



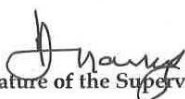
CENTRE FOR RESEARCH
ANNA UNIVERSITY :: CHENNAI 600 025



CERTIFICATE

This is to certify that all corrections and suggestions pointed out by the Indian /Foreign Examiner(s) are incorporated in the Thesis titled “CERTAIN INVESTIGATIONS ON ENERGY EFFICIENT CLUSTER BASED MULTILEVEL HIERARCHICAL ROUTING SCHEME IN WIRELESS SENSOR NETWORKS” submitted by Mr. V. CHANDRASEKARAN (Reg. No. 4083052104).

Signature of the Joint Supervisor


Signature of the Supervisor

Dr. A. SHANMUGAM
Professor, Department of ECE
SNS College of Technology
Coimbatore - 641 035

Place: Coimbatore

Date: 20. 10. 2014



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PROCEEDINGS OF THE Ph.D VIVA-VOCE EXAMINATION OF Mr. V. CHANDRASEKARAN HELD AT 11.00 AM ON 20-10-2014 IN SNS COLLEGE OF TECHNOLOGY, COIMBATORE - 641 035.

The Ph.D. Viva-Voce Examination of Mr. V. CHANDRASEKARAN (Reg. No. 4083052104) on his Ph.D. Thesis Entitled "CERTAIN INVESTIGATIONS ON ENERGY EFFICIENT CLUSTER BASED MULTILEVEL HIERARCHICAL ROUTING SCHEME IN WIRELESS SENSOR NETWORKS" was conducted on 20-10-2014 at 11.00 AM in the Chanakya Bhavan Seminar Hall, SNS College of Technology, Coimbatore - 641 035.

The following Members of the Oral Examination Board were present:

1.	Dr. P. Santhi Thilagam Associate Professor, Department of CSE N.I.T.K Surathkal Mangalore - 575 025.	Indian Examiner
2.	Dr. K. Gunavathi Professor, Department of ECE, PSG College of Technology Coimbatore - 641 004.	Subject Expert
3.	Dr. A. Shanmugam Dean & Professor, Department of Electronics and Communication Engineering, SNS College of Technology, Coimbatore- 641 035.	Supervisor & Convener

The research scholar, Mr. V. CHANDRASEKARAN presented the salient features of his 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 examiners have been carried out and incorporated in the Thesis before Oral examination.

Based on the scholar's research work, his presentation and also the clarifications and answers by the scholar to the questions, the board recommends that Mr. V. CHANDRASEKARAN be awarded Ph.D. degree in the Faculty of INFORMATION AND COMMUNICATION ENGINEERING.

1.	Dr. P. Santhi Thilagam	Indian Examiner	
2.	Dr. K. Gunavathi	Subject Expert	
3.	Dr. A. Shanmugam	Supervisor & Convener	

ANNA UNIVERSITY
CHENNAI 600 025

CERTIFICATE

The research work embodied in the present Thesis entitled “**CERTAIN INVESTIGATIONS ON ENERGY EFFICIENT CLUSTER BASED MULTILEVEL HIERARCHICAL ROUTING SCHEME IN WIRELESS SENSOR NETWORKS**” has been carried out in the SNS College of Technology, Coimbatore – 641 035. 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 copied from other sources or been previously submitted for award or assessment.

Counter signed by



Signature of the Scholar
20/10/14

V. CHANDRASEKARAN



Signature of the Supervisor

Dr. A.SHANMUGAM
SUPERVISOR

Dean & Professor,
Department of Electronics and
Communication Engineering,
SNS College of Technology,
Coimbatore - 641 035.

Place: **COIMBATORE**
Date: **20.10.2014**