



# RAJARAMBAPU INSTITUTE OF TECHNOLOGY

An Autonomous Institute, Affiliated to Shivaji University, Kolhapur

Approved by AICTE New Delhi, D.T.E., Govt. of Maharashtra

NAAC Accredited 'A+' Grade NBA Accredited

K. E. Society's



Ref: RIT/

Date:

## Summary

2.4.2 Number of full-time teachers with **Ph. D/ D.M. / M.Ch. / D.N.B Super Specialty / DSc / DLitt** during the year:

<b>Year</b>	2022-2023
<b>Number</b>	66

Supporting Documents:

1. List of Full Time Teachers with Ph. D. for A. Y. 2022-23
2. Ph. D. certificates of Full Time Teachers for A. Y. 2022-23

  
**REGISTRAR**  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
**DIRECTOR**  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

K.E.Society's  
Rajarambapu Institute of Technology, Rajaramnagar

**2.4.2 Number of Full time teachers with Ph.D during the Year**

S N	Employee ID	Name	Year of Completion	Gender	Designation
1	E01297	Dr.Kadole Pradyumkumar Vasant	30-06-2009	Male	Director
2	E00014	Dr. Mrs. Kulkarni Sushma Shekhar	05-02-2004	Female	Director
3	E00035	Dr. Yadav Sanjay Dnyanu	29-09-2013	Male	Professor
4	E00006	Dr.Thombare Dhananjay Ganapati	12-06-2017	Male	Professor
5	E00017	Dr. Jadhav Hanmant Shamrao	26-03-2012	Male	Professor
6	E01127	Dr. Kulkarni Prakash Jayant	21-03-1994	Male	Professor
7	E00727	Dr. Dharwadkar Nagaraj V.	09-08-2014	Male	Professor
8	E01107	Dr. Talange Dhananjay Balu	16-09-2005	Male	Professor
9	E01106	Dr. Katti Pradeep Krishna	11-08-2007	Male	Professor
10	E00631	Dr. Patil Mahadeo Satappa	18-07-2014	Male	Professor
11	E00197	Dr. Kakade Anandrao Bajirao	17-07-2010	Male	Professor
12	E00596	Dr. Adamuthe Amol Chandrakant	22-02-2018	Male	Professor
13	E00009	Dr. Gawade Sanjaykumar Shankarrao	01-11-2012	Male	Professor
14	E00038	Dr. Jugulkar Lalitkumar Maikulal	30-01-2017	Male	Professor
15	E00190	Dr. Patil Sachin Krishnath	16-08-2016	Male	Professor
16	E00037	Dr. Patil Satyajit Ramchandra	15-03-2018	Male	Associate Professor
17	E00199	Dr. Desai Sandeep Rangrao	04-07-2016	Male	Associate Professor
18	E00018	Dr. Kumbhar Popat Dattatraya	26-02-2012	Male	Associate Professor
19	E01150	Dr. Nalavade Jagannath Eaknath	13-08-2019	Male	Associate Professor
20	E00148	Dr. Patil Sachin Subhash	26-12-2019	Male	Associate Professor
21	E00344	Dr. Kalkhambkar Vaiju Nago	06-01-2018	Male	Associate Professor
22	E00031	Dr. Kumbhar Mahesh Shivajirao	08-09-2016	Male	Associate Professor
23	E00470	Dr. Gaikwad Hemlata Vivek	13-03-2015	Female	Associate Professor

S N	Employee ID	Name	Year of Completion	Gender	Designation
49	E01084	Dr. Suryawanshi Nagesh Tatoba	11-08-2020	Male	Assistant Professor
50	E00118	Dr. Waghmare Chandan Ananda	10-03-2022	Male	Assistant Professor
51	E00125	Dr. Patil Santosh Ramchandra	10-03-2022	Male	Assistant Professor
52	E00891	Dr. Shirguppikar Shailesh Suresh	10-03-2022	Male	Assistant Professor
53	E00196	Dr. Thorat Arun Rajaram	10-03-2022	Male	Assistant Professor
54	E00217	Dr. Pisal Mahesh Vasant	05-03-2022	Male	Assistant Professor
55	E00020	Dr. Jadhav Baliram Rajaram	10-03-2022	Male	Assistant Professor
56	E01078	Dr. Bobalade Dnyaneshwar Dattatray	21-04-2023	Male	Assistant Professor
57	E00514	Dr. Mane Sandeep Uttam	27-06-2023	Male	Assistant Professor
58	E01232	Dr. Padwal Umakant Mahadev	13-02-2023	Male	Assistant Professor
59	E01238	Dr. Shinde Prasad Vishwasrao	04-01-2023	Male	Assistant Professor
60	E01234	Dr. Nassa Vinay Kumar	24-06-2013	Male	Associate Professor
61	E01253	Dr. Patil Amit Prakash	11-01-2017	Male	Associate Professor
62	E01225	Dr. Maldar Parvejha Shamshuddin	06-07-2019	Male	Assistant Professor
63	E01282	Dr. Kalmani Vijay Hirachand	22-12-2016	Male	Professor
64	E01242	Dr. Gaikwad Pratapsingh Vijaysingh	10-02-2021	Male	Assistant Professor
65	E01220	Dr. Ganachari Vaibhav Sidraya	20-09-2022	Male	Assistant Professor
66	E00039	Dr. Jalwadi Sudhindra Narayan	20-08-2022	Male	Associate Professor

  
**REGISTRAR**  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
**DIRECTOR**  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur

**WE** the Chancellor, Vice-Chancellor and Members of the Management Council, on the recommendation of the Academic Council, certify that



## Doctor of Philosophy

*Textile Engineering*

has been conferred on the 15<sup>th</sup> day of the month of March in the year two thousand ten.

at Kolhapur, on

*Kadote Pradyumkumar Vasant*

Mother's Name - *Laxmibai*

In Testimony whereof are set the Seal of the University and the Signatures of the Registrar and the Vice-Chancellor

*Ushisre*  
Ag Registrar



*Dawan*  
Vice-Chancellor

DIRECTOR

# Shivaji University, Kolhapur.

*We* the Chancellor, Vice-Chancellor and Members of the Management Council, on the recommendation of the Academic Council certify that the Degree of

## Doctor of Philosophy

*Civil Engineering*

has been conferred on the 5<sup>th</sup> day of the month of February in the year two thousand four.

at Kolhapur, on

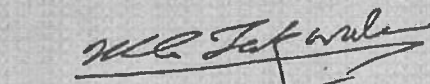
*Kulkarni Geeta Ramchandra*

who has been found duly qualified for the same.

In Testimony whereof are set the Seal of the University and the Signatures of the Registrar and the Vice-Chancellor.

  
Registrar



  
Vice-Chancellor

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

Sr.No.-A- No K.1000065

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar Sakharale (Islampur)

# Solapur University

**WE** the Chancellor, Vice -Chancellor and Members of the Management Council, on the recommendation of the Academic Council, certify that



**Doctor Of Philosophy**

*Mechanical Engineering*  
*has been conferred on the 29<sup>th</sup> day of the month of*  
*November in the year two thousand thirteen*  
*at Solapur, on*

*Yadar Sanjay Dnyanu*

*who has been found duly qualified for the same.*

*In Testimony whereof are set the Seal of the University*  
*and the Signatures of the Registrar and the Vice - Chancellor.*

*M. Shinde*

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)



DIRECTOR

K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale (Islampur)

*M. Wadgaonkar*

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and Members of the Management Council on the recommendation of the Academic Council certify that

Thombare Dhananjay Ganpati  
Mother's Name - Shantabai  
has passed the



## Doctor of Philosophy

Mechanical

in faculty of Engineering and Technology

on 12<sup>th</sup> June 2017

The said degree has been conferred on him

at Kolhapur in the Winter Session

of the year two thousand eighteen

In Testimony whereof are set the seal of the university and signatures of the Registrar and the Vice-Chancellor

Registrar



Vice-Chancellor

*Adh*

Sr.No.:B-18 : 37495

DIRECTOR

K. E. Society

Rajarambapu Institute of Technology

An Autonomous Institute

Rajaramnagar, Sakharale, (Islampur)

Scanned by CamScanner

# Shriwan University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Jadhav Hanmant Shamrao*  
Mother's Name - *Kashibai*  
has been awarded the degree of



## Doctor of Philosophy

*in Civil Engineering*  
*in the faculty of Engineering & Technology*  
*on 26<sup>th</sup> March 2012.*

*The said degree has been conferred on him*  
*at Kolhapur in the Winter Session*  
*of the year Two Thousand Thirteen.*

**In testimony** whereof are set the seal of the  
university and the signatures of  
the Registrar and the Vice-Chancellor.

*Shimuley*  
Registrar



*Pawar*  
Vice-Chancellor

Sr. No. -B-12 30943

*Antal*

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale. (Islampur)



**WE** the Chancellor, Vice-Chancellor  
and Members of the Executive  
Council, on the recommendation of the Senate  
of the **Shivaji University**, certify

that the Degree of

**Doctor of Philosophy**

( **ELECTRONICS  
ENGINEERING** )

has been conferred on the twentyfirst day  
of the month of March in the year  
one thousand nine hundred and ninetyfour.

at Kolhapur, on

Prakash Jayant Kulkarni

who has been found duly qualified for the  
same.

In Testimony whereof are set the Seal of the  
University and the Signatures of the Registrar and the  
Chancellor.

P. R. S. S. S. S.

Registrar.

[Signature]

REGISTRAR

K. E. Society's  
Rajarambapu Institute of Technology  
Rajaramnagar, Sakharale (Islampur)

[Signature]

Chancellor.

