

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
KARNATAKA, INDIA



This is to certify that

Siddesh G K

has been conferred the Degree of
Doctor of Philosophy
in
Faculty of Electrical and Electronics Engineering Sciences

for the thesis entitled

**Neuro-Fuzzy Model Based Routing Protocols in Mobile
Ad-Hoc Networks**

*in recognition of the fulfillment of requirements
for the said degree*

PH 13 000195

Given under the seal of the University

USN: 4PS06PEM02



BELGAUM

DATE

PRINCIPAL
Institute of Engg. & Technology
No. 574 225, D.K.

VICE CHANCELLOR



Visvesvaraya Technological University

"Jnana Sangama", Belagavi- 590 018, Karnataka state.

Dr. K. E. Prakash, B.E. M.E., Ph.D
Registrar

Phone: (0831) 2405468

Fax : (0831) 2405467

Ref.: VTU/Aca/2015-2016/A7/EL

/ 9034

Date: 19 JAN 2016

OFFICE ORDER

Sub : Registration of Ph.D./M.Sc.(Engg.) by Research from June 2015.

Ref : Your application for the Ph.D. /M.Sc.(Engg.) by Research.

By the direction of the Vice-Chancellor, you are hereby permitted to register for pursuing research with the following details:

1. Name : Maheshkumar Patil
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E&C
5. College/Institute : JSSATE, Bengaluru
6. Supervisor : Dr. Siddesh G K
7. Research Topic : "Design of Protocol to Improve Quality of Service for Real Time Multimedia Applications "
8. Approved Course work

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEC001	VLSI Design and Embedded Systems
3.	14PHDEC004	Wireless and Mobile Networks
4.	14PHDCS003	Advances in Computer Networks

This permission for registration is subject to fulfilling the following conditions

1. Submission of a letter confirming acceptance of provisional admission to Ph.D./M.Sc.(Engg.) and an undertaking to abide by rules and regulations of the University stipulated from time to time to the Office of the undersigned, on or before 25th Jan 2016, forwarded by the Supervisor and the Head of the Institution in which the Research Centre mentioned above is located.
2. Send a DD to VTU for requisite registration fee of ₹. 4000/- drawn in favour of the Finance Officer, VTU, Belagavi

Note: This Provisional Registration is subject to fulfilling the conditions specified in the Clause PHD14.9 of the Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D. 2014)

Registrar

To,

☒ The candidate

- Copy to,
1. The Research Centre /VTURRC
 2. The Supervisor/Co-Supervisor

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
KARNATAKA, INDIA



This is to certify that

MAHESH KUMAR N

has been conferred the Degree of

Doctor of Philosophy

in

FACULTY OF ELECTRICAL & ELECTRONICS ENGINEERING SCIENCES

for the thesis entitled

SECURE FRAMEWORK FOR COGNITIVE RADIO NETWORK

*in recognition of the fulfillment of requirements
for the said degree*

PH
19 000921

Given under the seal of the University

USN: 1DS15PEJ03



BELAGAVI

DATE : APRIL 03, 2021

VICE CHANCELLOR

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ

ಕರ್ನಾಟಕ, ಭಾರತ



ಶ್ರೀ/ಶ್ರೀಮತಿ

RAVINDRA S

ಇವರು

FACULTY OF ELECTRICAL & ELECTRONICS ENGINEERING SCIENCES ವಿಭಾಗದಲ್ಲಿ

QOS BASED NETWORK SELECTION AND DEVICE - TO -DEVICE
COMMUNICATION FOR LTE ADVANCED SYSTEMS

ಎಂಬ ಪ್ರಬಂಧವನ್ನು ಮಂಡಿಸಿದ್ದು

ಡಾಕ್ಟರ್ ಆಫ್ ಫಿಲಾಸಫಿ

ಪದವಿಗೆ ಅಪೇಕ್ಷಿತವಾದ ಅಗತ್ಯಗಳನ್ನು ಪೂರೈಸಿದ್ದಾರೆಂದು ಪರಿಗಣಿಸಿ
ಮೇಲೆ ಕಾಣಿಸಿದ ಪದವಿಯನ್ನು ಅವರಿಗೆ ಪ್ರಧಾನಮಾಡಲಾಗಿದೆ

