

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD  
HYDERABAD - 500 085, TELANGANA STATE, INDIA

TS 688185



H.T No. : 0703PH0614

*Ms. Rekha B Venkatapur*  
*D/o. Venkatapur B*

having fulfilled the academic requirements in *June, 2016*  
has this day been admitted by the Executive Council to the Degree of

*Doctor Of Philosophy*  
*Computer Science And Engineering*

Topic : *A Robust Hierarchical Clustering Algorithm for Video Watermark*

Given under the Seal of the University

Date: 09-09-2016



*Coffe*

*Andalash p*

*Aleed*

PRINCIPAL

REGISTERAR

VICE CHANCELLOR

*14.8.18*



460201652772

PC No  
316000364

K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109





# 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/CSE // 54/63

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:

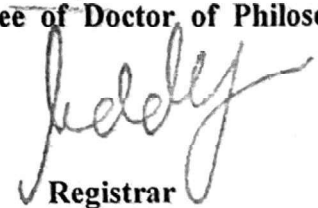
1. Name : K K Kavitha
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : CSE
5. College/Institute : KSIT, Bengaluru
6. Supervisor : Dr. Rekha B Venkatapur
7. Co-Supervisor : -
8. Research Topic : "An Effective Method for Progressive Image Transmission using Perceptual Region of Interest."
9. Approved Course work  

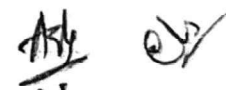
Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDCS005	Advances in web Intelligence Techniques
3.	14PHDCS001	Advances in Digital Image Processing
4.	14PHDCS004	Advances in Knowledge Data Discovery

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 29<sup>th</sup> 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 PHD 14.9 of the Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D. 2014).

  
Registrar



To,

The candidate

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



# Visvesvaraya Technological University

Jnana Sangama, Belagavi, Karnataka 590018

Registrar

Phone: (0831) 2405468

Fax : (0831) 2405467

VTU/Ph.D./AC/A7/2020-2021/CSE/365/20

Date: 20, Jan 2020

## OFFICE ORDER

Sub : Regarding of Ph.D./M.Sc.(Engg.) by Research Program.

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

By the recommendations of the Admission Committee, you are hereby provisionally permitted to register under VTU for pursuing Ph.D. /M.Sc.(Engg.) research Program with the following details:

1. Name	<b>RAGHAVENDRACHAR S</b>							
2. Programme	<b>Ph.D</b>							
3. Type	<b>Part Time</b>							
4. Research Centre Department	<b>Computer Science and Engineering</b>							
5. College/Institute	<b>KSIT, Bangalore</b>							
6. Supervisor	<b>DR. REKHA B VENKATAPUR</b>							
7. Co-Supervisor	<b>(No Co-Supervisor)</b>							
8. Research Topic	<b>UNSUPERVISED AUTO ENCODER BASED DETECTION OF NUTRITION DEFICIENCY IN INDIAN MULBERRY LEAVES.</b>							
9. Constitution of Doctoral committee & approval from University	Ph.D. 3.1.2 Regulations-2017							
10. Proposing Coursework	Course work should be selected and approved by Doctoral Committee as per Ph.D. 14.1 (a) Regulations-2017							
11. Mandatory residence certificate for part time candidates	Ph.D. 15.1 Regulations-2017							
12. Six months Progress Report (From date of Provisional Registration) Ph.D.16 Regulations-2017	1st	2nd	3rd	4th	5th	6th	7th	8th
13. Course work	Ph.D. 14 Regulations-2017							
14. Comprehensive Viva-Voce	Ph.D. 17 Regulations-2017							
15. Conformation of Ph.D Registration	Ph.D. 18 Regulations-2017							
16. Open Seminar (I & II)	Ph.D. 19.1 Regulations-2017							
17. Pre-Submission Colloquium	Ph.D. 19.2 Regulations-2017							
18. Submission of Long Synopsis plagiarism check and Publications	Ph.D. 19.3 , Ph.D 19.4 & Ph.D 20 Regulations-2017							
19. Submission of Thesis	Ph.D. 22 Regulations-2017							
20. Final Viva-Voce	Ph.D. 23.7 Regulations-2017							

This permission for registration is subject to fulfilling the following conditions:

1. Letter of acceptance for the Provisional admission, duly forwarded by the Supervisor/ Co-Supervisor and Head of Research Centre on or before 09, Feb 2020.
2. An undertaking to abide by the rules and regulations of the University.
3. **Online payment of Rs.6000/- towards requisite registration fee.**
4. University Development fee (One time paid) 2,000/-
5. E-Consortium (every academic year) 3,000/-

**Note:** This Provisional Registration is subject to fulfilling the conditions specified in the Clause Ph.D.14.6 and 14.7 of the Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D. 2017).

  
REGISTRAR

Download VTU regulation: <http://www.vtu.ac.in/pdf/regulation/phd201718.pdf>

To, **RAGHAVENDRACHAR S**, KSIT, Dept of CSE, No 14, Raghuvanahalli , Kanakapura Road , Bengaluru - 560109.

Copy to,

1. Research Center: **KSIT, #14, Raghuvanahalli, Kanakapura Main Road, Bangalore 560062, Bangalore**
2. The Supervisor/Co-Supervisor: **DR. REKHA B VENKATAPUR / (No Co-Supervisor)**

  
25.1.2020





# Visvesvaraya Technological University

Jnana Sangama, Belagavi, Karnataka 590018

Registrar

Phone: (0831) 2405468

Fax : (0831) 2405467

VTU/Ph.D./AC/A7/2020-2021/ CSE/365/6

Date: 20, Jan 2020

## OFFICE ORDER

Sub : Regarding of Ph.D./M.Sc.(Engg.) by Research Program.

