



*This is to certify that*  
**Manjunath Kotari**  
*has been conferred the Degree of*  
**Doctor of Philosophy**  
*in*

Faculty of Computer and Information Sciences

*for the thesis entitled*

**Formulation of Framework for Security Mechanisms in the  
Context of Adaptive Distributed Systems**

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

Attested By

PRINCIPAL

Alva's Institute of Engg. & Technology  
Mijar, MOODBIDRI - 574 225

PH 001088

USN: 4NM11PEN02

Given under the seal of the University



BELGAUM

DATE : January 09, 2018

VICE CHANCELLOR

Visvesvarya Technological University  
"Jnana Sangama", Belagavi, Karnataka

Progress Report of Ph.D Programme

Feb-2022 to Aug-2022

<b>1. Particular of Research Scholar</b>	
Name:	VEENA M.
USN	4AL19PCS01
Name of the department	Computer Science and Engineering
Reporting Period	Feb-2022 to Aug-2022
Name of Research Center where enrolled	ALVAS INST. OF ENGG. AND TECHNOLOGY, MOODABIDRI, MOODABIDRI
<b>2. Registration Details</b>	
Registration Type:	Fresh Registration
Date of Provisional Registration	23, Aug 2019
<b>3. Particulars of Supervisor</b>	
Name of the supervisor	DR. MANJUNATH KOTARI
Designation	Professor
Institution employed	ALVAS INST. OF ENGG. AND TECHNOLOGY, MOODABIDRI, MOODABIDRI
<b>4. Name of Research center where meeting is conducted</b>	ALVAS INST. OF ENGG. AND TECHNOLOGY, MOODABIDRI, MOODABIDRI
<b>5. Area of work and tentative title of thesis work</b>	Data Analytics and Machine Learning Approaches in Predicting Students Employability in Higher Education

**6. Details of progress**

Whether the candidate report enclosed	Yes / No
Whether published any paper	No
Whether attended any seminar or conference	Yes
Whether prescribed course work completed	No


**7. Remarks of the doctoral committee**

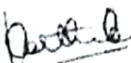
Attendance	Satisfactory
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Progress	Satisfactory
Expected time of research completion	2025
8. Comments of the doctoral committee on the progress of the research work done by the candidate	
The research work progress of the candidate is satisfactory and the Candidate has completed her Comprehensive Viva recently. The research scholar also attended the below-mentioned workshops 1. Attended Conference on Target Multiplai 2022! 2. Attended webinar on Gender Justice and Feminist Jurisprudence in India on 22nd June 2022 3. Attended workshop on Latex on July 13th 2022 organized by Dayanand Sagar University.	


**Signature of the members of doctoral committee**

  
**DR. PETER FERNANDES**  
 PRINCIPAL  
 ALVAS INST. OF ENGG. AND TECHNOLOGY, MOODABIDRI  
 PRINCIPAL  
 ALVAS Institute of Engg. & Technology,  
 MOODABIDRI - 574 225, D.K

  
**DR. MANJUNATH KOTARI**  
 Professor & Head  
 ALVAS INST. OF ENGG. AND TECHNOLOGY, MOODABIDRI  
 H.O.D.  
 Dept. of Computer Science & Engineering  
 ALVAS Institute of Engg. & Technology  
 MOODABIDRI - 574 225

  
 (Dr. Karthik Pai B H)  
 Professor & Head  
 NMAM INSTITUTE OF TECHNOLOGY, NITTE  
**DR. KARTHIK PAI B H**  
 Professor & Head  
 NMAM INSTITUTE OF TECHNOLOGY, NITTE

  
**DR. BALACHANDRA**  
 Professor  
 MIT, Manipal- Manipal University

  
**DR. MANJUNATH KOTARI**  
 Supervisor  
 H.O.D.  
 Dept. of Computer Science & Engineering  
 ALVAS Institute of Engg. & Technology  
 MOODABIDRI - 574 225


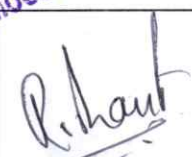



(No Co-guide)