PH 19 000993

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮುದ್ರೆಯೊಂದಿಗೆ ನೀಡಲಾಗಿದೆ

USN: 1DS15PEJ04



ಬೆಳಗಾವಿ

ದಿನಾಂಕ :

APRIL 03, 2021

1

ಕುಲಪತಿ



This is to certify that

RAVINDRA S

has been conferred the Degree of

Doctor of Philosophy

in

FACULTY OF ELECTRICAL & ELECTRONICS ENGINEERING SCIENCES

for the thesis entitled

QOS BASED NETWORK SELECTION AND DEVICE - TO -DEVICE
COMMUNICATION FOR LTE ADVANCED SYSTEMS

*in recognition of the fulfillment of requirements
for the said degree*

PH
19 000993

Given under the seal of the University

USN: IDS15PEJ04



BELAGAVI

2

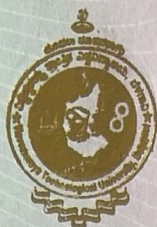
DATE

:

APRIL 03, 2021

VICE CHANCELLOR

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
KARNATAKA, INDIA



This is to certify that

SHASHI RAJ K

has been conferred the Degree of

Doctor of Philosophy

in

FACULTY OF ELECTRICAL & ELECTRONICS ENGINEERING SCIENCES

for the thesis entitled

QOS AWARE ROUTING BASED ON BANDWIDTH ESTIMATION, DELAY
AND ENERGY CONSUMPTION FOR MANETS

*in recognition of the fulfillment of requirements
for the said degree*

PH
19 000929

Given under the seal of the University

USN: 1DS15PEJ02

BELAGAVI

DATE

:

APRIL 03, 2021



VICE CHANCELLOR

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
KARNATAKA, INDIA



This is to certify that
PRAKASH JADHAV
has been conferred the Degree of
Doctor of Philosophy
in

Faculty of Electrical & Electronics Engineering Sciences

for the thesis entitled

*Bandwidth Reduction Of Virtual Multimedia Payload Using
Self-Modifying Wavelets And Implementation Of Tree-Based
Streaming Protocol Over Multimedia Networks*

*in recognition of the fulfillment of requirements
for the said degree*

PH
13 001966


Given under the seal of the University

USN: 1JS11PEN01



BELGAUM

DATE : March 18, 2019


VICE CHANCELLOR



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ
Visvesvaraya Technological University
 "Jnana Sangama", Belagavi - 590 018, Karnataka State.

Prof. A. S. Deshpande, B.E., M.Tech., Ph.D.
REGISTRAR

Phone: (0831) 2498100
 Fax : (0831) 2405467

J.S.S.A.T.E, B'lore-60
 P.R. No. 35
 Date 12.04.2021

Preamble:

Sub: Change of Research Supervisor and Center -reg...
Ref: Hon'ble Vice-Chancellor approval dated 17-03-2021.

Shruti . N(1DS17PEA35) pursuing research under the guidance of **Dr.Anitha.V**, has requested for Change of Research Supervisor and Center . Based on the recommendations of the Doctoral Committee, No Objection Certificate from the Guides/Centers, and in accordance with the Regulations Governing the Degree of Doctor of Philosophy (Ph.D.), the Change of Research Supervisor and Center as requested by the candidate is approved.

Order No: VTU/BGM/Ph.D/Aca/2020-21/ 10609.

Date: 24 MAR 2021

Pursuant to the approval of the Hon'ble Vice-Chancellor and as per the preamble above, **Shruti . N (1DS17PEA35)** has been permitted to Change of Research Supervisor and Center of her/his Research work.

OLD	NEW
Dr.Anitha.V, Dayananda Sagar College of Engineering, Bengaluru	Dr. SIDDESH.G.K., JSS ACADEMY OF TECHNICAL EDUCATION, Bengaluru (1JS17PEA12)

The said changes shall be incorporated in all the related documents of the University, with immediate effect.

By Order,

Registrar

To

Shruti . N(1DS17PEA35) Research Scholar

Copy to

1. The Registrar (Evaluation), VTU, Belagavi for information.
2. The Principal, Dayananda Sagar College of Engineering, Bengaluru.
3. The Principal, JSS ACADEMY OF TECHNICAL EDUCATION, Bengaluru
4. Research Guide – Dr.Anitha.V.
5. Research Guide- Dr. SIDDESH.G.K.,
6. Office copy.

Est
 12.4.2021

Copy to HOD, FEE



Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka state.