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

By the recommendations of the Admission Committee, you are hereby provisionally permitted to register under VTU for pursuing Ph.D. /M.Sc.(Engg.) research Program with the following details:

1. Name	<b>M SHANMUGAM SHOBA</b>							
2. Programme	<b>Ph.D</b>							
3. Type	<b>Part Time</b>							
4. Research Centre Department	<b>Computer Science and Engineering</b>							
5. College/Institute	<b>KSIT,Bangalore</b>							
6. Supervisor	<b>DR. REKHA B VENKATAPUR</b>							
7. Co-Supervisor	<b>(No Co-Supervisor)</b>							
8. Research Topic	<b>AN ENHANCEMENT FOR QUANTUM RESISTANT BLOCKCHAIN THROUGH POST QUANTUM DIGITAL SIGNATURE SCHEME.</b>							
9. Constitution of Doctoral committee & approval from University	Ph.D. 3.1.2 Regulations-2017							
10. Proposing Coursework	Course work should be selected and approved by Doctoral Committee as per Ph.D. 14.1 (a) Regulations-2017							
11. Mandatory residence certificate for part time candidates	Ph.D. 15.1 Regulations-2017							
12. Six months Progress Report (From date of Provisional Registration) Ph.D.16 Regulations-2017	1st	2nd	3rd	4th	5th	6th	7th	8th
13. Course work	Ph.D. 14 Regulations-2017							
14. Comprehensive Viva-Voce	Ph.D. 17 Regulations-2017							
15. Conformation of Ph.D Registration	Ph.D. 18 Regulations-2017							
16. Open Seminar (I & II)	Ph.D. 19.1 Regulations-2017							
17. Pre-Submission Colloquium	Ph.D. 19.2 Regulations-2017							
18. Submission of Long Synopsis plagiarism check and Publications	Ph.D. 19.3 , Ph.D 19.4 & Ph.D 20 Regulations-2017							
19. Submission of Thesis	Ph.D. 22 Regulations-2017							
20. Final Viva-Voce	Ph.D. 23.7 Regulations-2017							

This permission for registration is subject to fulfilling the following conditions:

1. Letter of acceptance for the Provisional admission, duly forwarded by the Supervisor/ Co-Supervisor and Head of Research Centre on or before 09, Feb 2020.
2. An undertaking to abide by the rules and regulations of the University.
3. **Online payment of Rs.6000/- towards requisite registration fee.**
4. University Development fee (One time paid) 2,000/-
5. E-Consortium (every academic year) 3,000/-

**Note:** This Provisional Registration is subject to fulfilling the conditions specified in the Clause Ph.D.14.6 and 14.7 of the Regulations (Amended) Governing the Degree of Doctor of Philosophy (Ph.D. 2017).


  
REGISTRAR

Download VTU regulation: <http://www.vtu.ac.in/pdf/regulation/phd201718.pdf>

To, **M SHANMUGAM SHOBA**, #114, 3rd A Cross, RR Layout, Doorvani Nagar, Vijinapura, Bangalore-560016

Copy to,

1. Research Center: **KSIT, #14, Raghuvanahalli, Kanakapura Main Road, Bangalore 560062, Bangalore**
2. The Supervisor/Co-Supervisor: **DR. REKHA B VENKATAPUR / (No Co-Supervisor)**

  
25.1.2020





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

To: Kashika P H  
Dr. Rekha Venkatapur  
2/6/2020

**Preamble:**

**Sub:** Change of Research Center -reg--

**Ref:** Hon'ble Vice-Chancellor approval dated 15-06-2020.

Kashika P H (5VX17PEA84) pursuing research under the guidance of Dr. Rekha B Venkatapur, has requested for Change of Research 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.) 2014, the change of research center as requested by the candidate is approved.

**Order No:** VTU/BGM/Ph.D/Aca/2020-21/ 614

**Date :** 15-06-2020.

Pursuant to the approval of the Hon'ble Vice-Chancellor and as per the preamble above, Kashika P H (5VX17PEA84) has been permitted to change of Research center of her/his Research work as under.

OLD RESEARCH CENTER	NEW RESEARCH CENTER
VTU-RRC Belagavi	K S Institute of Technology, Bengaluru

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

By Order,

15.6.2020  
Registrar

To

Kashika P H (5VX17PEA84) Research Scholar

Copy to

1. The Registrar (Evaluation), VTU, Belagavi for information.
2. The Principal, K S Institute of Technology, Bengaluru
3. The Chairperson, Dept. of CSE, VTU Belagavi.
4. Research Guide – Dr. Rekha B Venkatapur.
5. Office copy.



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ

Visvesvaraya Technological University

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

REGISTRAR

Phone: (0831) 2498100

Fax : (0831) 2405467

Preamble:

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

Ref: Hon'ble Vice-Chancellor approval dated 05-04-2021.

T. Somashekhar(SVX17PES23) pursuing research under the guidance of Dr. Anirban Basu, has requested for Change of Research Supervisor and Research 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 Research Center as requested by the candidate is approved.

Order No: VTU/BGM/Ph.D/Aca/2020-21/ 58.

Date: 20 APR 2021

Pursuant to the approval of the Hon'ble Vice-Chancellor and as per the preamble above, T. Somashekhar (SVX17PES23) has been permitted to Change of Research Supervisor and Research Center of her/his Research work.