**Visvesvaraya Technological University  
Jnana Sangama, Belagavi- 590018**

<b>FORM-1</b>	<b>DOCTORAL COMMITTEE</b>
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<b>Name of Research Centre:</b>	ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY , MOODUBIDIRE
<b>Name of Research Scholar:</b>	Sathyaprakash B P
<b>University Seat Number:</b>	4AL15PEJ01
<b>Research Topic:</b>	"Implementation of Dynamic Multipath Route Discovery and Route Shortening Protocol for Mobile Ad hoc Networks"

Sl. No	Doctoral Committee Composition	Name and Designation	College/Organization, Address, e-mail, Mobile	Signature
1	Head of Institute/Nominee (Chairperson)	Dr.Peter Fernandes PRINCIPAL	<b>College :</b> Alva's Institute of Engineering & Technology, Shobhavan Campus, Moodubidire, <b>E-mail :</b> <a href="mailto:principalaiet08@gmail.com">principalaiet08@gmail.com</a> <b>Mobile :</b> 9845050268 / 7026212555	 PRINCIPAL Alva's Institute of Engg. & Technology, Moodubidire - 574 225, D.K
2	VC Nominee for Head of Research Centre/Department (Member)	Dr.Roshan Fernandes Associate Professor , Department of CSE	<b>College :</b> NMAMIT – Nitte Mahalinga Adyanthaya Memorial Institute of Technology , Nitte- 574110 , Karkala , Udupi District <b>E-mail :</b> <a href="mailto:nitteroshan@gmail.com">nitteroshan@gmail.com</a> / <b>Mobile :</b> 9901723993	
3	Domain Expert-1 (Internal)- (Member)	Dr.Keshava Prasanna Professor , Department of CSE	<b>College :</b> Channabasaveshwara Institute of Technology , Gubbi , Tumakuru <b>E-mail :</b> <a href="mailto:keshavaprasanna2013@gmail.com">keshavaprasanna2013@gmail.com</a> <b>Mobile :</b> 9886858111	
4	Domain Expert-2 (External)- (Member)	Dr.Guruprakash C D Professor , Department of Computer Science & Engineering.	<b>College :</b> Sri Siddhartha Institute of Technology, Tumakuru <b>E-mail :</b> <a href="mailto:cdguruprakash@gmail.com">cdguruprakash@gmail.com</a> <b>Mobile :</b> 9844782445	
5	Research Supervisor (Member Convener)	Dr.Manjunath Kotari Professor & Head Department of CSE	<b>College :</b> Alva's Institute of Engineering & Technology, Moodubidire, <b>E-mail:</b> <a href="mailto:mkotari@gmail.com">mkotari@gmail.com</a> <b>Mobile :</b> 9449586008 / 9353297852	 H.O.D. Dept. Of Computer Science & Engin Alva's Institute of Engg. & Technol Mijar, MOODUBIDRI - 574 225
6	Co- Supervisor (Member Convener)	NA		

The above Doctoral Committee was constituted on 17-02-2023 and will abide by VTU Regulations 2020 and will be responsible for all further proceedings as per Ph.D VTU Regulations 2020.



# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟಿ 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. : 1328

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	HARISH KUNDER
2.	University Seat Number (USN)	4AL20PCS01
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	ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY. MOODBIDRI
6.	Specialization	COMPUTER SCIENCE AND ENGINEERING
7.	Proposed Research Topic / Area.	An efficient method for handling non-convex optimization problems in Machine Learning
8.	Name and address of the Research Supervisor.	DR. MANJUNATH KOTARI Professor - COMPUTER SCIENCE AND ENGINEERING ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY. MOODBIDRI
*****		

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. HARISH KUNDER, ASSOCIATE PROFESSOR DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ALVAS INSTITUTE OF ENGINEERING AN.

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. MANJUNATH KOTARI
4. Office copy.

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# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟಿ 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. : 2366

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	NAGESH U.B
2.	University Seat Number (USN)	4AL20PCS02
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	ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY. MOODBIDRI
6.	Specialization	COMPUTER SCIENCE AND ENGINEERING
7.	Proposed Research Topic / Area.	IMPLEMENTATION AND PERFORMANCE ANALYSIS OF IOT BASED SECURE AUTONOMOUS VEHICLES USING BLOCKCHAIN TECHNOLOGY
8.	Name and address of the Research Supervisor.	DR. MANJUNATH KOTARI Professor - COMPUTER SCIENCE AND ENGINEERING ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY. MOODBIDRI
*****		

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. NAGESH U.B, ASST PROFESSOR, DEPARTMENT OF ISE, ALVAS INSTITUTE OF ENGINEERING AND TECHNOLOGY,

MIJAR, MOODBIDRI, .