CHANCELLOR  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

1387



# National Institute of Technology, Warangal

*upon the recommendation of the Senate  
hereby confers the degree of*

## Doctor of Philosophy

*on*

**Mr. Nagaraj V Dharwadkar**

**(Roll No: 700823 )**

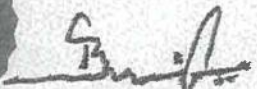
*who has successfully completed the prescribed requirements for the award  
of the degree and passed the examination in May 2014 in the Department of*

## Computer Science & Engineering

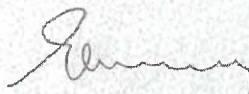
*Given under the seal of the Institute at Warangal  
in the Republic of India on the Ninth day of August Two Thousand Fourteen*

*Title of the Thesis : A study on Digital Image Steganography and Water marking schemes*



  
DIRECTOR &  
CHAIRMAN, SENATE



  
CHAIRMAN  
BOARD OF GOVERNORS

*[Handwritten signature]*

*[Handwritten signature]*

Rajarambapu Institute of Technology  
At: Kalyandurg, Warangal  
Rajaramnagar, S. Chavala, (Telangana)

K.E. Society's



# भारतीय प्रौद्योगिकी संस्थान मुंबई

धनंजय बालू तलंगे  
को एतद्वारा

विद्या वाचस्पति

की उपाधि प्रदान करता है।

अभिषद की अनुशंसा पर संस्थान की मुद्रांकित यह उपाधि, अवाप्ति हेतु विनियमों में विहित अपेक्षाओं को पूर्ण कर लेने पर तथा जुलाई 2005 में अपने शोध-प्रबंध के सफल पक्षपोषण के उपसंग, मुंबई, भारतीय गणराज्य में आज 16 सितम्बर, 2005 को दी गई है।

## Indian Institute of Technology Bombay

upon recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

on

Dhananjay Balu Talange

who has fulfilled the requirements for the degree as prescribed under the regulations and successfully defended in July 2005, the thesis entitled:

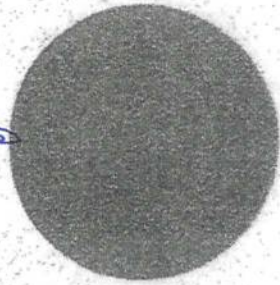
"Modeling and Spatial Control of a Large Nuclear Reactor with Reactivity Feedback Effects"

Given this day, under the seal of the Institute at Mumbai in the Republic of India, the 16th day of September 2005.

अध्यक्ष, अभिषद  
Chairman, Senate

कुलसचिव  
Registrar

अध्यक्ष, शासी मंडल  
Chairman, Board of Governors



KEE P...  
REGISTRAR  
K. E. Society's  
Rajarambapu Institute of Technology  
At Autonomous Institute  
Paijarambapur, Sakharale, (Sikampur)

REGISTRAR  
K. E. Society's  
Rajarambapu Institute of Technology  
At Autonomous Institute  
Paijarambapur, Sakharale, (Sikampur)



विश्वेश्वरय्या राष्ट्रीय प्रौद्योगिकी संस्थान  
(अभिमत विद्यापीठ)  
नागपुर (भारत)

प्रदीप कृष्णराव कट्टी

को एम.डि. द्वारा अभिषेक की अनुशंसा पर आज दि. 11 अगस्त 2007 को

संस्थान की मुद्रांकित

आचार्य

उपाधि प्रदान करता है।

इन्होंने विनियमों के अंतर्गत विहित आवश्यकताओं को मई 2007 में पूर्ण किया एवं  
अपने शोधप्रबंध का सफलतापूर्वक पक्षापोषण किया।

**VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY  
(DEEMED UNIVERSITY)  
NAGPUR (INDIA)**

upon recommendation of the Senate hereby confers the degree of

**Doctor of Philosophy**

on

**Pradeep Krishnarao Katti**

who has fulfilled the requirements as prescribed  
under the regulations and has successfully defended

the thesis in May 2007 titled

**"Integrated Operation of Renewable Energy Sources for Rural Area  
Power Supply"**

Given this day, 11th August 2007

under the seal of the Institute.



CHIEF, SENATE  
CHAIRMAN, SENATE

REGISTRAR

CHAIRMAN, BOARD OF GOVERNORS

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**DIRECTOR**  
K.E.S. Society's

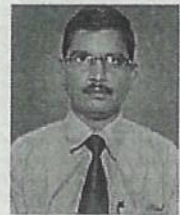
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Patil Mahadev Satappa*  
*Mother's Name - Chandrabhaga*  
*has been awarded the degree of*



## Doctor of Philosophy

*in Electronics & Tele-communication*  
*in the faculty of Engineering & Technology*  
*on 18<sup>th</sup> July 2014.*

*The said degree has been conferred on him*  
*at Kolhapur in the Winter Session*  
*of the year two thousand fifteen.*

**In testimony** whereof are set the seal of the  
university and the signatures of  
the Registrar and the Vice-Chancellor.

Registrar



Vice-Chancellor

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's Sr. No. -B-12 52680  
Rajarambapu Institute of Technology  
An Autonomous Institute-  
Rajaramnagar, Sakharale, (Islampur)



# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

upon the recommendation of the senate hereby confers the degree of

## Doctor of Philosophy

on

**Kakade Anandrao Bajirao**

in recognition of the research work on

***Modal Analysis and Mode Excitation of Multilayer Hemispherical Dielectric Resonator Antennas using an Efficient Computation Technique***

Given under the seal of the Institute at Kharagpur on the Seventeenth day of July, Two Thousand and Ten



REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)



Registrar



Director



DIRECTOR  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale. (Islampur)

University of Mumbai



# University of Mumbai

## मुंबई विद्यापीठ

We,

the Chancellor, the Vice-Chancellor  
and  
Members of the Management Council  
confer the Degree of  
**DOCTOR OF PHILOSOPHY**  
(Technology)  
on

**ADAMUTHE AMOL CHANDRAKANT USHADEVI**  
of Thadomal Shahani Engineering College  
Presented a Thesis in Information Technology Branch  
in DECEMBER 2015

which has been accepted by the Examiners  
at the Convocation  
held on 22nd February, 2018.

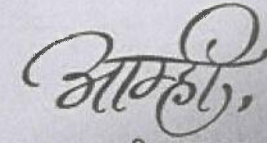


17-PHTE-15D-238-00000029

  
REGISTRAR

KE.S. Rajarambapu Institute of Technology  
Rajaramnagar, Sakharale (Islampur)

Dr. Devanand Shinde | डॉ. देवानंद शिंदे  
Vice-Chancellor | कुलगुरु



कुलपती, कुलगुरु  
आणि

व्यवस्थापन परिषदेचे सदस्य  
विद्या वाचस्पती  
(तंत्रविद्या)

ही पदवी

आडमुठे अमोल चंद्रकांत उषादेवी  
थाडोमल शहानी इंजिनिअरिंग कॉलेज  
यांना

माहिती तंत्रविद्या शाखा या विषयात  
डिसेंबर २०१५ मध्ये

सादर केलेला प्रबंध परीक्षकांनी स्वीकृत केल्याबद्दल  
२२ फेब्रुवारी, २०१८ च्या  
दीक्षान्त समारंभात प्रदान करित आहोत.



  
0599131  
DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale (Islampur)

# Solapur University

**WE**, the Chancellor, Vice-Chancellor and Members of the Management Council, on the recommendation of the Academic Council, certify that



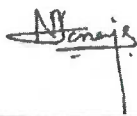
## Doctor Of Philosophy

*Mechanical Engineering*  
has been conferred on the 1<sup>st</sup> day of the month of  
November in the year two thousand twelve  
at Solapur, on

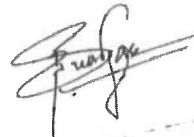
*Gawade Sanjaykumar Shankarrao*

who has been found duly qualified for the same.

In Testimony whereof are set the Seal of the University  
and the Signatures of the Registrar and the Vice-Chancellor.



Registrar



Vice-Chancellor

REGISTRAR

DIRECTOR



**Sant Longowal Institute of Engineering and Technology**  
(Deemed University, Under MHRD, Govt. of India)  
**Longowal, Distt. Sangrur (Punjab) -148106**

Upon recommendation of the Senate hereby confers the degree of  
**Doctor of Philosophy**

**JUGULKAR LALIT KUMAR MAIKULAL**  
Son of Sh. MAIKULAL

**THESIS TITLE : ANALYSIS OF SUSPENSION WITH VARIABLE STIFFNESS AND VARIABLE DAMPING FORCE FOR AUTOMOTIVE APPLICATIONS**

Given this day, the 7<sup>th</sup> April, 2017, under the seal of the Institute at Longowal in the Republic of India.

**संत लौगोवाल अभियांत्रिकी एवं प्रौद्योगिकी संस्थान**

अभिषद की अनुषांसा पर  
**विद्या वाचस्पति**

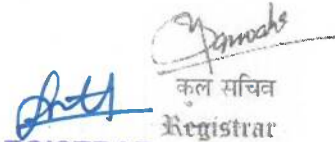
की उपाधि एतद द्वारा

**जुगूलकर ललित कुमार मैकुलाल**

सुपुत्र श्री मैकुलाल  
को प्रदान करता है।

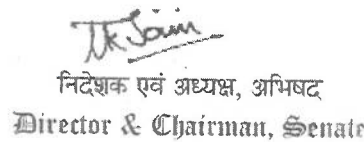
**शोध प्रबन्ध शीर्षक : अनैलिसिस ऑफ सस्पेंशन विद वेरिएबल स्टिफनेस एंड वेरिएबल डंपिंग फ़ोर्स फॉर ऑटोमोटिव एप्लीकेशन्स**

सात अप्रैल सन दो हजार सतरह को भारतीय गणराज्य के अधीन लौगोवाल में स्थित संस्थान की मुद्रा अंकित यह उपाधि प्रदान की गयी।

  
कल सचिव  
Registrar

**REGISTRAR**

**K.E.S. Rajarambapu Institute Of Technology**  
Rajaramnagar, Sakharale (Islampur)

  
निदेशक एवं अध्यक्ष, अभिषद  
Director & Chairman, Senate

  
**DIRECTOR** अध्यक्ष, प्रबंधन मंडल  
K. E. S. Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale. (Islampur)





सरदार वल्लभभाई राष्ट्रीय प्रौद्योगिकी संस्थान, सूरत (गुजरात, भारत)  
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT (GUJARAT, INDIA)

पाटील सचिन कृष्णात  
को एतद्वारा यांत्रिकी अभियांत्रिकी में

**विद्या वाचस्पति**

की उपाधि प्रदान करता है।

अभिषद की अनुशंसा पर संस्थान की मुद्रांकित यह उपाधि,  
आवाप्ति हेतु विनियमों में विहित अपेक्षाओं को पूर्ण कर लेने पर तथा  
जनवरी, २०१५ में अपने शोध-निबंध के सफल पक्षपोषण के उपरांत,  
सूरत, भारतीय गणराज्य में आज सोलह अगस्त, २०१६ को दी गई है।

*Upon recommendation of the Senate  
hereby confers the degree of*

**Doctor of Philosophy**

*in Mechanical Engineering*

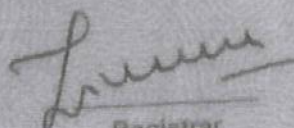
*on*

**Patil Sachin Krishnath**

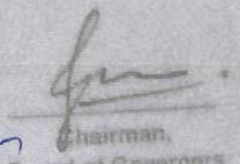
*who has fulfilled the requirements for the degree as prescribed under the  
regulations and has successfully defended in January, 2015, the thesis entitled:  
Study of Knowledge Management Adoption in Supply Chain by Fuzzy MCDM  
Approaches*

*Given this day, under the seal of the Institute at Surat  
in the Republic of India, the Sixteenth of August, 2016.*



  
Registrar

  
Chairman,  
Senate

  
Chairman,  
Board of Governors

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**DIRECTOR**

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

## महेश काकडे

बी.ई. (सिविल), एम.ई. (स्ट्रक्च.),  
एफ.आय.ई. (इंडिया), एम.आय.एस.टी.ई.