OLD	NEW
Dr. Anirban Basu, VTU-RRC Belagavi	Dr. Rekha B Venkatapur, Dept. of CSE, KSIT Bangalore (1KS17PES01)

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

By Order,

Registrar

To

T. Somashekhar(SVX17PES23) Research Scholar

Copy to

1. The Registrar (Evaluation), VTU, Belagavi for information.
2. The Chairperson, Dept. of Computer Science & Engineering, VTU Research Resource Centre, Belagavi
3. The Principal, Dept. of CSE, KSIT Bangalore
4. Research Guide-Dr. Anirban Basu,
5. Research Guide- Dr. Rekha B Venkatapur,
6. Office copy.

To H(CSE)/ES

25/6/21





# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)  
"ಜ್ಞಾನ ಸಂಗಮ", ಬೆಳಗಾವಿ-೫೯೦೦೧೮, ಕರ್ನಾಟಕ, ಭಾರತ

## Visvesvaraya Technological University

(State University of Government of Karnataka Established as per the VTU Act, 1994)  
"Jnana Sangama" Belagavi-590018, Karnataka, India

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

Phone: (0831) 2498100

Fax : (0831) 2405467

VTU/BGM/Aca/Ph.D./2020-21/878

Date: December 31, 2021

### Provisional Registration Letter for Ph.D. Degree Programme (Office Order)

**Sub: Provisional Ph.D. Registration reg...**

- Ref:** 1. Notification No. VTU/BGM/Aca/Ph.D./2020-21/847 dated 07-11-2020.  
2. Candidate's ETR Application No. : 3430  
3. Hon'ble Vice Chancellor's Order dated 14-12-2021.

Pursuant to the recommendations of the Admission Committee and approval of Honourable Vice Chancellor, you have been selected for provisional admission to pursue Ph.D. programme under Visvesvaraya Technological University, Belagavi.

The details pertaining to the registration are given below:

Sl.No.	Particulars	
1.	Name of the Candidate	ROOPESH KUMAR B N
2.	University Seat Number (USN)	1KS20PCS01
3.	Admission Category of Research Programme (Full Time/Part Time).	Ph.D. - Part Time
4.	Faculty under which the degree will be awarded.	FACULTY OF COMPUTER AND INFORMATION SCIENCES
5.	Name of the Research Center	K.S. INSTITUTE OF TECHNOLOGY BANGALORE
6.	Specialization	COMPUTER SCIENCE AND ENGINEERING
7.	Proposed Research Topic / Area.	"A ROBUST MULTISTAGE DESIGN TOWARDS MITIGATING PHISHING ADVERSARIES USING EXTREME ENSEMBLING TECHNIQUE"
8.	Name and address of the Research Supervisor.	DR. REKHA B VENKATAPUR Professor - COMPUTER SCIENCE AND ENGINEERING K.S. INSTITUTE OF TECHNOLOGY BANGALORE
*****		

The Research Scholars shall strictly follow the norms of the University with regard to the Regulations Governing the Degree of Doctor of Philosophy (Ph.D.) / M.S. (Research) - 2020 and any other amendments effected from time to time.

**Registrar**

To,

1. ROOPESH KUMAR B N, ASSISTANT PROFESSOR, DEPARTMENT OF CSE, KSIT, BENGALURU 560109.
2. Principal of the college / Director, Principal or Dean (Architecture)/Chairperson of the University Department/Research Organization where the candidate has to register for admission to Ph.D. programme.

3. To Research Supervisor: DR. REKHA B VENKATAPUR
4. Office copy.

**Document Generated Date: 2022-03-08 & Time: 08:34:53, Web portal: <https://jnanashodha.vtu.ac.in>**





# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)  
"ಜ್ಞಾನ ಸಂಗಮ", ಬೆಳಗಾವಿ-೫೯೦೦೧೮, ಕರ್ನಾಟಕ, ಭಾರತ

## Visvesvaraya Technological University

(State University of Government of Karnataka Established as per the VTU Act, 1994)  
"Jnana Sangama" Belagavi-590018, Karnataka, India

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

Phone: (0831) 2498100

Fax : (0831) 2405467

VTU/BGM/Aca/Ph.D./2021-22/RS/795

Date: 03-09-2022

### **Sub: Recognition as Research Supervisor**

**Ref: VTU/BGM/Aca/Ph.D./2022-23/87 dated:08-04-2022.**

With reference to your application for Recognition as Research Supervisor/ Research Co-Supervisor to supervise Scholars pursuing Research programmes of VTU, the University is pleased to inform you that your candidature has been considered and you have been recognized as Research Supervisor of VTU. You can supervise Scholars pursuing Ph.D./M.S.(Research)/ Integrated Ph.D. programmes as a Research Supervisor or Co-Supervisor\* from 2022 onwards.

On acceptance as a Research Supervisor, you shall adhere to Regulations of Ph.D./M.S.(Research)/ Integrated Ph.D. programmes and to the corresponding amendments notified from time to time.

You are required to submit a report on your Research related progress in the prescribed format to the university every year. On the basis of the same and recommendation of the expert committee, university will decide about your further continuation of the recognition as Research Supervisor.