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. MANJUNATH KOTARI
4. Office copy.

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# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿ ಟಿ 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

**Dr. B. E. Rangswamy, Ph.D.**  
**REGISTRAR**

Phone: (0831) 2498100

Fax : (0831) 2405467

VTU/BGM/Aca/Ph.D./2020-21/272/T

Date: 17-01-2023

**To,**

The Principal,

ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI

**Sir / Madam,**

**Sub: Research Advisory Committee. reg...**

**Ref:** 1. Your Submission Dated. 24-12-2022  
2. Hon'ble Vice Chancellor's approval dated 17-01-2023.

This is to inform you that as per the reference to the subject cited above, the constitution of the Research Advisory Committee for **JAYANTKUMAR A RATHOD (4AL13PCS02)** who has registered for Ph.D. in this University, under the Guideship of **DR. MANJUNATH KOTARI**.

The following Research Advisory Committee has been approved by the University.

Sl.No.	Particulars	
1.	Name of the Candidate	JAYANTKUMAR A RATHOD
2.	University Seat Number (USN)	4AL13PCS02
3.	Research Programme & Category of Research Programme (Full Time/Part Time).	Ph.D. - PART TIME
4.	Department in which the VTU recognized Research Center is established (Specialization).	COMPUTER SCIENCE AND ENGINEERING
5.	Name of the Research Center	ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY. MOODBIDRI
6.	Proposed Research Topic / Area.	A NOVEL FRAMEWORK FOR SECURE MESSAGE TRANSMISSION IN MOBILE ADHOC NETWORK USING CRYPTO MESSAGE FRAGMENTATION

Sl.No.	Composition of Research Advisory Committee	Name and Designation	College/Organization, Address, Department, Specialization, E-mail & Mobile
1.	Principal/Director (Architecture)/ Chairperson of the University Department - Chairperson (or his/her Nominee)	<b>PETER FERNANDES</b> Principal	<b>College/Organization</b> : AL - ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY. MOODBIDRI, <b>Address</b> : SHOBHAVANA CAMPUS , <b>Department</b> : MECHANICAL ENGINEERING, <b>E-mail</b> : principalaiet08@gmail.com, <b>Mobile</b> : 7026212555
2.	VC Nominee for the University Department /Head of the Department - Member	<b>DR.KARTHIK PAI B H</b> Professor	<b>College/Organization</b> : NM - NITTE MAHALINGA ADYANTHAYA MEMORIAL INSTITUTE OF TECHNOLOGY NITTE , <b>Address</b> : PROFESSOR & HEAD DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING NMAM INSTITUTE OF TECHNOLOGY NITTE 574110 UDUPI DISTRICT, <b>Department</b> : COMPUTER SCIENCE AND ENGINEERING, <b>E-mail</b> : karthikpai@nitte.edu.in, <b>Mobile</b> : 9844065557
3.	Domain Expert-1 (Internal) - Member	<b>DR.SIDDESH G M</b> Professor	<b>College/Organization</b> : MS - M.S. RAMAIAH INSTITUTE OF TECHNOLOGY BANGALORE , <b>Address</b> : DR.SIDDESH GM ASSOCIATE PROFESSOR DEPT. OF INFORMATION SCIENCE & ENGINEERING MS RAMAIAH INSTITUTE OF TECHNOLOGY BANGALORE 560054, <b>Department</b> : COMPUTER SCIENCE AND ENGINEERING, <b>E-mail</b> : siddeshgm@gmail.com, <b>Mobile</b> : 9632221981
	Domain Expert-2 (External) - Member	<b>GURUPRAKASH C D</b> Professor	<b>College/Organization</b> : SRI SIDDHARTHA INSTITUTE OF TECHNOLOGY TUMAKURU, <b>Address</b> : SSITTUMAKURU, <b>Department</b> : COMPUTER SCIENCE AND ENGINEERING, <b>E-mail</b> : cdguruprakash@gmail.com, <b>Mobile</b> : 9844782445
4.	Research Supervisor - Member Convener	<b>DR. MANJUNATH KOTARI</b> Professor	<b>College/Organization</b> : AL - ALVA S INSTITUTE OF ENGINEERING AND TECHNOLOGY. MOODBIDRI, <b>Address</b> : HOD CSE ALVAS INSTITUTE OF ENGINEERING AND TECHNOLOGY MOODBIDRI , <b>Department</b> : COMPUTER SCIENCE AND ENGINEERING, <b>E-mail</b> : mkotari@gmail.com, <b>Mobile</b> : 9449586008