संचालक, परीक्षा व मूल्यमापन मंडळ

## Mahesh Kakade

B. E. (Civil), M. E. (Struc.)  
FIE (INDIA), MISTE

Director,

Board of Examinations & Evaluation



शिवाजी विद्यापीठ,

कोल्हापूर-४१६ ००४, महाराष्ट्र

SHIVAJI UNIVERSITY,

KOLHAPUR-416 004, MAHARASHTRA

दूरध्वनी (थेट) : २६९३१७६,  
२६०९०६७, २६०९०६८

Phone : (Dir.) 2693176,  
2609067, 2609068

Website : www.unishivaji.ac.in

E-mail : coe@unishivaji.ac.in

Ref. No. :

Date :

## Declaration of Result

It is hereby declared that the thesis entitled,

### INVESTIGATIONS INTO MR BRAKES (MAGNETORHEOLOGICAL BRAKES) FOR AUTOMOTIVE APPLICATIONS

submitted by, Shri. Satyajit Ramchandra Patil, in Mechanical Engineering under the Faculty of Science and Technology is accepted by the University authorities for the award of the Degree of Doctor of Philosophy in Mechanical Engineering under the Faculty of Science and Technology on 15/03/2018.

Director

Board of Examinations & Evaluation

No. SU/PG/EXAM/Ph.D./ 2660

Date: 23 MAR 2018.

To,

1. Shri. Satyajit Ramchandra Patil,  
Automobile Engineering Department,  
Rajarambapu Institute of Technology,  
Rajaramnagar, Sakharale.
2. Dr. S. M. Sawant, (Guide)  
Rajarambapu Institute of Technology,  
Rajaramnagar, Sakharale.
3. The Librarian, Barr. Balasaheb Khardekar Library, Shivaji University,  
Kolhapur.
4. The Head, Department of Technology, Shivaji University,  
Kolhapur.
5. Statement of Marks / Certificate Unit.
6. Convocation Unit.
7. Statistics Section
8. UGC Notification File

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



# Savitribai Phule Pune University

(formerly University of Pune)

We, the Chancellor, the Vice Chancellor and the Members of the Management Council and the Academic Council of the Savitribai Phule Pune University certify that

Desai Sandeep Rangrao, Mother's Name: Malan

having been examined and found duly qualified for the degree of

**Doctor of Philosophy**

(Mechanical)

The said degree has been conferred on him. In testimony whereof is set the seal of the said University.

## सावित्रीबाई फुले पुणे विद्यापीठ

(पूर्वीचे पुणे विद्यापीठ)

आम्ही, सावित्रीबाई फुले पुणे विद्यापीठाचे कुलपति, कुलगुरु आणि व्यवस्थापन परिषद व विद्या परिषद सदस्य, प्रमाणित करितो की,

देसाई संदीप रंगराव, आईचे नाव: मालन

**विद्यावाचस्पती**

(यांत्रिक)

पदवीस पात्र झाल्याबद्दल त्यांना ही पदवी प्रदान करण्यात येत आहे. याची साक्ष म्हणून विद्यापीठाची अधिकृत मुद्रा येथे अंकित करण्यात येत आहे.



**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

Vice Chancellor

08th January 2020

S-EN-00072

**DIRECTOR**

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale. (Islampur)

# Shivaji University, Kolhapur

**WE** the Chancellor, Vice-Chancellor and Members of the Management Council on the recommendation of the Academic Council certify that

*Kumbhar Papat Dattatraya*  
 Mother's Name - *Laxmi*  
 has been awarded the degree of



## Doctor of Philosophy

*in Civil Engineering*  
*in the faculty of Engineering & Technology*  
*on 26<sup>th</sup> December 2012.*

*The said degree has been conferred on him*  
*at Kolhapur in the Winter Session*  
*of the year two thousand fourteen.*

**In testimony** whereof are set the seal of the university and the signatures of the Registrar and the Vice-Chancellor.

*Shimley*

Registrar



*Pawar*

Vice-Chancellor

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
 Rajaramnagar, Sakharale (Islampur)

SE. No. - B-12 33284  
 Society's

Rajarambapu Institute of Technology  
 An Autonomous Institute  
 Rajaramnagar, Sakharale, (Islampur)



# Vel Tech

Ranganathan Dr. Sagunthala  
R&D Institute of Science and Technology  
(Deemed to be University) Est. on 31st UGC Act, 1956



Sl. No. : 7404

Reg. No. : 14RECS1037

The Board of Management of  
Veltech Ranganathan Dr. Sagunthala R & D Institute of  
Science and Technology (Deemed to be University)

hereby makes known that

**NALAVADE JAGANNATH EAKNATH  
S/O SHEVANTA EAKNATH NALAVADE**

has been admitted to the Degree of  
Doctor of Philosophy

in

**COMPUTER SCIENCE AND ENGINEERING**

having been certified by duly appointed examiners to be  
qualified to receive the same in the year **JAN-2019**

in accordance with the provisions of

UGC Regulations 2009 (for the award of Ph.D. Degree)

Title of the Thesis:

**STREAM DATA CLASSIFICATION USING HOLOENTROPY BASED  
SOFT COMPUTING TECHNIQUES**

Given under the seal of this Deemed to be University.

Dated: 13.08.2019

  
Registrar

  
Vice-Chancellor

  
President

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**DIRECTOR**

K.E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Patil Sachin Subhash*

*Mother's Name - Sumanda*



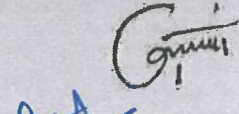
*has passed the*

## *Doctor of Philosophy*

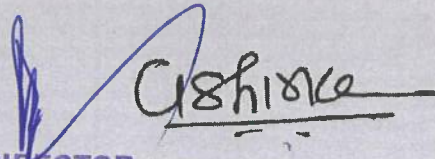
*in Computer Science & Engineering  
in faculty of Science And Technology  
on 26<sup>th</sup> December, 2019.*

*The said degree has been conferred on him  
at Kolhapur in the Summer Session  
of the year two thousand twenty one.*

**In Testimony** *whereof are set the seal of the  
university and the signatures of the Registrar and the Vice-Chancellor.*

  
*Registrar*  
**REGISTRAR**



  
*Vice-Chancellor*  
**DIRECTOR**  
K. E. Society's *Vice-Chancellor*

# मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर

अभिषद् की अनुशंसा पर  
कलखांबकर वैजू नागो  
को

**विद्या वाचस्पति**

की उपाधि प्रदान करता है।

शोधप्रबंध शीर्षक

ऑप्टीमल साइजिंग एण्ड प्लेसमेंट ऑफ एनर्जी स्टोरेज इन कॉर्डिनेशन विद रिन्युएबल डिस्ट्रीब्यूटेड  
जनरेशन

आज भारतीय गणराज्य के अन्तर्गत जयपुर में यह उपाधि दी गई है।

दिनांक ६ जनवरी, २०१८

## **Malaviya National Institute of Technology Jaipur**

*upon the recommendation of the Senate confers on*

**Kalkhambkar Vaiju Nago**

*the degree of*

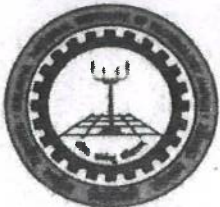
**Doctor of Philosophy**

*Thesis title in*

**Optimal Sizing and Placement of Energy Storage in Coordination with  
Renewable Distributed Generation**

*Given this day at Jaipur in the Republic of India*

**The 6th January, 2018**



*[Signature]*  
कुलसचिव  
Registrar

*[Signature]*  
निदेशक एवं अध्यक्ष अभिषद्  
Director & Chairman Senate

*[Signature]*  
अध्यक्षा शासी परिषद्  
Chairperson Board of Governor



**REGISTRAR**

**K.E.S. Rajarambapu Institute Of Technology**  
Rajaramnagar, Sakharale (Islamour)

**TOR**

**K. E. Society's**  
Rajarambapu Institute of Technology  
An Autonomnous Institute  
Rajaramnagar, Sakharale, (Islampur)



# Shivaji University, Kolhapur

**WE** the Chancellor, Vice-Chancellor and Members of the Management Council on the recommendation of the Academic Council certify that

*Kumbhar Mahesh Shivajirao*  
*Mother's Name - Shanta*  
*has been awarded the degree of*



## Doctor of Philosophy

*in Electronics Engineering*  
*in the faculty of Engineering & Technology*  
*on 8<sup>th</sup> September 2016.*

*The said degree has been conferred on him*  
*at Kolhapur in the Winter Session*  
*of the year two thousand seventeen.*

**In testimony** whereof are set the seal of the university and the signatures of the Registrar and the Vice-Chancellor.

Registrar



Vice-Chancellor

55648

Sr.No. :B-16 :

**DIRECTOR**

K. E. Society's  
 Rajarambapu Institute of Technology  
 An Autonomous Institute  
 Rajaramnagar, Sakharale, (Islampur)

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
 Rajaramnagar, Sakharale (Islampur)

पंजीकरण सं: 10711464  
(Reg. No.)

नामांकन सं: PEN/CMG/11/00210  
(Enrollment No.)