Sl.No.	Particulars	
1.	Name and Address of the Recognized Research Supervisor	DR.DEEPA S R #216 A 6TH CROSS 1ST MAIN MANJUNATHNAGAR BANGALORE 560010
2.	Registration ID	042022RSCS003173
3.	Designation (Professor/Associate Professor/ Assistant Professor) or Actual Designation with AICTE cadre equivalence	Assoc. Professor
4.	Recognised Faculty under which research is to be carried out	FACULTY OF COMPUTER AND INFORMATION SCIENCES
5.	Department in which the VTU recognized Research Center is established	COMPUTER SCIENCE AND ENGINEERING
6.	Recognition date/month/year of Research Supervisor	03-09-2022
*****		

  
**Registrar**

**\*In case if, you are supervising a candidate not from your institute's/department's Research Centre approved by VTU, you are permitted to act only as Co-Supervisor.**



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ  
VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA

PH  
18 001970

**Provisional Degree Certificate**

*This is to certify that Mr./Ms. VANEETA M*

*is qualified for the award of the degree of*  
DOCTOR OF PHILOSOPHY IN FACULTY OF COMPUTER & INFORMATION SCIENCES W.E.F. 29.6.2021

*of this University for having fulfilled the requirements for the award*  
*of the said Degree by submitting the thesis titled :*

NOVEL KEY DISTRIBUTION AND SECURITY FRAMEWORK FOR NODE LEVEL COMMUNICATION FOR  
WIRELESS SENSOR NETWORKS

*with University Seat No. 1KS15PEJ04*

*The degree will be conferred on him / her at the next*  
*convocation or thereafter.*

Belagavi  
Date : 08.07.2021



*Rang* B.E  
Registrar (Evaluation)



VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

VIJAYALAXMI MEKALI

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

FACULTY OF COMPUTER & INFORMATION SCIENCES

*for the thesis entitled*

MEDICAL IMAGE ANALYSIS USING COMPUTATIONAL METHODS TO  
DETECT AND DIAGNOSE CANCER TUMOR

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

PH  
19 001651

Given under the seal of the University

USN: 1RN13PEN05

BELAGAVI

DATE : MARCH 10, 2022

  
VICE CHANCELLOR





# Visvesvaraya Technological University

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

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

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

Ref.: VTU/Aca/2013-2014/A7/ 1442

Date: 17 8 MAR 2014

## (REVISED OFFICE ORDER)

Sub :: Registration of Ph.D./M.Sc.(Engg.) by Research from May 2013  
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 : Devika B
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E & CE
5. College/Institute : VTU-RRC
6. Supervisor : Dr. P N Sudha
7. Co-Supervisor :
8. Research Topic : "Optimizing power in Adhoc Networks"
9. Approved Course work  

Sl.No.	Group	Course work
1.	10EC131	Wireless & Mobile Networks
2.	10SCN153	System Modeling & Simulation
3.	10EC050	Mobile Computing
4.	10SCS321	Wireless & Cellular Networks

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.-2011).

  
Registrar

To,

The candidate

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



# 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/2013-2014/A71 9577

Date: 12 DEC 2014

## OFFICE ORDER

Sub : Registration of Ph.D./M.Sc.(Engg.) by Research from May 2014  
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 : Srividya L.
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E & C Engg.
5. College/Institute : KSIT, Bangaluru
6. Supervisor : Dr. P N Sudha
7. Co-Supervisor :
8. Research Topic : "Enhancing highly efficient joint source/channel coding techniques and secured transmission technique for wireless communication"
9. Approved Course work  

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEE006	Linear Algebra
3.	14PHDEC004	Wireless and Mobile Networks
4.	14PHDCS003	Advances in Computer 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 29<sup>th</sup> Dec 2014.
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. 2014)

Registrar

To,

The candidate

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





# 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 9221

Date: 27 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 recommendations of the Admission Committee, you are hereby provisionally permitted to register for pursuing research work with the following details:

1. Name : V Sangeetha
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : ECE
5. College/Institute : KSIT, Bengaluru
6. Supervisor : Dr. P N Sudha
7. Co-Supervisor :
8. Research Topic : "A Novel Approach to Minimize the Effect of Fading Using Adaptive Channel Coding & Multi Carrier Modulation Techniques"
9. Approved Course work  

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEC003	Communication Systems
3.	14PHDEC004	Wireless and 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 10<sup>th</sup> Feb 2016.
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. 2014)

Registrar

To,

The candidate

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



# 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 8351

Date:

23 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 : Prathima B A
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E & CE
5. College/Institute : VTU-RRC, Belagavi
6. Supervisor : Dr. P N Sudha
7. Co-Supervisor : Dr. P M Suresh
8. Research Topic : "Development of Measurement Algorithms & Communication Protocols for Automated Inspection in Closed Loop Manufacturing System"

9. Approved Course work

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEC004	Wireless & Mobile Networks
3.	14PHDIT003	Sensors & Applications
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 05<sup>th</sup> Jan 2016.
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. 2314)

Registrar

To,   
The candidate

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



# 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 8411/56

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 : Jayasudha B S K
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : ECE
5. College/Institute : KSIT, Bengaluru
6. Supervisor : Dr. P N Sudha
7. Co-Supervisor :
8. Research Topic : "Embedding smart power aware Bio-sensors for monitoring, communicating and multiscale processing of physiological signals"
9. Approved Course work  

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDIT001	Biomedical Signal Processing and Applications
3.	14PHDIT002	Biomedical Image Processing and Applications
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 10<sup>th</sup> 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)

  
Registrar

To,

The candidate

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





# 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 1172/36

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 : Sahana (Balakka) Salagare
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E&CE
5. College/Institute : KSIT, Bangaluru
6. Supervisor : Dr. P N Sudha
7. Co-Supervisor : Dr. Karthik P
8. Research Topic : "Design and Development of Auto Charging System for Underwater Devices"
9. Approved Course work  

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEC003	Communication Systems
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 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)

  
Registrar

To,

The candidate

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



# 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 8254

Date: 18 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 : Lakshmi H R
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : E & CE
5. College/Institute : VTU-RRC, Belagavi
6. Supervisor : Dr. B Surekha
7. Co-Supervisor :
8. Research Topic : "Content Protection of Digital Images Through Lossless Watermarking"
9. Approved Course work  

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEC005	Digital System Design
3.	14PHDEC001	VLSI Design & Embedded Systems
4.	14PHDCS001	Advances in Digital Image Processing