The above committee was constituted on **17-01-2023** and will abide by VTU Regulations 2020 and will be responsible for all further proceedings as per Ph.D. VTU Regulations 2020.

### Role of Research Advisory Committee

(a) The Research Advisory Committee shall be responsible to guide, review and monitor the progress of the Scholars pursuing the Research program starting from the commencement of the program until the submission of the Thesis.

(b) The Research Advisory Committee shall meet as often as required, but at least once every six months to oversee the progress of the Scholar for evaluation and further guidance. The half-yearly progress reports shall be uploaded to <https://jnanashodha.vtu.ac.in> by the Research Advisory Committee.

(c) The Research Advisory Committee shall assess the performance of the Scholar and declare the same to be satisfactory or unsatisfactory.

(d) In case the progress of the Research Scholar is not satisfactory, the Research Advisory Committee shall record the reasons for the same and suggest corrective measures. If the research Scholar fails to implement these corrective measures, the Research Advisory Committee may recommend specific reasons for the cancellation of the registration of the Research Scholar.

(e) The Research Advisory Committee shall forward its recommendations to the Registrar, regarding the cancellation of the registration of the Research Scholar, the change of Research Supervisor/Co-Supervisor, use of other Research Center, change in Research area and topic, and other matters related with the Research Programme. [A copy of the same be marked to the Registrar (Evaluation)].

(f) The Registrar, shall arrange to place the recommendations of the Research Advisory Committee before the Admissions Committee for its approval.

This is for your information.

**Thanking you,**



**Registrar**

Copy to,

1. Research Supervisor: DR. MANJUNATH KOTARI
2. Research Scholar: JAYANTKUMAR A RATHOD.
3. Office copy.

**Document Generated Date: 2023-03-29 & Time: 14:29:32, Web portal: <https://jnanashodha.vtu.ac.in>**

Vacancy Count (As on : 26-10-2023 04:46:07)

## LIST OF RESEARCH CANDIDATES

SLNo.	USN	Candidate Name	Candidate Type	Guide Type	Category	Candidate Status
1	4AL13PCS01	VENKATESHS	PART TIME	Guide	GM	THESIS SUBMITTED
2	4AL13PCS02	JAYANTKUMAR A RATHOD	PART TIME	Guide	OTHER	RE-REGISTERED
3	4AL15PEJ01	SATHYAPRAKASHBP	PART TIME	Guide	SC	RE-REGISTERED
4	4AL19PCS01	VEENA M.	PART TIME	Guide	GM	COURSE WORK COMPLETED
5	4AL20PCS01	HARISH KUNDER	PART TIME	Guide	GM	REGISTERED
6	4AL20PCS02	NAGESH U.B	PART TIME	Guide	OTHER	REGISTERED

## CURRENT VACANCY DETAILS

Total Remaining Count	GM Remaining Count	SC/ST/CAT-1 Remaining Count	OTHER/DIVYANGA Remaining Count	NRI Remaining Count
2	0	0	0	2

NOTE: '-' or 'negative' values indicates candidates count exceeded in the respective category.

Dr. MANJUNATH KOTARI  
Professor & Head  
Department of CSE  
Institute of Engineering & Technology  
Mijar, Mysore - 574 225

© ೨೦೨೩ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ಅಭಿವೃದ್ಧಿಪಡಿಸಿದವರು ಯೋಜನಾ ನಿರ್ವಹಣೆ ವಿಭಾಗ (ಪಿ. ಎಮ್. ಸಿ), ವಿ.ತಾ.ವಿ, ಬೆಳಗಾವಿ. ಕರ್ನಾಟಕ. ಭಾರತ.

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