**Shri Jagdishprasad Jhabarmal Tibrewala University, Jhunjhunu**  
श्री जगदीशप्रसाद झाबरमल टिबड़ेवाला विश्वविद्यालय, झुंझुनूं



## डॉक्टर ऑफ़ फिलॉसफी

प्रमाणित किया जाता है कि **Hemlata Vivek Gaikwad** को इस विश्वविद्यालय के **Commerce and Management** संकाय के अन्तर्गत डॉक्टर ऑफ़ फिलॉसफी की उपाधि से वर्ष **2015** में विभूषित किया गया।

इनके शोध प्रबन्ध का विषय निम्नलिखित था :-

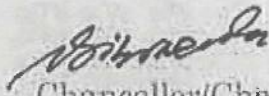
An Analytical Study Of Human Resource Management Of Women Conductors In Maharashtra State Transport

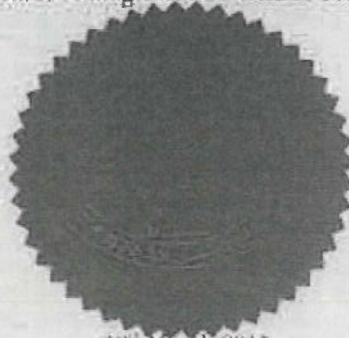
## DOCTOR OF PHILOSOPHY

*This is to certify that Hemlata Vivek Gaikwad has been awarded the degree of Doctor of Philosophy in the faculty of Commerce and Management of this university in the year 2015.*


*The title of his/ her thesis was:-*

An Analytical Study Of Human Resource Management Of Women Conductors In Maharashtra State Transport


  
Chancellor/Chairman  
कुलाधिपति / चेयरमैन



13<sup>th</sup> March 2015

  
Vice-Chancellor/President  
कुलपति / अध्यक्ष

  
REGISTRAR  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
DIRECTOR  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Desai Seema Shahaji*  
*Mother's Name - Nanda*  
*has been awarded the degree of*



## Doctor of Philosophy

*in Business Management*  
*in the faculty of Commerce*  
*on 13<sup>th</sup> October 2014.*

*The said degree has been conferred on her*  
*at Kolhapur in the Winter Session*  
*of the year two thousand fifteen.*

**In testimony** whereof are set the seal of the  
university and the signatures of  
the Registrar and the Vice-Chancellor.

Registrar



Vice-Chancellor

DIRECTOR

**REGISTRAR**  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

Sr. No. 12 52649  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

00008

MSH No. P150008

# National Institute of Technology Warangal



*upon the recommendation of the Senate  
hereby confers the degree of*

## Doctor of Philosophy

*on*

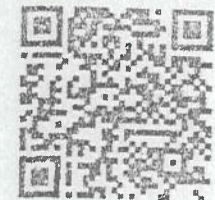
**Mr. Desavale Ramchandra Ganapati**  
(Roll No: 701112 )

*who has successfully completed the prescribed requirements for the award  
of the degree and passed the examination in October 2014 in the Department of*

## Mechanical Engineering

*Given under the seal of the National Institute of Technology Warangal  
in the Republic of India on the Thirteenth day of December Two Thousand Fifteen*

*Title of the Thesis : THEORETICAL AND EXPERIMENTAL STUDIES OF VIBRATIONS PRODUCED BY SINGLE AND MULTIPLE  
DEFECTS IN ROTOR-BEARING SYSTEMS USING EXPERIMENTAL DATA BASED MODELS*



  
**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)



  
**CHAIRMAN**  
SENATE & BOARD OF GOVERNORS  
K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

upon the recommendation of the Senate hereby confers the degree of

**Doctor of Philosophy**

on

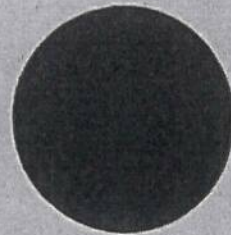
**PATIL SHARAD DATTATRAY SUMAN**

in recognition of the research work on

*Theoretical Studies on Metal Hydride based Systems for Hydrogen Storage and Water Pumping*

Given under the seal of the Institute at Kharagpur on the Seventh day of August, Two Thousand and Fifteen

  
Registrar



  
Director

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajarnnagar, Sakharale (Islampur)

  
DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajarnnagar, Sakharale, (Islampur)

00015  
National Institute of Technology Warangal

upon the recommendation of the Senate  
herby confer the degree of

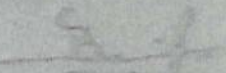
**Doctor of Philosophy**

on  
**Mr. Shah Abhijeet Prakash**  
(Roll No: 701123)

who has successfully completed the prescribed requirements for the award  
of the degree and passed the examination in September 2015 in the Department of  
**Mechanical Engineering**


Given under the seal of the National Institute of Technology Warangal  
in the Republic of India on the Thirteenth day of December Two Thousand Fifteen

Title of the Thesis: CONJUGATE MIXED CONVECTION WITH SURFACE RADIATION FROM A VERTICAL CHANNEL WITH  
MULTIPLE NON-IDENTICAL FLUSH-MOUNTED DISCRETE HEAT SOURCES IN THE LEFT WALL

  
CHAIRMAN  
SENATE & BOARD OF GOVERNORS



  
**REGISTRAR**  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
**DIRECTOR**  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, Warangal

क्रम संख्या IG31-210487  
Serial No.

नामांकन संख्या 122877658  
Enrolment No

इन्दिरा गांधी राष्ट्रीय मुक्त विश्वविद्यालय  
INDIRA GANDHI NATIONAL OPEN UNIVERSITY

डॉक्टर ऑफ फिलॉसफी  
DOCTOR OF PHILOSOPHY

प्रमाणित किया जाता है कि *Sanjay Ramchandra Kumbhar*  
This is to certify that

को उनके शोध प्रबन्ध *"Theoretical and Experimental  
Investigation of Controlling Structure Borne Noise & Vibrations  
in Automobiles Using Magnetorheological Elastomers"*  
having his / her thesis on

के स्वीकृत हो जाने के उपरान्त डॉक्टर ऑफ फिलॉसफी की उपाधि  
approved, has been awarded the degree of Doctor of Philosophy

(*Mechanical Engineering*) विश्वविद्यालय के इकतीसवें दीक्षांत समारोह  
of this University at its Thirty First

में प्रदान की गई।  
Convocation.

*जुए श्रीवास्तव*

कुल सचिव  
Registrar



*Barora*

कुलपति  
Vice-Chancellor

नई दिल्ली / New Delhi  
दिनांक / Dated : 11th April, 2018

*REGISTRAR*

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

*DIRECTOR*

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



Est. 1962

Accredited by NAA, 120211  
with GPA 1.72

शिवाजी विद्यापीठ,

कोल्हापूर-४१६ ००४, महाराष्ट्र

SHIVAJI UNIVERSITY,

KOLHAPUR-416 004, MAHARASHTRA

जी. आर. पळसे

एम. ए., एम. एड., एम. एड., एम. एड.

प्र. संचालक, परीक्षा व मुल्यमापन मंडळ

G. R. Palse

M. A., M. G. S. NET

I/c Director,

Board of Examinations & Evaluation

दूरध्वनी (थेट) : २६२३१७६,  
२६०९०६७, २६०९०६८

Phone : (Dir) 2693176,

2609067, 2609068

Website : www.unshivaji.ac.in

E-mail : coe@unshivaji.ac.in

Ref. No. :

Date :

## Declaration of Result

It is hereby declared that the thesis entitled,

**DEVELOPMENT AND EXPERIMENTAL INVESTIGATION OF  
AUTOMOTIVE DRIVE SHAFT USING EPOXY COMPOSITE MATERIAL**

Submitted by, **Shri. Shinde Rajaram Madhukar** in **Mechanical Engineering**  
under the Faculty of Science and Technology is accepted by the university  
authorities for the award of the Degree of Doctor of Philosophy in **Mechanical  
Engineering** under the Faculty of Science and Technology on 05<sup>th</sup> March,  
2022.

I/C Director

Board of Examinations and Evaluation

No. SU/PG/EXAM/Ph.D./674/3192-A

Date: 22 MAR 2022

To,

1. **Shri. Shinde Rajaram Madhukar,**  
A/P- Wategaon, Tal. Walwa, Dist. Sangli.
2. Research Guide – Dr. S. M. Sawant,  
Rajarambapu Institute of Technology, Sakharale, Dist. Sangli.
3. The Director, Barr. Balasaheb Khardekar Knowledge Resource Centre, Shivaji University, Kolhapur.
4. The Director, Department of Technology, Shivaji University, Kolhapur.
5. Statement of Marks / Certificate Unit.
6. Convocation Unit.
7. Statistics Section.
8. UGC Notification File.

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*  
SUPRIYA SAGAR MORE  
*has been conferred the Degree of*  
**Doctor of Philosophy**

*in*

FACULTY OF MECHANICAL ENGINEERING SCIENCES

*for the thesis entitled*

IMPROVISATION IN SOLAR ENERGY GAIN WITH COMBINATION OF  
CONCENTRIC PHOTOVOLTAIC AND PERFORATED PLATE TYPE  
THERMAL COLLECTOR

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

PH  
19 000967

Given under the seal of the University

USN: 5VX12PMN14



BELAGAVI

DATE : APRIL 03, 2021

VICE CHANCELLOR

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

Scanned with CamScanner  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Yashwant Mohan Patil*  
Mother's Name - *Sushila*  
has passed the



## Doctor of Philosophy

*in Civil Engineering*  
*in faculty of Science and Technology*

*on 17<sup>th</sup> December 2018*

*The said degree has been conferred on him*  
*at Kolhapur in the Winter Session*  
*of the year two thousand nineteen*

**In Testimony** *whereof are set the seal of the*  
*university and signatures of the Registrar and the Vice-Chancellor*

Registrar



Vice-Chancellor

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

Sr.No. : B-20 : K.E. 00012

**DIRECTOR**  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale. (Islampur)



# भारतीय प्रौद्योगिकी संस्थान मुंबई

कुंभार श्रीधर शंकर

को एतद्वारा

विद्या वाचस्पति

की उपाधि प्रदान करता है ।

अभिपद की अनुशंसा पर संस्थान की मुद्रांकित यह उपाधि अवाप्ति हेतु विनियमों में विहित अपेक्षाओं को पूर्ण कर लेने पर तथा अपने शोध-प्रबंध के सफल पक्षपोषण के उपरांत मुंबई, भारतीय गणराज्य में आज 7 अगस्त, 2021 को दी गई है ।

## Indian Institute of Technology Bombay

upon recommendation of the Senate hereby confers the degree of

**Doctor of Philosophy**

on

**Kumbhar Shridhar Shankar**

who has fulfilled the requirements for the degree as prescribed under the regulations and successfully defended the thesis entitled:

“Sustainable Nutrient Management - A Case Study of Nitrate in Warana River Basin, Maharashtra, India.”