Dr. H. N. Jagannatha Reddy., B.E. M.E., Ph.D.
Registrar

Phone: (0831) 2405468

Fax : (0831) 2405467

Ref.: VTU/Aca/2016-2017/A7/EL 8411/135

Date: 2 FEB 2017

OFFICE ORDER

Sub : Registration of Ph.D./M.Sc.(Engg.) by Research from June 2016
Ref : Your application for the Ph.D. /M.Sc.(Engg.) by Research.

By the recommendations of the Admission Committee, you are hereby provisionally permitted to register for pursuing research work with the following details:

1. Name : Shruthi N
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E&CE
5. College/Institute : DSCE, Bengaluru
6. Supervisor : Dr. Anitha V
7. Co-Supervisor :
8. Research Topic : "IoT Based Cloud Security Authentication Protocol"
9. Approved Course work

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDCS003	Advances in Computer Networks
3.	14PHDEC004	Wireless and Mobile Networks
4.	14PHDIT003	Sensors and Applications

This permission for registration is subject to fulfilling the following conditions


1. Letter of acceptance for the Provisional admission, duly forwarded by the Guide/ Co-guide and Head of Research Centre on or before 10th Feb 2017
2. An undertaking to abide by the rules and regulations of the University.
3. DD. of ₹ 6000/- drawn in favour of the Finance Officer VTU, Belagavi towards requisite registration fee.

Note: This Provisional Registration is subject to fulfilling the conditions specified in the Clause PHD 14.9 of the Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D. 2014)

To,

The candidate

- Copy to, 1. The Research Centre /VTU-RRC
2. The Supervisor/Co-Supervisor


Registrar




ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ

Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka State.

Prof. A. S. Deshpande, B.E., M.Tech., Ph.D.
REGISTRAR

Phone: (0831) 2498100
Fax : (0831) 2405467

Preamble:

Sub: Change of Research Supervisor and Center - reg...

Ref: Hon'ble Vice-Chancellor approval dated 17-03-2021.

J.S.S.A.T.E, B'lore-60	
P.R. No.	772
Date	27.03.2021

Chaithanya S.(IDS17PEA17) pursuing research under the guidance of Dr. V. Anitha, has requested for Change of Research Supervisor and Center. Based on the recommendations of the Doctoral Committee, No Objection Certificate from the Guides/Centers, and in accordance with the Regulations Governing the Degree of Doctor of Philosophy (Ph.D.), the Change of Research Supervisor and Center as requested by the candidate is approved.

Order No: VTU/BGM/Ph.D/Aca/2020-21/10405.

Date: 24 MAR 2021

Pursuant to the approval of the Hon'ble Vice-Chancellor and as per the preamble above, Chaithanya S. (IDS17PEA17) has been permitted to Change of Research Supervisor and Center of her/his Research work.

OLD	NEW
Dr. V. Anitha, Dayananda Sagar College of Engineering, Bengaluru	Dr. Siddesh G K, JSS Academy of Technical Education, Bengaluru (IDS17PEA11)

The said changes shall be incorporated in all the related documents of the University, with immediate effect.

By Order,

Registrar

To

Chaithanya S.(IDS17PEA17) Research Scholar

Copy to

1. The Registrar (Evaluation), VTU, Belagavi for information.
2. The Principal, Dayananda Sagar College of Engineering, Bengaluru.
3. The Principal, JSS Academy of Technical Education, Bengaluru
4. Research Guide - Dr. V. Anitha.
5. Research Guide- Dr. Siddesh G K,
6. Office copy.

Est
27-3-21
Copy to KUD FCG



Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka state.

Dr. H. N. Jagannatha Reddy., B.E. M.E., Ph.D.
Registrar

Phone: (0831) 2405468
Fax : (0831) 2405467

Ref.: VTU/Aca/2016-2017/A7/EL 1172/3

Date: 22 MAY 2017

OFFICE ORDER

Sub : Registration of Ph.D./M.Sc.(Engg.) by Research from June 2016.
Ref : Your application for the Ph.D. /M.Sc.(Engg.) by Research.

