



CERTIFICATE

1. This is to certify that no corrections/suggestions were pointed out by the Indian/Foreign Examiner(s) in the Thesis titled "Performance Analysis of Undecimated Wavelet based Adaptive Despeckling Filters for Ultrasound Images" submitted by Mr./Ms. Nirmala devi. P

OR

2. This is to certify that all corrections and suggestions pointed out by the Indian /Foreign Examiner(s) are incorporated in the Thesis titled "Performance Analysis of Undecimated Wavelet based Adaptive Despeckling Filters for Ultrasound Images" submitted by Mr./Ms. Nirmala devi. P

Signature of the Joint Supervisor
(if applicable)

Place: *Chettinam*

Date: *4.12.15*

[Signature]
Signature of the Supervisor

Dr. R. ASOKAN, M.S., M.Tech., Ph.D
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Proceedings of the Ph.D. Viva-Voce Examination of Mr./Ms. Nirmala devi.P held at 11:00 AM on 04.12.2015 in Seminar Hall, Department of ECE, Kongunadu College of Engineering and Technology, Thottiam, Trichy.

The Ph.D. Viva-Voce Examination of Mr./Ms. Nirmala devi .P (Reg.No. 10930522032) on his/her Ph.D. Thesis Entitled "Performance Analysis of Undecimated Wavelet based Adaptive Despeckling Filters for Ultrasound Images" was conducted on 04.12.2015 at 11.00 AM in the Seminar Hall, Department of ECE, Kongunadu College of Engineering and Technology, Thottiam, Trichy .



The following Members of the Oral Examination Board were present:

1. Dr. G. Raju, Associate Professor & Head
Department of Information Technology, Kannur University,
Kannur University campus P.O., Kannur, Kerala
Indian Examiner
2. Dr. K. B. Jayanthi, Professor
Department of Electronics and Communication Engineering
K.S.Rangasamy College of Technology, Thiruchengode.
Subject Expert
3. Dr.R.Asokan, Professor
Kongunadu College of Engineering and Technology, Thottiyam, Trichy.
Supervisor & Convener

The research scholar, Mr./Ms. Nirmala devi.P presented the salient features of his/her Ph.D. work. This was followed by questions from the board members. The questions raised by the Foreign and Indian Examiners were also put to the scholar. The scholar answered the questions to the full satisfaction of the board members.

The corrections suggested by the Indian/Foreign examiner have been carried out and incorporated in the Thesis before the Oral examination.

Based on the scholar's research work, his/her presentation and also the clarifications and answers by the scholar to the questions, the board recommends that Mr./Ms. Nirmala devi.P be awarded Ph.D. degree in the **Faculty of Information and Communication Engineering**.

1. Dr. G. Raju. Rhu. Indian Examiner
2. B. Jayanthi Subject Expert
3.  Supervisor & Convener
4.  Joint Supervisor (If any)

ANNA UNIVERSITY**CHENNAI 600 025****CERTIFICATE**

The research work embodied in the present Thesis entitled **“PERFORMANCE ANALYSIS OF UNDECIMATED WAVELET BASED ADAPTIVE DESPECKLING FILTERS FOR ULTRASOUND IMAGES”** has been carried out in the Department of Electronics and Communication Engineering, Kongunadu College of Engineering and Technology, Thottiyam, Trichy. The work reported herein is original and 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 or to any other scholar.

I understand the University’s policy on plagiarism and declare that the thesis and publications are my own work, except where specifically acknowledged and has not been copied from other sources or been previously submitted for award or assessment.

NIRMALA DEVI P
RESEARCH SCHOLAR

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