Given this day, under the seal of the Institute at Mumbai in the Republic of India, the 7th day of August 2021.

Digitally signed by  
PREMKUMAR B. SHAM  
Date: 2021.08.20  
05:23:30  
Reason: BOMBAY  
NAD  
Location: IIT  
BOMBAY

Signature valid

अध्यक्ष, अभिपद  
Chairperson, Senate

कुलसचिव  
Registrar

अध्यक्ष, शासी मंडल  
Chairperson, Board of Governors

  
**REGISTRAR**  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

URL : <https://portal.iitb.ac.in/verify>  
Verification Ticket Number: 4A CD36 9324 2945 8214

  
**DIRECTOR**  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

SABIR SALIM SAYYED

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

FACULTY OF CIVIL ENGINEERING SCIENCES

*for the thesis entitled*

FLEXIBLE PAVEMENT PERFORMANCE EVALUATION FOR  
ENHANCEMENT IN DESIGN METHODOLOGY

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

PH  
19 001355

Given under the seal of the University

USN: 5VX15PCJ16



BELAGAVI

DATE : MARCH 10, 2022

VICE CHANCELLOR

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



126104022

## भारतीय प्रौद्योगिकी संस्थान गुवाहाटी

विद्या परिषद की अनुशंसा पर

सिविल अभियांत्रिकी में

विद्या वाचस्पति की उपाधि

### संदिप संपतराव साठे

को इस उपाधि के प्रदान हेतु विनियम विहित अपेक्षाएँ अगस्त 2019 में सफलतापूर्वक पूर्ण करने पर प्रदान करता है।

भारतीय गणराज्य के अंतर्गत गुवाहाटी में आज 22 सितंबर 2020 को संस्थान की यह मुद्रा अंकित उपाधि दी गई।

**INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI**

upon the recommendation of the Senate hereby confers the degree of

**Doctor of Philosophy**

in

**Civil Engineering**

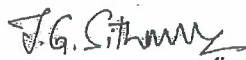
on

**Sandip Sampatrao Sathe**

who has successfully completed in August 2019, the requirements prescribed under the regulations for the award of this degree.

Given this day, under the seal of the Institute at Guwahati in the Republic of India, the 22<sup>nd</sup> day of September, 2020.

**Thesis Title :** A study to delineate Arsenic safe and unsafe aquifers by hydro-geological, microbiological and numerical methods



निदेशक एवं,  
अध्यक्ष, विद्या परिषद  
Director and  
Chairman, Senate



कुलसचिव  
Registrar



अध्यक्ष,  
शासी मंडल  
Chairman,  
Board of Governors

**DIRECTOR**

K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

  
**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

# मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर

अभिषद् की अनुशंसा पर  
प्रान्दा प्रसन्ता गुप्ता

को  
विद्या वाचस्पति

की उपाधि प्रदान करता है।

शोधप्रबंध शीर्षक

स्टोकास्टिक सिक्योरिटी कन्स्ट्रेंड युनिट कमिटमेंट कन्सिडरिंग रिन्यूएबल एनर्जी एंड  
स्टोरेज इंटीग्रेशन

आज भारतीय गणराज्य के अन्तर्गत जयपुर में यह उपाधि दी गई है।

दिनांक ११ अक्टूबर, २०२१

## *Malaviya National Institute of Technology Jaipur*

*upon the recommendation of the Senate confers on*

*Pranda Prasanta Gupta*

*the degree of*

*Doctor of Philosophy*

*Thesis title in*

*Stochastic Security Constrained Unit Commitment considering Renewable  
Energy and Storage Integration*

*Given this day at Jaipur in the Republic of India*

*The 11th October, 2021*



*[Signature]*  
कुलसचिव  
Registrar

*[Signature]*  
निदेशक एवं अध्यक्ष अभिषद्  
Director & Chairman Senate

*[Signature]*  
अध्यक्ष शासी परिषद्  
Chairperson Board of Governors



*[Signature]*  
DIRECTOR

*[Signature]*  
REGISTRAR  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर

अभिषद की अनुशंसा पर

सुजिल ए

को

विद्या वाचस्पति

की उपाधि प्रदान करता है।

शोधप्रबंध शीर्षक

स्मार्ट माइक्रोग्रिड मैनेजमेंट युजिंग मल्टी एजेंट सिस्टम

आज भारतीय गणराज्य के अन्तर्गत जयपुर में यह उपाधि दी गई है।

दिनांक १९ जनवरी, २०२०

**Malaviya National Institute of Technology Jaipur**

*upon the recommendation of the Senate confers on*

**Sujil A**

*the degree of*

**Doctor of Philosophy**

*Thesis title in*

*Smart Microgrid Management using Multi Agent System*

*Given this day at Jaipur in the Republic of India*

*The 19th January, 2020*



*Jai Nam*

कुलसचिव  
Registrar

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

*Uday Singh*

निदेशक एवं अध्यक्ष अभिषद  
Director & Chairman Senate

*Uday Singh*

अध्यक्षा शासी परिषद  
Chairperson Board of Governors

**DIRECTOR**

K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale (Islampur)



VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*  
JAYASHREE SUDHIR AWATI  
*has been conferred the Degree of*  
**Doctor of Philosophy**  
*in*

FACULTY OF ELECTRICAL & ELECTRONICS ENGINEERING SCIENCES

*for the thesis entitled*

AUTOMATION IN AGRICULTURE FIELD USING WIRELESS  
TECHNOLOGY

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

PH 19 000960 Given under the seal of the University

USN: 5VX13PEN47



BELAGAVI

DATE : APRIL 03, 2021

VICE CHANCELLOR

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



**Shri Jagdishprasad Jhabarmal Tibrewala University, Jhunjhunu**  
श्री जगदीशप्रसाद झाबरमल टिबड़ेवाला विश्वविद्यालय, झुंझुनू



**डॉक्टर ऑफ़ फिलॉसफी**

प्रमाणित किया जाता है कि **Jayashree Sudhir Awati** को इस विश्वविद्यालय के इंजीनियरिंग संकाय के अन्तर्गत डॉक्टर ऑफ़ फिलॉसफी की उपाधि से वर्ष 2014 में विभूषित किया गया।

इनके शोध प्रबन्ध का विषय निम्नलिखित था :-

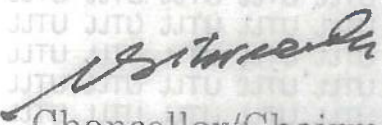
Application Of Wireless Sensor Networks For Agricultural Parameter Control.

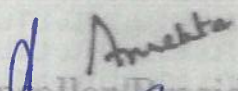
**DOCTOR OF PHILOSOPHY**

*This is to certify that Jayashree Sudhir Awati has been awarded the degree of Doctor of Philosophy in the faculty of Engineering of this university in the year 2014.*

The title of his/ her thesis was:-

Application Of Wireless Sensor Networks For Agricultural Parameter Control.

  
Chancellor/Chairman  
कुलाधिपति / चेयरमेन

  
Vice-Chancellor/President  
कुलपति / अध्यक्ष

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Prithvinnagar, Sakharale (Islampur)

26 February 2014

**DIRECTOR**  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and Members of the Management Council on the recommendation of the Academic Council certify that

Mrs. Jagtap Manisha Vikas  
Mother's Name - Draupadi  
has been awarded the degree of



## Doctor of Philosophy

in Business Management  
in the faculty of Commerce  
on 20<sup>th</sup> January 2014.

The said degree has been conferred on her at Kolhapur in the Winter Session of the year two thousand fifteen.

**In testimony** whereof are set the seal of the university and the signatures of the Registrar and the Vice-Chancellor.

REGISTRAR



DIRECTOR Vice-Chancellor  
K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute - B-12 52651  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur

**WE**

the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

Patil Krishnaji Sanjivao  
Mother's Name - Nandini



has passed the

**Doctor of Philosophy**

*in Commerce*

*in faculty of Commerce And Management*

*on 14<sup>th</sup> August, 2021.*

*The said degree has been conferred on him*

*at Kolhapur in the Summer Session*

*of the year two thousand twenty two.*

**In Testimony** whereof are set the seal of the  
university and the signatures of the Registrar and the Vice-Chancellor.

*Sanjivao*

*Ag Registrar*

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)



*Ushiroke*

*Vice-Chancellor*

Sr.No. :B- 22/ 46058

**DIRECTOR**  
K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Vidya Sunil Kadam*  
*Mother's Name - Kamal*  
*has been awarded the degree of*



## *Doctor of Philosophy*

*in Commerce & Management*

*in the faculty of Commerce*

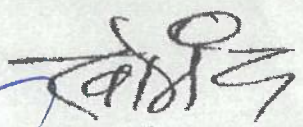
*on 23<sup>rd</sup> January 2015.*

*The said degree has been conferred on her  
at Kolhapur in the Winter Session  
of the year two thousand sixteen.*

**In testimony** whereof are set the seal of the  
university and the signatures of  
the Registrar and the Vice-Chancellor.

  
Registrar  
REGISTRAR



  
DIRECTOR  
K. E. Society's Vice-Chancellor

1493

MSH No. 171493

# National Institute of Technology Warangal



upon the recommendation of the Senate  
hereby confers the degree of

## Doctor of Philosophy

on

Mandale Maruti Bhagvan

(Roll No: 701137 )

who has successfully completed the prescribed requirements for the award  
of the degree and passed the examination in August, 2019 in the Department of

## Mechanical Engineering

Given under the seal of the National Institute of Technology Warangal  
in the Republic of India on the Seventeenth day of August Two Thousand Nineteen

Title of the Thesis : ESTIMATION OF STATISTICAL ENERGY ANALYSIS PARAMETERS FOR STRUCTURAL ELEMENTS.