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 23<sup>rd</sup> 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. 2314)

Registrar

To,

The candidate

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



# 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 8411/115  
OFFICE ORDER

Date: 2 FEB 2017

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 : Renuka V Tali
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : ECE
5. College/Institute : KSIT, Bengaluru
6. Supervisor : Dr. B Surekha
7. Co-Supervisor : -
8. Research Topic : "INTELLIGENT WHITE BLOOD CELLS CLASSIFICATION IN MICROSCOPIC BLOOD SMEAR IMAGES USING OPTIMUM MACHINE LEARNING TECHNIQUES"
9. Approved Course work  

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDEE006	Linear Algebra
3.	14PHDIT002	Biomedical Image Processing & Applications
4.	14PHDCS004	Advances in Knowledge Data Discovery

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 10<sup>th</sup> 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







# 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/2016-2017/47 IEL 8411/160

Date:

## 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 : Venkata Kranthi B
2. Programme : Ph.D.
3. Full time /Part time : Part Time
4. Research Centre : ECE
5. College/Institute : KSIT, Bengaluru
6. Supervisor : Dr. B Surekha
7. Co-Supervisor :
8. Research Topic : "HUMAN TRACKING AND RE-IDENTIFICATION FOR AUTOMATION OF VIDEO SURVEILLIENCE SYSTEMS"
9. Approved Course work  

Sl.No.	Group	Course work
1.	14PHDRM	Research Methodology
2.	14PHDIT002	Biomedical Image Processing & Applications
3.	14PHDCS004	Advances in Knowledge Data Discovery
4.	14PHDEC002	Signal Processwing

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 10<sup>th</sup> 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



# Visvesvaraya Technological University

Jnana Sangama, Belagavi, Karnataka 590018

Registrar

Phone: (0831) 2405468

Fax : (0831) 2405467

VTU/Ph.D./AC/A7/2019-2020/ *EL/11246/28*

Date: 23, Mar 2019

## OFFICE ORDER

Sub : Regarding of Ph.D./M.Sc.(Engg.) by Research Program.

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

By the recommendations of the Admission Committee, you are hereby provisionally permitted to register under VTU for pursuing Ph.D. /M.Sc.(Engg.) research Program with the following details:

1. Name	<b>AMBIKA ANNAVARAPU</b>							
2. Programme	<b>Ph.D</b>							
3. Type	<b>Part Time</b>							
4. Research Centre Department	<b>Electronics and Communication</b>							
College/Institute	<b>KSIT, Bangalore</b>							
6. Supervisor	<b>SUREKHA BORRA</b>							
7. Co-Supervisor	<b>(No Co-Supervisor)</b>							
8. Research Topic	<b>DENOISING OF MEDICAL IMAGES USING ADAPTIVE MACHINE LEARNING APPROACHES</b>							
9. Constitution of Doctoral Committee & approval from University	Ph.D. 3.1.2 Regulations-2017							
10. Proposing Coursework	Course work should be selected and approved by Doctoral Committee as per Ph.D. 14.1 (a) Regulations-2017							
11. Mandatory residence certificate for part time candidates	Ph.D. 15.1 Regulations-2017							
12. Six months Progress Report (From date of Provisional gistration) Ph.D.16 regulations-2017	1st	2nd	3rd	4th	5th	6th	7th	8th
13. Course work	Ph.D. 14 Regulations-2017							
14. Comprehensive Viva-Voce	Ph.D. 17 Regulations-2017							
15. Conformation of Ph.D Registration	Ph.D. 18 Regulations-2017							
16. Open Seminar (I & II)	Ph.D. 19.1 Regulations-2017							
17. Pre-Submission Colloquium	Ph.D. 19.2 Regulations-2017							
18. Submission of Long Synopsis plagiarism check and Publications	Ph.D. 19.3 , Ph.D 19.4 & Ph.D 20 Regulations-2017							
19. Submission of Thesis	Ph.D. 22 Regulations-2017							
20. Final Viva-Voce	Ph.D. 23.7 Regulations-2017							

This permission for registration is subject to fulfilling the following conditions:

1. Letter of acceptance for the Provisional admission, duly forwarded by the Supervisor/ Co-Supervisor and Head of Research Centre on or before 12, Apr 2019.
2. An undertaking to abide by the rules and regulations of the University.
3. **Online payment of Rs.6000/- towards requisite registration fee.**



## ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟ ಯು ಅಧಿನಿಯಮ ೧೯೯೪" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)  
"ಜ್ಞಾನ ಸಂಗಮ", ಬೆಳಗಾವಿ-೫೯೦೦೧೮, ಕರ್ನಾಟಕ, ಭಾರತ

## Visvesvaraya Technological University

(State University of Government of Karnataka Established as per the VTU Act, 1994)

"Jnana Sangama" Belagavi-590018, Karnataka, India

### RESEARCH SUPERVISOR / CO-SUPERVISOR DETAILS

<b>REGISTRATION ID</b>	042021RSEC001573	<b>RESEARCH SUPERVISOR / CO-SUPERVISOR NAME</b>	SUREKHA BORRA
<b>MOBILE Ph. No.</b>	8105000448	<b>EMAIL-ID</b>	borrasurekha@gmail.com
<b>DEPARTMENT</b>	ELECTRONICS AND COMMUNICATION ENGINEERING		

### RESEARCH SCHOLAR ALLOTMENT DETAILS

Candidate Name	Candidate Department	Guide Type	Research Center Name	Allotment Date
SUNIL KUMAR G R	ELECTRONICS AND COMMUNICATION ENGINEERING	Supervisor	K.S. INSTITUTE OF TECHNOLOGY BANGALORE	December 03, 2021

**REGISTRAR**

**NOTE:**

No signature required as this is system generated document.