By the recommendations of the Admission Committee, you are hereby provisionally permitted to register for pursuing research work with the following details:

1. Name : **Chaithanya S**
2. Programme : **Ph.D.**
3. Full time /Part time : **Part Time**
4. Research Centre : **E&CE**
5. College/Institute : **DSCE, Bengaluru**
6. Supervisor : **Dr. V Anitha**
7. Co-Supervisor : **--**
8. Research Topic : **"Implementation of Secure Authentication Protocol for Internet of Things "**
9. Approved Course work

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEE006	Linear Algebra
3.	14PHDEC003	Communication Systems
4.	14PHDEC004	Wireless and Mobile Networks

This permission for registration is subject to fulfilling the following conditions

1. Letter of acceptance for the Provisional admission, duly forwarded by the Guide/ Co-guide and Head of Research Centre on or before **29th May 2017**.
2. An undertaking to abide by the rules and regulations of the University.
3. DD of ₹6000/- drawn in favour of the Finance Officer VTU, Belagavi towards requisite registration fee.

Note: This Provisional Registration is subject to fulfilling the conditions specified in the Clause PHD14.9 of the Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D. 2014)

To,

The candidate

- Copy to, 1. The Research Centre /VTURRC
2. The Supervisor/Co-Supervisor

Registrar



Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka state.

Dr. K. E. Prakash, B.E., M.E., Ph.D.
Registrar

Phone: (0831) 2405468

Fax : (0831) 2405467

Ref.: VTU/Aca/2015-2016/A7 EL

8007

Date:

- 8 DEC 2015

OFFICE ORDER

Sub : Registration of Ph.D./M.Sc.(Engg.) by Research from June 2015

Ref : Your application for the Ph.D. /M.Sc.(Engg.) by Research.

By the recommendations of the Admission Committee, you are hereby provisionally permitted to register for pursuing research work with the following details:

1. Name : Basavanagouda Ganganagoudar
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E & CE
5. College/Institute : JSSATE, Bengaluru
6. Supervisor : Dr. Siddesh G K
7. Co-Supervisor :
8. Research Topic : "ASIC Design & Implementation of Low Power VHT-MIMO-OFDM Architecture for Wireless LAN"
9. Approved Course work

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEC001	VLSI Design & Embedded Systems
3.	14PHDEC004	Wireless & Mobile Networks
4.	14PHDEC005	Digital System Design

This permission for registration is subject to fulfilling the following conditions

1. Letter of acceptance for the Provisional admission, duly forwarded by the Guide/ Co-guide and Head of Research Centre on or before **19th Dec 2015**.
2. An undertaking to abide by the rules and regulations of the University.
3. DD of ₹ 4000/- drawn in favour of the Finance Officer VTU, Belagavi of towards requisite registration fee.

Note: This Provisional Registration is subject to fulfilling the conditions specified in the Clause PHD14.9 of the Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D. 1914)

Registrar

To,

The candidate

- Copy to,
1. The Research Centre /VTURRC
 2. The Supervisor/Co-Supervisor

From,

Date: 13/12/2015

Mr. Basavanagouda Ganganagoudar
#6, Kaladarshini Nilaya, BCC Layout,
Near Shani Mahatma temple,
Raghuvanahalli, Kanakpura road,
Bengaluru -560062

To,

The Registrar,
Visvesvaraya Technological University,
Jnana Sangama, Belgavi- 590018

Through,

Dr. Siddesh G K,
Supervisor, Assoc. Professor,
JSSATE, Bengaluru- 560060.

Sub: "Registration for PhD in Electronics and Communication Engineering"

Ref: VTU/Aca/2015-2016/A7 EL 8007

Respected Sir,

With reference to the above subject I would like to register for the PhD program under the supervision of **Dr. Siddesh G K**, Assoc. Professor, JSSATE, Bengaluru at the research centre at **J S S Academy of Technological Education, Bengaluru**.

Further I abide the rules and regulations of the university stipulated from time to time to the office of university. Hence I kindly request you to give the permission for the continuing my study. I will be enclosing the DD of amount Rs. 4000/- along with this letter.

(490722)

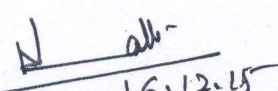
Thanking You,

Yours' Sincerely

Baasavanagouda Ganganagoudar

Accepted to guide
Mr. Basavanagouda Ganganagoudar
for PhD under VTU.

Siddesh 13.12.15


16.12.15
Dr. MRITYUNJAYA V. LATTE
M.E., Ph.D.,
PRINCIPAL
JSS Academy of Technical Education