*N. V. M.*

CHAIRMAN  
SENATE & BOARD OF GOVERNORS



Samsung Quad Camera  
Shot with my Galaxy A32

*[Signature]*  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

*[Signature]*  
DIRECTOR  
K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Kumbhar Samir Bhagwan*  
*Mother's Name - Rukmini*  
*has passed the*



## *Doctor of Philosophy*

*in Mechanical Engineering*  
*in faculty of Science And Technology*  
*on 17<sup>th</sup> December, 2019.*

*The said degree has been conferred on him*  
*at Kolhapur in the Summer Session*  
*of the year two thousand twenty one.*

**In Testimony** *whereof are set the seal of the*  
*university and the signatures of the Registrar and the Vice-Chancellor.*

*Registrar*

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)



**DIRECTOR**  
*Vice-Chancellor*

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

Sl. No. B-21 : 36033

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Sunil Namdeo Yadav*

*Mother's Name - Shalini*

*has passed the*



## Doctor of Philosophy

*in Mathematics*

*in faculty of Science*

*on 27<sup>th</sup> June 2017*

*The said degree has been conferred on him*

*at Kolhapur in the Winter Session*

*of the year two thousand eighteen*

**In Testimony** *whereof are set the seal of the  
university and signatures of the Registrar and the Vice-Chancellor*

Registrar



Vice-Chancellor

Sr.No. : B- 18 : 37151

DIRECTOR

Scanned by TapScanner

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**जी. आर. पळसे**

एम.ए., एम.एड., सेट, नेट

प्र. संचालक, परीक्षा व मुल्यमापन मंडळ

**G. R. Palse**

M. A., M.Ed, SET, NET

I/c. Director,

Board of Examinations &amp; Evaluation

Estd : 1962  
NAAC 'A' Grade**शिवाजी विद्यापीठ,**

कोल्हापूर-४१६ ००४, महाराष्ट्र

**SHIVAJI UNIVERSITY,**

KOLHAPUR-416 004, MAHARASHTRA

दूरध्वनी (थेट) : २६९३१७६,  
२६०९०६७, २६०९०६८Phone : (Dir.) 2693176,  
2609067, 2609068

Website : www.unishivaji.ac.in

E-mail : coe@unishivaji.ac.in

Ref. No. :

Date :

**Declaration of Result**

It is hereby declared that the thesis entitled,

**QUEST FOR IDENTITY IN THE NOVELS OF TERRY McMILLAN**

Submitted by **Shri. Pawar Pradip Nathuram** in English under the Faculty of Humanities is accepted by the University authorities for the award of the Degree of Doctor of Philosophy in English under the Faculty of Humanities on 06-08-2020.

I/c. Director

Board of Examinations &amp; Evaluation

No. SU/PG/EXAM/Ph.D./ 274/ 2558

Date : 29 SEP 2020

To,

1. Shri. Pawar Pradip Nathuram (7507699079)  
Shivprasad, Saiprasad Colony, Holy Family-Banawadi Road (E) Vidyanagar,  
Saidapur, Karad, Dist. Satara
2. Guide: Dr. R. R. Thorat  
Venutai Chavan College, Karad, Dist. Satara (9420628716)
3. The Director, Barr. Balasaheb Khardekar Knowledge Resource Center,  
Shivaji University, Kolhapur.
4. The Head, Deptt of English, Shivaji University, Kolhapur
5. Statement of Marks / Certificate Unit.
6. Convocation Unit.
7. Statistics Section.
8. Copy to UGC Notification File.

**REGISTRAR**K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**DIRECTOR**

K. E. Society's

Rajarambapu Institute of Technology

An Autonomous Institute

Rajaramnagar, Sakharale, (Islampur)



# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that  
Pusawale Swati Narayan  
Mother's Name - Smita  
has awarded the Degree of



## Doctor of Philosophy

in the Subject

Physics

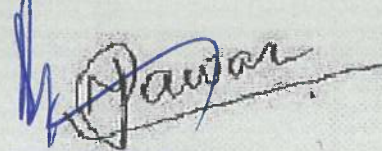
on 27<sup>th</sup> December 2011.

The said Degree has been conferred on her  
at Kolhapur in the Winter Session  
of the year Two Thousand Thirteen.

In Testimony whereof are set the seal of the  
University and the signatures of the  
Registrar and the Vice-Chancellor.

  
Registrar  
REGISTRAR



  
Vice-Chancellor  
DIRECTOR  
K. E. S. Rajarambapu Institute of Technology

# Shriwan University, Kolhapur

the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Kadam Dipali Mansingrao*  
*Mother's Name - Latika*  
*has been awarded the degree of*



## Doctor of Philosophy

*in English*

*in the faculty of Arts And Fine Arts*

*on 29<sup>th</sup> July 2013.*

*The said degree has been conferred on her  
at Kolhapur in the Winter Session  
of the year two thousand fourteen.*

**In testimony** whereof are set the seal of the  
university and the signatures of  
the Registrar and the Vice-Chancellor.

*[Signature]*

*[Signature]*  
Registrar

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)



*[Signature]*  
Vice-Chancellor

**DIRECTOR**

K. E. Society's  
Rajarambapu Institute Of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur) 33028

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Rajanikant M Kurane*  
Mother's Name - *Suvarna*



has passed the

## Doctor of Philosophy

*in Chemistry*

*in faculty of Science And Technology*

*on 30<sup>th</sup> May, 2016.*

*The said degree has been conferred on him*

*at Kolhapur in the Summer Session*

*of the year two thousand twenty one.*

**In Testimony** *whereof are set the seal of the  
university and the signatures of the Registrar and the Vice-Chancellor.*

Registrar



Vice-Chancellor

Sr.No. :B- 221

36203

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

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DIRECTOR  
K.E.S. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

ಮಂಗಳೂರು  
MANGALORE



ವಿಶ್ವವಿದ್ಯಾನಿಲಯ  
UNIVERSITY

ಮಂಗಳೂರು ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಕುಲಾಧಿಪತಿಗಳು, ಸಹಕುಲಾಧಿಪತಿಗಳು, ಕುಲಪತಿಗಳು,  
ಸಿಂಡಿಕೇಟ್ ಮತ್ತು ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ತಿನ ಸದಸ್ಯರುಗಳಾದ ನಾವು

ಉಜ್ವಲ್ ಉ. ಪ್ರಭು

ಅವರು ೨೦೧೩ನೆಯ ವರ್ಷದ ಜನವರಿ ತಿಂಗಳಲ್ಲಿ

ಡಾಕ್ಟರ್ ಆಫ್ ಫಿಲಾಸಫಿ

ಪದವಿಗೆ ನಿರ್ದಿಷ್ಟ ಅರ್ಹತೆಯನ್ನು ಪಡೆದಿರುವರೆಂದು ಪ್ರಮಾಣೀಕೃತವಾಗಿರುವುದರಿಂದ  
೨೦೧೩ ರ ೩೧ನೆಯ ತಿಂಗಳ ಇಪ್ಪತ್ತಮೂರನೇ ದಿನದಂದು ನಡೆದ ೩೧ನೆಯ ಘಟಿಕೋತ್ಸವದಲ್ಲಿ  
ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ನಿಕಾಯದ ಭೌತಶಾಸ್ತ್ರ  
ಅಧ್ಯಯನ ಮಂಡಳಿಯ ವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಅಂಗೀಕೃತರಾಗಿರುವರೆಂದು ಈ ಮೂಲಕ ದೃಢೀಕರಿಸುತ್ತೇವೆ.

*We, the Chancellor, the Pro-Chancellor, the Vice-Chancellor  
and the members of the Syndicate and Academic Council of Mangalore University  
do hereby make known that*

**UJWAL U. PRABHU**

*has been admitted to the Degree of*

**DOCTOR OF PHILOSOPHY**

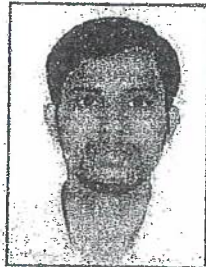
*at the 31st Convocation held on the 23rd day of February 2013 on being duly certified to have  
qualified for the same in the month of January 2013  
for the thesis / ಮಹಾಪ್ರಬಂಧದ ಶೀರ್ಷಿಕೆ:*

**"STUDIES ON TRANSFER FACTORS AND TRANSFER COEFFICIENTS OF CESIUM AND  
STRONTIUM IN SOIL-GRASS-MILK PATHWAY AND ESTIMATION OF RADIATION DOSE IN THE  
ENVIRONMENT OF KAIGA"**

*in the Faculty of Science and Technology under the Board of Studies in Physics*

ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಲಾಂಛನದೊಂದಿಗೆ ನೀಡಿದೆ.

*Given Under the Seal of the University*



Attested



*[Signature]*

ಪ್ರಾಂಶಿಕ ವ್ಯವಸ್ಥಾಪಕರು  
ಕೃತ್ರಿಕ ಅಕ್ಷರಾಧಿಕಾರಿಗಳ ಸುಯೋಜನೆಯಲ್ಲಿ

*[Signature]*  
12/2/21

*[Signature]*  
ಕುಲಪತಿ  
VICE-CHANCELLOR

ಮಂಗಳಗಂಗೋತ್ರಿ, ಕರ್ನಾಟಕ, ಭಾರತ  
MANGALAGANGOTRI, KARNATAKA, INDIA

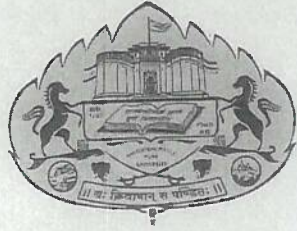
ದಿನಾಂಕ / Date: 23.02.2013

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



# Savitribai Phule Pune University

(formerly University of Pune)

*We, the Chancellor, the Vice Chancellor and the Members of the Management Council and the Academic Council of the Savitribai Phule Pune University certify that*

*Suryawanshi Nagesh Tatoba, Mother's Name : Jayashri*

*having been examined and found duly qualified for the degree of*

**Doctor of Philosophy**

*(Civil Engineering)*

*The said degree has been conferred on him. In testimony whereof is set the seal of the said University.*

## सावित्रीबाई फुले पुणे विद्यापीठ

(पूर्वीचे पुणे विद्यापीठ)

आम्ही, सावित्रीबाई फुले पुणे विद्यापीठाचे कुलपती, कुलगुरु आणि व्यवस्थापन परिषद व विद्या परिषद सदस्य, प्रमाणित करितो की,

सुर्यवंशी नागेश तातोबा , आईचे नाव: जयश्री

विद्यावाचस्पती

(स्थापत्य अभियांत्रिकी)

पदवीस पात्र झाल्याबद्दल त्यांना ही पदवी प्रदान करण्यात येत आहे. याची साक्ष म्हणून विद्यापीठाची अधिकृत मुद्रा येथे अंकित करण्यात येत आहे.