© ೨೦೨೨ ವಿನ್ಯಾಸ ಮತ್ತು ಅಭಿವೃದ್ಧಿಪಡಿಸಿದವರು **ಯೋಜನಾ ನಿರ್ವಹಣೆ ವಿಭಾಗ (ಪಿ. ಎಮ್. ಸಿ)**, ವಿ.ತಾ.ವಿ, ಬೆಳಗಾವಿ.  
ಕರ್ನಾಟಕ. ಭಾರತ.

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# Visvesvaraya Technological University

Jnana Sangama, Belagavi, Karnataka 590018

Registrar

Phone: (0831) 2405468

Fax : (0831) 2405467

VTU/Ph.D./AC/A7/2019-2020/ EL 173925

Date: 17, Jun 2019

## OFFICE ORDER

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

By the recommendations of the Admission Committee, you are hereby provisionally permitted to register under VTU for pursuing Ph.D. /M.Sc.(Engg.) research Program with the following details:

1. Name	CHANDRA NAIK G							
2. Programme	Ph.D							
3. Type	Part Time							
4. Research Centre Department	Electronics and Communication							
5. College/Institute	KSIT, Bangalore							
6. Supervisor	DR B SUDARSHAN							
7. Co-Supervisor	(No Co-Supervisor)							
8. Research Topic	HYBRID ENCRYPTION TECHNIQUE FOR ENHANCEMENT OF IMAGE SECURITY.							
9. Constitution of Doctoral committee & approval from University	Ph.D. 3.1.2 Regulations-2017							
10. Proposing Coursework	Course work should be selected and approved by Doctoral Committee as per Ph.D. 14.1 (a) Regulations-2017							
11. Mandatory residence certificate for part time candidates	Ph.D. 15.1 Regulations-2017							
12. Six months Progress Report (From date of Provisional Registration) Ph.D.16 Regulations-2017	1st	2nd	3rd	4th	5th	6th	7th	8th
13. Course work	Ph.D. 14 Regulations-2017							
14. Comprehensive Viva-Voce	Ph.D. 17 Regulations-2017							
15. Conformation of Ph.D Registration	Ph.D. 18 Regulations-2017							
16. Open Seminar (I & II)	Ph.D. 19.1 Regulations-2017							
17. Pre-Submission Colloquium	Ph.D. 19.2 Regulations-2017							
18. Submission of Long Synopsis plagiarism check and Publications	Ph.D. 19.3 , Ph.D 19.4 & Ph.D 20 Regulations-2017							
19. Submission of Thesis	Ph.D. 22 Regulations-2017							
20. Final Viva-Voce	Ph.D. 23.7 Regulations-2017							





# Indian Institute of Technology, Madras

*hereby confers the degree of*  
**Doctor of Philosophy**  
*of the Institute*

*on*

**VENKATESWARA ALIAS BALAJI K**

*for successfully completing the prescribed programme of study and  
presenting the thesis entitled*

**A STUDY OF SOME PSYCHOLOGICAL ANTECEDENTS  
IN INDUSTRIAL ACCIDENTS**

*Given this day the Twentysixth of July, 1996  
under the seal of the Institute.*

*[Signature]*  
PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109.



*[Signature]*  
Registrar

*[Signature]*  
Director

*[Signature]*  
Chairman Board of Governors



Registration No.



03221012A



**National Institute of Technology Karnataka, Surathkal**

hereby confers the degree of



**Doctor of Philosophy**

on

*Dilip Kumar K*

in recognition of the research work on

*"Computer Aided Prediction Of Forming Severity In L-Bending Of Aluminium Sheet Metal"*

carried out in the Department of

**Mechanical Engineering**

and completed all the requirements

in May 2009

Given under the seal of the Institute,

on 5<sup>th</sup> May 2010



*H. G. ...*  
Registrar

*A. ...*  
Director

*C. ...*  
Chairman, Board of Governors

Sl. No. PH09036





# VIT<sup>®</sup>

## Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

### *Office of Academic Research*

**Dr. Kalyani Desikan**

*Dean Academic Research*

Ref. No:VIT/Dean(AR)/SMEC/13PHD1135/ 20211100

July 06, 2021

### **Provisional Certificate**

This is to certify that the thesis titled **“TRIBOLOGICAL STUDIES ON ZINC-ALUMINIUM CAST ALLOYS”**, submitted by **Mr.Umashankar M (13PHD1135)** registered under the **School of Mechanical Engineering** has been recommended for the award of the degree of **Doctor of Philosophy (Ph.D.)** by the duly appointed examiners. He has successfully defended his thesis in the oral examination conducted on Wednesday, June 16, 2021.

He is eligible for the award of **Doctor of Philosophy (Ph.D) degree** of VIT Chennai in accordance with the provisions of the UGC Regulations 2009, after due approvals by the appropriate authorities at the next convocation.

