAL EXAMINER

# ANNA UNIVERSITY, CHENNAI

## BONAFIDE CERTIFICATE

Certified that this project titled "AN ENHANCED PYRAMIDALGORITHM FOR MULTI - EXPOSURE IMAGE FUSION" is the bonafide work of Mr. MANIKANDAN M (E20COF004) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
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Submitted for the Project Viva-Voce examination held on 8-7-22

  
INTERNAL EXAMINER

  
EXTERNAL EXAMINER

ATTESTED

  
Dr. S. RAMABALAN, M.E., Ph.D.,

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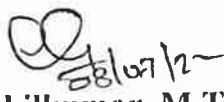
Thethi, Nagore - 611 002.

Nagapattinam (Dt) Tamil Nadu.


ANNA UNIVERSITY, CHENNAI  
BONAFIDE CERTIFICATE

Certified that this project titled "WATERMARKING SYSTEM FOR OWNERSHIP VERIFICATION BASED ON SECURE SPARSE CODING" is the bonafide work of Mr.NANDHAKUMAR.K (E20COF006) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
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Associate Professor and Head  
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S. Senthilkumar, M.Tech., (Ph.D.),  
Assistant Professor,  
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College,  
Nagapattinam.

Submitted for the Project Viva-Voce examination held on 08.07.2022

  
INTERNAL EXAMINER

  
EXTERNAL EXAMINER

iii  
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Nagapattinam (Dt) Tamil Nadu.

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CHENNAI

BONAFIDE CERTIFICATE

Certified that this project report titled "SECURE IMAGE TRANSMISSION IN WIRELESS OFDM SYSTEM USING SECURE BLOCK COMPRESSION" is the bonafide work of Mr. RAJAMANICKAM J (E20COF008) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
Dr. A. SUNDAR RAJ., M.E., Ph.D

PG, Communication systems

Professor and Head

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Mrs. R. KEERTHIKA., M.Tech.,

Assistant professor

Department of ECE

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Submitted for the Viva voce Examination held on 08/07/2022

  
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EXTERNAL EXAMINER

# ANNA UNIVERSITY, CHENNAI

## BONAFIDE CERTIFICATE

Certified that this project report titled "PERFORMANCE ANALYSIS OF MIMO OFDM FOR DIFFERENT MODULATION SCHEMES (QPSK, BPSK, QAM-32) USING LINK ADAPTATION" is the bonafide work of Mrs. RAMYA. K (E20COF009) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
Dr. A. Sundar Raj, M.E., Ph.D  
PG, Communication systems  
Professor and Head  
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Mr. M. NUTHAL SRINIVASAN, M.E., (Ph.D)  
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Submitted for the Viva voce Examination held on 08.07.2022

  
INTERNAL EXAMINER

**ATTESTED**  
  
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EXTERNAL EXAMINER




## ANNA UNIVERSITY, CHENNAI

## BONAFIDE CERTIFICATE

Certified that this project report titled "SPEECH SIGNAL DEREVERBERATION USING DEEP LEARNING ALGORITHM" is the bonafide work of Ms. SUDARVIZHI B (E20COF010) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Dr. A. SUNDAR RAJ, M.E., Ph.D  
PG Communication Systems  
Professor and Head  
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Miss S. AADHIRAI, M.E.,  
Assistant Professor  
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E.G.S. Pillay Engineering College  
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Submitted for the Viva voce Examination held on 8/7/2022

  
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## ANNA UNIVERSITY, CHENNAI

## BONAFIDE CERTIFICATE

Certified that this project report titled "REAL-TIME TEXTURE MAPPING OF GARMENTS OVER 3D MODEL OF HUMAN" is the bonafide work of Ms. SUGANIYA. S (E20COF011) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
Dr. A. Sundar (Raj.), M.E., Ph. D

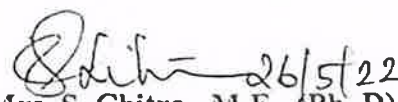
PG, Communication systems

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Mrs. S. Chitra., M.E., (Ph. D)


Assistant professor

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Submitted for the Viva voce Examination held on 08/07/2022

  
INTERNAL EXAMINER


  
EXTERNAL EXAMINER

**ATTESTED**  
  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
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Nagapattinam (Dt) Tamil Nadu.

ANNA UNIVERSITY, CHENNAI

BONAFIDE CERTIFICATE

Certified that this project report titled "BRAIN TUMOR DETECTION FROM MRI IMAGE USING K-MEANS CLUSTERING" is the bonafide work of Ms.SWETHA.K.S (E20COF012) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
Dr. A. Sundar Raj., M.E., Ph. D

PG, Communication systems

Professor and Head

Department of ECE

E.G.S. Pillay Engineering College

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Dr.D.Devarajan.,M.E., Ph. D

Associate professor

Department of ECE

E.G.S. Pillay Engineering College

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Submitted for the Viva voce Examination held on 08.07.2022

  
INTERNALEXAMINER

ATTESTED

  
EXTERNALEXAMINER

**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**

**E.G.S. Pillay Engineering College,**  
**Thethi, Nagore - 611 002.**  
**Nagapattinam (Dt) Tamil Nadu.**

## BONAFIDE CERTIFICATE

Certified that this project report titled “MIXED DUAL-HOP FSO-RF COMMUNICATION SYSTEMS THROUGH RECONFIGURABLE INTELLIGENT SURFACE FOR 6G COMMUNICATION” is the bonafide work of Mrs.VEMBARASI.K (E20COF013) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

<p style="text-align: center;"><i>A. Sundar Raj</i></p> <p><b>Dr.A.Sundar Raj, M.E., Ph.D.,</b> PG,Communication Systems Associate Professor and Head Department of ECE E.G.S.Pillay Engineering college Nagapattinam</p>	<p style="text-align: center;"><i>F. Senthilkumar</i></p> <p><b>Mr.T.Senthilkumar,M.E.,(Ph.d)</b> Assistant Professor Department of ECE E.G.S.Pillay Engineering College Nagapattinam</p>
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Submitted for the Viva voce Examination held on 08-07-2022

*[Signature]*  
**INTERNAL EXAMINER**

*[Signature]*  
**EXTERNAL EXAMINER**

**ATTESTED**  
*[Signature]*  
**Dr. S. RAMABALAN, M.E., Ph.D.,**  
**PRINCIPAL**  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.

# ANNA UNIVERSITY, CHENNAI

## BONAFIDE CERTIFICATE

Certified that this Report titled "DESIGN OF A HYBRID ENERGY SYSTEM WITH AUTO SPLITTING OF NON-CONVENTIONAL SOURCES OF ENERGY FOR ENVIRONMENTAL VARIATION" is the bonafide work of ANGELO VINCY CHRISTHOM .B (E17COF002) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

  
SIGNATURE

Dr.V.PARTHASARADHI  
HEAD OF THE DEPARTMENT  
Department of ECE  
E.G.S. Pillay Engineering College  
Nagapattinam-611 002.


  
SIGNATURE

Dr.M. IRSHAD AHAMED  
SUPERVISOR  
ASSOCIATE PROFESSOR  
Department of ECE  
E.G.S. Pillay Engineering College  
Nagapattinam-611 002.

Submitted for the Viva voce Examination held on 28/1/20

  
Internal Examiner

**ATTESTED**  
  
Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL  
E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
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External Examiner