Vice Chancellor

118th Convocation (Summer)

EN20-00077

DIRECTOR

K. E. Sudey's

Rajarambapu Institute of Technology

An Autonomous Institute

Rajaramnagar, Sakharale (Islamnagar)

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islamnagar)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*  
**CHANDAN ANANDA WAGHMARE**

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

**FACULTY OF MECHANICAL ENGINEERING SCIENCES**

*for the thesis entitled*

**INVESTIGATIONS ON THE EFFECT OF POWDER MIXED DIELECTRIC  
FLUID IN ELECTRICAL DISCHARGE MACHINING (EDM) ON SURFACE  
INTEGRITY OF AISI D2 STEEL.**

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

PH  
19 001431

Given under the seal of the University

USN: 5VX13PMN13



BELAGAVI

DATE : MARCH 10, 2022

  
VICE CHANCELLOR

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale (Islampur)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

SANTOSHKUMAR RAMCHANDRA PATIL

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

FACULTY OF MECHANICAL ENGINEERING SCIENCES

*for the thesis entitled*

SOME THEORETICAL & EXPERIMENTAL STUDIES ON DESIGN,  
DEVELOPMENT AND RESPONSE ANALYSIS OF A LARGE-SCALE  
ORIFICE TYPE DAMPER USING HIGH YIELD SMART FLUID FOR  
ARTILLERY GUN RECOIL APPLICATION

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

PH  
19 001399

Given under the seal of the University

USN: 5VX13PMN01



BELAGAVI

DATE MARCH 10, 2022

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar Sakharale (Islampur)

  
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DIRECTOR  
K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

SHIRGUPPIKAR SHAILESH SURESH

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

FACULTY OF MECHANICAL ENGINEERING SCIENCES

*for the thesis entitled*

AN EXPERIMENTAL INVESTIGATION ON ELECTRO DISCHARGE  
MACHINE USING DIFFERENT COATED TOOL ELECTRODES

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

PH  
19 001436

Given under the seal of the University

USN: 2GI15PMJ03




BELAGAVI

DATE : MARCH 10, 2022

  
VICE CHANCELLOR

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
DIRECTOR  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

ARUN RAJARAM THORAT

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

FACULTY OF ELECTRICAL & ELECTRONICS ENGINEERING SCIENCES

*for the thesis entitled*

APPLICATION OF MODIFIED ARTIFICIAL BEE COLONY ALGORITHM  
FOR OPTIMIZATION OF FUEL COST AND REACTIVE POWER OF  
POWER SYSTEMS INCORPORATING NON-CONVENTIONAL ENERGY  
SOURCES

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

PH  
19 001578

Given under the seal of the University

USN: 5VZ15PEJ26



BELAGAVI

DATE : MARCH 10, 2022

*[Signature]*  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

*[Signature]*  
VICE CHANCELLOR

DIRECTOR  
K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

**जी. आर. पळसे**

एम. ए. एम. एड. सेट, नेट

प्र. संचालक, परीक्षा व मुल्यापन मंडळ

**G. R. Palse**

M.A., M.Ed., SET, NET

I/c Director,

Board of Examinations & Evaluation



EST. 1962  
ACCREDITED BY NAAC (2021)  
with UGPV 172

**शिवाजी विद्यापीठ,**

कोल्हापूर-४१६ ००४, महाराष्ट्र

**SHIVAJI UNIVERSITY,**

KOLHAPUR-416 004, MAHARASHTRA

दूरध्वनी (थेट) : २६९३१७६,  
२६०९०६७, २६०९०६८

Phone : (Dir) 2693176  
2609067, 2609068

Website : www.unishivaji.ac.in

E-mail : coe@unishivaji.ac.in

Ref. No. :

Date :

## Declaration of Result

It is hereby declared that the thesis entitled.

**EXPERIMENTAL INVESTIGATIONS OF LOW TEMPERATURE  
DRYING AND PULVERIZING SYSTEM FOR JAGGERY POWDER**

Submitted by, **Shri. Pisal Mahesh Vasant** in **Mechanical Engineering** under the Faculty of Science and Technology is accepted by the university authorities for the **award of the Degree of Doctor of Philosophy in Mechanical Engineering** under the Faculty of Science and Technology on **05<sup>th</sup> March, 2022.**

**I/C Director**

**Board of Examinations and Evaluation**

No. SU/PG/EXAM/Ph.D./513/9208

Date: **23 MAR 2022**

To,

1. **Shri. Pisal Mahesh Vasant**,  
At. Lavanmacchi, Post. Killemachindragad, Tal. Walwa, Dist. Sangli.
2. Research Guide – Dr. S. S. Gawade,  
Rajarambapu Institute of Technology, Rajaramnagar, Sakharale, Dist. Sangli.
3. The Director, Barr. Balasaheb Khardekar Knowledge Resource Centre, Shivaji University, Kolhapur.
4. The Director, Department of Technology, Shivaji University, Kolhapur.
5. Statement of Marks / Certificate Unit.
6. Convocation Unit.
7. Statistics Section.
8. UGC Notification File.

**REGISTRAR**  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**DIRECTOR**  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that*

**JADHAV BALIRAM RAJARAM**

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

**FACULTY OF MECHANICAL ENGINEERING SCIENCES**

*for the thesis entitled*

**INVESTIGATION OF PROCESS PARAMETERS IN POWDER MIXED  
ELECTRO DISCHARGE MACHINING OF ALUMINIUM-SILICON ALLOY  
USING BRASS ELECTRODE**

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

PH  
19 001467

Given under the seal of the University

USN: 5VX13PMN38



BELAGAVI

DATE : MARCH 10, 2022

*[Signature]*  
**REGISTRAR**

**K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)**

*[Signature]*  
**VICE CHANCELLOR**

**DIRECTOR**

K. E. Society's

**Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)**



Estd: 1962

A++ Accredited by NAAC (2021)  
with CGPA 3.52

शिवाजी विद्यापीठ,

विद्यानगर, कोल्हापूर - ४१६ ००४.

**SHIVAJI UNIVERSITY,**

Vidyanagar, Kolhapur - 416 004

दूरध्वनी (थेट) : २६९३१७६, २६०९०६७,  
२६०९०६८

Phone : (Dir.) - 2693176, 2609067,  
2609068

Web : www.unishivaji.ac.in

E-mail : coe@unishivaji.ac.in

डॉ. अजितसिंह एन. जाधव

M.E. (Electronics), Ph.D. (E & TC)

संचालक, परीक्षा व मुल्यमापन मंडळ

**Dr. Ajitsinh N. Jadhav**

M.E. (Electronics), Ph.D. (E & TC)

Director,

Board of Examinations & Evaluation

## Declaration of Result

It is hereby declared that the thesis entitled,

### STUDY OF SOME CLASSES OF FUNCTIONS IN GEOMETRIC FUNCTION THEORY

Submitted by **Shri. Bobalade Dnyaneshwar Dattatray** in **Mathematics** under the **Faculty of Science & Technology** is accepted by the University authorities for the award of the Degree of Doctor of Philosophy in **Mathematics** under the **Faculty of Science & Technology** on 21/04/2023.

No. SU/PG/EXAM/Ph.D./1446

Date: 06 MAY 2023

  
Director

Board of Examinations & Evaluation

To,

1. Shri. Bobalade Dnyaneshwar Dattatray,  
A/P Gunjegaon, Tal. Mangalwedha,  
Dist. Solapur. 413305
2. Research Guide: Dr. N. D. Sangale,  
Department of Mathematics,  
D. Y. Patil College of Engineering and Technology,  
Kasaba Bawada, Kolhapur. 416 006.
3. The Director, Barr. Balasaheb Khardekar Knowledge Resource Centre, Shivaji  
University, Kolhapur.
4. The Head, Department of Mathematics, Shivaji University, Kolhapur.
5. Statement of Marks / Certificate Unit.
6. Convocation Unit.
7. College and University Development Section
8. UGC Notification File.

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous institute  
Rajaramnagar, Sakharale, (Islampur)



**Koneru Lakshmaiah Education Foundation**

(Deemed to be University) (Sec. 3 of the UGC Act, 1956)

Campus : Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India. PIN : 522 302  
Phone No. : 08645 - 350200; www.kluuniversity.in; www.klef.edu.in

NAAC  
ACCREDITED  
A++

RECOGNIZED  
CATEGORY  
1

Ref: KLEF/AR/Ph.D/Engineering/2022-23/655

Date: 27-06-2023

## NOTIFICATION

It is hereby notified that the Vice Chancellor, on the recommendations of the examiners appointed to adjudicate the Ph.D. thesis entitled "**DESIGN AND IMPLEMENTATION OF HYBRID EVOLUTIONARY ALGORITHMS FOR MANY-OBJECTIVE OPTIMIZATION PROBLEMS**" submitted by **MANE SANDEEP UTTAM**, Research Scholar, Koneru Lakshmaiah Education Foundation (Deemed to be University) with Registered Number **14303073**, Department of Computer Science and Engineering, under the supervision of **Dr. K. Venkata Raju**, Professor, Department of CSE, KLEF for the award of Ph.D. Degree, and on consideration of the report submitted by the Examiners of the VIVA-VOCE Board, has ordered that **MANE SANDEEP UTTAM** be declared qualified for the award of the **Degree of Doctor of Philosophy (Ph.D)** in "**Computer Science and Engineering**" in the "**Faculty of Engineering**" of this University.

To  
**MANE SANDEEP UTTAM**,  
Research Scholar,  
Registered Number **14303073**,  
Department of Computer Science and Engineering,  
Koneru Lakshmaiah Education Foundation (Deemed to be University).



(Dr.K.Subba Rao)

Registrar (I/C)  
**REGISTRAR (I/C)**

Koneru Lakshmaiah Education Foundation  
(Deemed to be University)  
Green Fields, VADDESARAM-522 302,  
Guntur District, Andhra Pradesh

EXALTING EDUCATION, EPITOMISING EXCELLENCE

Admin. office : 29-36-38, Museum Road, Governorpet, Vijayawada, A. P., India. PIN : 520 002.