Dr. Kalyani Desikan



VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

**NAGAPRASAD K S**

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

*Faculty of Mechanical Engineering Sciences*

*for the thesis entitled*

*A Study on Effect of Fluid Injection on Diesel Engine  
Performance and Emissions*

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

PH  
19 000332

Given under the seal of the University

USN: 1DA08PMN03



BELAGAVI

DATE : Feb 08, 2020

VICE CHANCELLOR





ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ  
VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA

PH  
18 000102

### Provisional Degree Certificate

*This is to certify that Mr./Ms. Girish T. R.*

*is qualified for the award of the degree of  
Doctor of Philosophy Faculty of Mechanical Engineering Sciences w.e.f. 27.10.2018  
of this University for having fulfilled the requirements for the award  
of the said Degree by submitting the thesis titled :*

*"DEVELOPMENT AND CHARACTERIZATION OF HYBRID COMPOSITE USING JUTE AND GLASS FIBER*

*with University Seat No. 5VX12PMN37*

*The degree will be conferred on him / her at the next  
convocation or thereafter.*

Belagavi

Date : 03.11.2018



*Amiga*

Registrar (Evaluation)



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR  
ANANTHAPURAMU - 515 002, ANDHRA PRADESH, INDIA

CC 067139

H.T.No:10PH0340

Aadhaar No:890764913798



*L Nirmala*

*D/o. L Rangaiah  
&  
Lingutla Ramathulasi*

*having fulfilled the academic requirements in August, 2019 has this day  
been admitted by the Executive Council to the Degree of*

*\*\*\* Doctor of Philosophy \*\*\*  
(Mechanical Engineering)*

*for the Thesis entitled,  
"STUDIES ON ABRASIVE WEAR, CORROSION RESISTANCE AND MICROSTRUCTURAL  
PROPERTIES OF ZA27 NICKEL ALLOY"*

*Date of Viva Voce : 24.08.2019 Given under the Seal of the University  
Saturday, 24 April, 2021.*



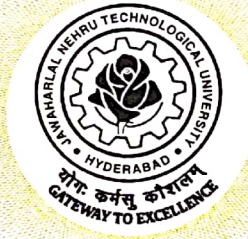
DIRECTOR OF EVALUATION

REGISTRAR

VICE CHANCELLOR



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
HYDERABAD - 500 085, TELANGANA STATE, INDIA.



320001720  
SI. No. PC 01146069

**PROVISIONAL CERTIFICATE**



Hall Ticket No.: 0903PH1526

This is to certify that Mr. SALEEM KHAN

son of Mr. GULAM HUSSAIN

has satisfied all the requirements for the award of Doctor of Philosophy

in the faculty of MECHANICAL ENGINEERING

of this University, held in November, 2020 for the thesis entitled,

"Development of Hybrid Al6061-Si<sub>3</sub>N<sub>4</sub>-C<sub>f</sub> Metal Matrix Composite".

Verified by  
Hyderabad - T.S.

Director of Evaluation

REGISTRAR

Date: 18 February 2021





ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ  
(“ವಿ ಟ ಯು ಅಧಿನಿಯಮ ೧೯೯೪” ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)  
“ಜ್ಞಾನ ಸಂಗಮ”, ಬೆಳಗಾವಿ-೫೯೦೦೧೮, ಕರ್ನಾಟಕ, ಭಾರತ  
**Visvesvaraya Technological University**  
(State University of Government of Karnataka Established as per the VTU Act, 1994)  
“Jnana Sangama” Belagavi-590018, Karnataka, India

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

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

VTU/BGM/Aca/Ph.D./2020-21/RS

Date: 29-03-2021

**Sub: Recognition as Research Supervisor**


Ref: VTU/BGM/Aca/Ph.D./2020 - 21/10139 dated 22 Jan 2021.

With reference to your application for Recognition as Research Supervisor/ Research Co-Supervisor to supervise Scholars pursuing Research programmes of VTU, the University is pleased to inform you that your candidature has been considered and you have been recognized as Research Supervisor of VTU. You can supervise Scholars pursuing Ph.D./M.S.(Research)/ Integrated Ph.D. programmes as a Research Supervisor or Co-Supervisor\* from 2021 onwards.

On acceptance as a Research Supervisor, you shall adhere to Regulations of Ph.D./M.S.(Research)/ Integrated Ph.D. programmes and to the corresponding amendments notified from time to time.

You are required to submit a report on your Research related progress in the prescribed format to the university every year. On the basis of the same and recommendation of the expert committee, university will decide about your further continuation of the recognition as Research Supervisor.

Sl.No.	Particulars	
1.	Name and Address of the Recognized Research Supervisor	DR.CHANDA V REDDY #338,7TH MAIN, 4THCROSS, DUO HEIGHTS LAYOUT DEVARACHIKKANAHALLI, BECUR, BANGALORE.
2.	Registration ID	012021RSEC001023
3.	Designation (Professor/Associate Professor/ Assistant Professor) or Actual Designation with AICTE cadre equivalence	Professor
4.	Recognised Faculty under which research is to be carried out	FACULTY OF ELECTRICAL AND ELECTRONICS ENGINEERING SCIENCES
5.	Department in which the VTU recognized Research Center is established	ELECTRICAL AND ELECTRONICS ENGINEERING
6.	Recognition date/month/year of Research Supervisor	29-03-2021
*****		

  
Registrar

\*In case if, you are supervising a candidate not from your institute's/department's Research Centre approved by VTU, you are permitted to act only as Co-Supervisor.



# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟಿ ಯು ಅಧಿನಿಯಮ ಗಣಕ" ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ)  
"ಜ್ಞಾನ ಸಂಗಮ", ಬೆಳಗಾವಿ-೫೯೦೦೧೮, ಕರ್ನಾಟಕ, ಭಾರತ

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1.	Name and Address of the Recognized Research Supervisor	DR.CHANDA V REDDY #338,7TH MAIN, 4THCROSS, DUO HEIGHTS LAYOUT DEVARACHIKKANAHALLI, BEGUR, BANGALORE.
2.	Registration ID	012021RSEC001023
3.	Designation (Professor/Associate Professor/ Assistant Professor) or Actual Designation with AICTE cadre equivalence	Professor
4.	Recognised Faculty under which research is to be carried out	FACULTY OF ELECTRICAL AND ELECTRONICS ENGINEERING SCIENCES
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ವಿಶ್ವವಿದ್ಯಾಲಯದ ಕುಲಾಧಿಪತಿ, ಸಮಕುಲಾಧಿಪತಿ, ಕುಲಪತಿ,  
*We, the Chancellor, the Pro-Chancellor, the Vice-Chancellor,*  
 ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ತು ಮತ್ತು ಸಿಂಡಿಕೇಟ್ ಸದಸ್ಯರಾದ ನಾವು  
*the members of the Academic Council and the Syndicate*

**Certify that**

**KIRAN KUMAR S R**

ಇವರು ಪರೀಕ್ಷಕರಿಂದ ಪರೀಕ್ಷಿಸಲ್ಪಟ್ಟು, ಪರೀಕ್ಷಕರ ಮಂಡಳಿಯ ಶಿಫಾರಸ್ಸಿನಂತೆ,  
*on the recommendation of the Board of Examiners, admitted to the degree of*

**Doctor of Philosophy**  
**(Chemistry)**

ಪದವಿಗೆ ಅರ್ಹರಾಗಿರುತ್ತಾರೆಂದು ಪ್ರಮಾಣೀಕೃತವಾಗಿರುವುದರಿಂದ  
*in recognition of the fulfilment of requirements*  
 ೩೦ನೇ ಘಟಿಕೋತ್ಸವದಲ್ಲಿ ಸದರಿ ಪದವಿಗೆ ಇವರನ್ನು ಅಂಗೀಕರಿಸಲಾಗಿದೆ.  
*for the said Degree at the THIRTIETH Convocation*

ಅಧಿಸೂಚನೆ ದಿನಾಂಕ / Date of Notification : **12/06/2019**

ಘಟಿಕೋತ್ಸವ ದಿನಾಂಕ / Date of Convocation : **29th July 2020**

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮೊಹರಿನೊಂದಿಗೆ ನೀಡಲಾಗಿದೆ.

*Given under the seal of the University.*



Jnana Sahyadri, Shankaraghatta-577451  
 Shivamogga District,  
 Karnataka, India

Date of Issue : 29/07/2020

KUS



*Jnana Sahyadri*

ಕುಲಪತಿ

Vice-Chancellor



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ  
ಕರ್ನಾಟಕ, ಭಾರತ



ಶ್ರೀ/ಶ್ರೀಮತಿ

JALAJA P

ಇವರು

FACULTY OF APPLIED SCIENCES (MATHEMATICS)

ವಿಭಾಗದಲ್ಲಿ

A NUMERICAL STUDY OF UNSTEADY INCOMPRESSIBLE BOUNDARY  
LAYER THROUGH DOUBLE CHOKING SUPERSONIC EJECTORS

ಎಂಬ ಪ್ರಬಂಧವನ್ನು ಮಂಡಿಸಿದ್ದು

**ಡಾಕ್ಟರ್ ಆಫ್ ಫಿಲಾಸಫಿ**

ಪದವಿಗೆ ಅಪೇಕ್ಷಿತವಾದ ಅಗತ್ಯಗಳನ್ನು ಪೂರೈಸಿದ್ದಾರೆಂದು ಪರಿಗಣಿಸಿ  
ಮೇಲೆ ಕಾಣಿಸಿದ ಪದವಿಯನ್ನು ಅವರಿಗೆ ಪ್ರಧಾನಮಾಡಲಾಗಿದೆ

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ವಿಶ್ವವಿದ್ಯಾಲಯದ ಮುದ್ರೆಯೊಂದಿಗೆ ನೀಡಲಾಗಿದೆ

USN: 1EW15PGJ04



ಬೆಳಗಾವಿ

ದಿನಾಂಕ : APRIL 03, 2021

ಕುಲಪತಿ



பாரதியார் பல்கலைக் கழகம்  
Bharathiar University

அறிவியல் புலம்  
FACULTY OF SCIENCE

பாரதியார் பல்கலைக் கழகத்தால் முறையாக அமைக்கப்பட்ட தேர்வாளர் குழு.  
ரேணுகா ச, 2018ஆம் ஆண்டு, நவம்பர் 22ஆம் நாளில் இயற்பியல் என்னும் பிரிவில்  
ஆய்வியல் அறிஞர் என்னும் பட்டம் பெறத் தகுதியடைந்திருப்பதாகச் சான்றளித்ததை  
ஏற்று, அவருக்கு அந்தப் பட்டத்தைப் பல்கலைக் கழக இலச்சினையுடன்,  
பாரதியார் பல்கலைக் கழக ஆட்சிக் குழு வழங்குகின்றது.

The Syndicate of the Bharathiar University hereby makes known that RENUKA C  
has been admitted to the Degree of DOCTOR OF PHILOSOPHY in PHYSICS,  
having been certified by duly appointed Examiners to be qualified to receive the same on 22nd NOVEMBER 2018.



கோயம்புத்தூர்  
Coimbatore  
405 003  
நாள்

Dated: 18th December 2019 Controller of Examinations i/c  
ISSUED ON - 3 OCT 2020

Given under the Seal of the University.

  
தேர்வாளர்(பொ)



  
பதிவாளர்(பொ)  
Registrar(i/c)

  
குணைவேந்தர்  
Vice-Chancellor



VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

VENKATARAMANA B S

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

FACULTY OF APPLIED SCIENCES (MATHEMATICS)

*for the thesis entitled*

STUDIES ON POWER EXPONENTIAL MEAN IN SEVERAL VARIABLE  
AND ITS APPLICATIONS

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

PH  
19 001822

Given under the seal of the University

USN: IJS15PGJ05



BELAGAVI

DATE : MARCH 10, 2022

VICE CHANCELLOR