Phone No. : +91 - 888 - 3500122, 2577715, 2576129

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**DIRECTOR**

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



॥ सा विद्या या विमुक्तये ॥

स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड

'ज्ञानतीर्थ', विष्णुपुरी, नांदेड - ४३१ ६०६ (महाराष्ट्र राज्य) भारत

SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY, NANDED

'Dnyanteerth', Vishnupuri, Nanded - 431 606 (Maharashtra State) INDIA

Established on 17th September, 1994, Recognized By the UGC U/s 2(f) and 12(B), NAAC Re-accredited with 'B++' grade

Fax : (02462) 299574

POST GRADUATE SECTION

website: srtmun.ac.in

Ext. No 143, 153

E-mail: pg@srtmun.ac.in

Ref:P.G./Ph.D/2022-2023/ 3706

Date: 13/02/2023

## NOTIFICATION

It is hereby notified for the information of all concerned that the report of the referees appointed to examine and adjudicate the Thesis entitled:

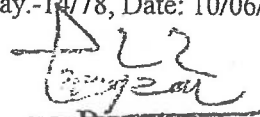
**A Study of Impact of Information Technology (IT) on Knowledge Management Practices in Higher Education With Reference to Western Maharashtra.**

Submitted by the candidate mentioned below has been accepted by this University, and the candidate has been declared 'Eligible' for the award of Degree of:

**DOCTOR OF PHILOSOPHY (Ph.D.)**

**SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY**

Name of the Candidate : Padwal Umakant Mahadev  
Date of Registration : 12/05/2014  
Topic of Research : A Study of Impact of Information Technology (IT) on Knowledge Management Practices in Higher Education With Reference to Western Maharashtra.  
Guide : Dr. H. S. Patil  
Subject : Management Science  
Faculty : Commerce & Management  
Viva Voce Held on : 13/02/2023  
Eligibility No. : Ph.D./Mngt. Sci./May.-14/78, Date: 10/06/2015

  
Director

**Board of Examinations & Evaluation**

Copy forwarded with compliments to :

01. The University Grants Commission, Bahadurshah Zafar Marg, New Delhi.
02. The Joint Secretary U.G.C., Western Regional Center Aundh Road, Ganeshkhind, University Campus, Pune - 411 007.
03. The Secretary Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110 002.
04. The Editor, University Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110 002.
05. The Dean of concerned faculty.
06. The Director, Board of Examinations & Evaluation, this University
07. Research Guide : Dr. H. S. Patil
08. Researcher : Padwal Umakant Mahadev
09. Convocation Section, this University
10. The Director, Knowledge Resource Center, this University
11. Research Centre

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
DIRECTOR

K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale (Islampur)

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डॉ. अजितसिंह एन. जाधव

M.E. (Electronics), Ph.D. (E & TC)

संचालक, परीक्षा व मुल्यमापन मंडळ

**Dr. Ajitsinh N. Jadhav**

M.E. (Electronics), Ph.D. (E & TC)

Director,

Board of Examinations & Evaluation



Estd: 1962

A<sup>++</sup> Accredited by NAAC (2021)  
with CGPA 3.52

शिवाजी विद्यापीठ,

विद्यानगर, कोल्हापूर - ४१६ ००४.

**SHIVAJI UNIVERSITY,**

Vidyanagar, Kolhapur - 416 004

दूरध्वनी (थेट) : २६९३१७६, २६०९०६७,  
२६०९०६८

Phone : (Dir.) - 2693176, 2609067,  
2609068

Web : www.unishivaji.ac.in

E-mail : coe@unishivaji.ac.in

## Declaration of Result

It is hereby declared that the thesis entitled,

### **FAULT DIAGNOSIS OF ROTOR BEARING SYSTEM BASED ON MODEL-BASED-MATRIX METHOD (MBMM) AND COMPETITIVE LEARNING METHOD**

Submitted by, **Shri. Shinde Prasad Vishwasrao** in **Mechanical Engineering** under the Faculty of Science and Technology is accepted by the university authorities for the award of the Degree of Doctor of Philosophy in **Mechanical Engineering** under the Faculty of Science and Technology on 04<sup>th</sup> January, 2023.

No. SU/PG/EXAM/Ph.D./647/253

Date: 18 JAN 2023

To,

1. **Shri. Shinde Prasad Vishwasrao,**  
A/p- Ashta, Tal. Walwa Dist. - Sangli 416 301.
2. Research Guide – **Dr. R. G. Desavale,**  
Rajarambapu Institute of Technology, Rajaramnagar, Sakharale - 415 414.
3. The Director, Barr. Balasaheb Khardekar Knowledge Resource Centre, Shivaji University, Kolhapur.
4. The Director, Department of Technology, Shivaji University, Kolhapur.
5. Statement of Marks / Certificate Unit.
6. Convocation Unit.
7. Statistics Section.
8. UGC Notification File.

Director

Board of Examinations and Evaluation

**REGISTRAR**  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

**DIRECTOR**  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

क्रमांक  
Sl. No. 47390

अनुक्रमांक  
Roll No. 19709716



## विद्या वाचस्पति

प्रमाणित किया जाता है कि ..... विद्यार्थी ..... २/०

जससु राम नासा

..... को इस विश्वविद्यालय  
की वर्ष 20/4..... की परीक्षा में उत्तीर्ण होने पर विद्या वाचस्पति  
की उपाधि प्रथम श्रेणी में प्रदान की गयी।

## Doctor of Philosophy

This is to certify that..... VINAY KUMAR २०

JASU RAM NASSA

.....obtained the  
Degree of Doctor of Philosophy in EFFECTIVENESS OF VIDEO LESSON  
USING MOBILE LEARNING. <sup>TECHNOLOGY</sup> in this University in the year 20/4..... and  
that he/she was placed in the ... I<sup>st</sup>..... Division.

दिनांक / Dated 16 JULY 2016

बसंत पंचमी / Basant Panchami.....Vikramiya/विक्रमीया  
वीर बहादुर सिंह पूर्वांचल विश्वविद्यालय, जौनपुर  
Veer Bahadur Singh Purvanchal University, Jaunpur (U.P.)

  
कुलपति  
Vice-Chancellor

  
REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
DIRECTOR  
K. E. Society's

Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)





# SINGHANIA UNIVERSITY

## Doctor Of Philosophy

The Board of Management of the Singhania University confers on Mr./Ms. ~~Vinay Kumar~~ Son/Daughter of Sh. ~~Shijassu Ram Nassa~~ the degree of ~~Doctor Of Philosophy~~ in ~~Computer Science And Engineering~~ on his/her having successfully completed the prescribed requirements for the said degree on 12<sup>th</sup> May 2013. The degree has been awarded in compliance of UGC (Minimum Standards and Procedure for Awards of M.Phil./Ph.D. Degree) Regulation, 2009.

His/Her title of the thesis was: "~~PROJECT MANAGEMENT EFFICIENCY USING SOFT COMPUTING AND RISK ANALYSIS TECHNIQUES~~".


Given under the seal of the University




  
Registrar

  
President

Pachori Bari, Distt. Jhunjhunu, Rajasthan, India. Dated 10<sup>th</sup> July, 2021.

  
REGISTRAR  
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Rajaramnagar, Sakharale (Islampur)

  
DIRECTOR  
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Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

Registration No.



135015AM13F04



**National Institute of Technology Karnataka, Surathkal**  
hereby confers the degree of

**Doctor of Philosophy**

on

Patil Amit Prakash



*in recognition of the research work on*

*"MODELING REFERENCE EVAPOTRANSPIRATION USING HYBRID  
ARTIFICIAL INTELLIGENCE TECHNIQUES IN ARID AND SEMI-ARID  
REGIONS OF INDIA"*

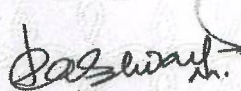
*carried out in the Department of  
Applied Mechanics And Hydraulics  
and completed all the requirements  
in January 2017*

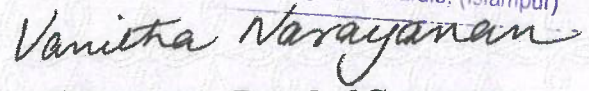
*Given under the seal of the Institute,  
on 28<sup>th</sup> October 2017*

  
**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
Registrar

  
Director

  
Chairperson, Board of Governors

  
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K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)

Sl. No. PH17001



Estd : 1962  
NAAC 'A' Grade

SHIVAJI UNIVERSITY, KOLHAPUR - 416 004, MAHARASHTRA  
PHONE: EPABX-2609000. PGBUTR - 2609139  
FAX +91-0231-2691533 & 2692333 website: www.unishivaji.ac.in  
शिवाजी विद्यापीठ, कोल्हापूर, ४१६ ००४, महाराष्ट्र  
दुरध्वनी (इपीबीएक्स) २६०९०००१ पी.जी.बी.यु.टी.आर. २६०९१३९  
फॅक्स : ९१-०२३१-२६९१५३३ व २६९२३३ e-mail : pgbutr@unishivaji.ac.in

Ref. No. SU / PG / BUTR / Ph.D./ 7902

Date: 24 JUL 2019

## Ph.D Declaration Certificate

It is hereby Certified that the thesis entitled,  
**STUDIES ON SPRAYED  $Cu_2CoSnS_4$  THIN FILMS AND THEIR USE IN SOLAR CELL APPLICATION**  
submitted by **Shri. Maldar Parvejha Shamshuddin** in the subject of **Physics** under the **Faculty of Science and Technology** is accepted by the university authorities for the award of the Degree of **Doctor of Philosophy in Physics** under the **Faculty of Science and Technology** on **06/07/2019**.

It is hereby also certified that the Ph.D. awarded to **Shri. Maldar Parvejha Shamshuddin** is in compliance of the provision of UGC (Minimum Standard and Procedure for the award of Ph.D. Degree Regulation 2009)

This certificate is issued in the light of UGC directive F.No.1/1/2002 (PS) Pt file III dated 28 August 2009 and as per the decision of the academic council held on 11/02/2010.

  
Dy. Registrar

  
REGISTRAR  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
DIRECTOR  
K. E. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur) 



**SURESH  
GYAN VIHAR  
UNIVERSITY**  
Accredited by NAAC with 'A' Grade

**We, the Chairperson, the President and the  
Members of the Board of Management**  
by virtue of the authority vested in us by law and on recommendation  
of the Academic Council do hereby confer

the degree of  
**Doctor of Philosophy**  
in the faculty of  
**Engineering & Technology**  
(Computer Science & Engineering)

on

**VIJAY H. KALMANI**

who has successfully completed all the prescribed requirements,

on 22.12.2016

The title of thesis is

**"Enhancing the Security of Data in Mobile Cloud Computing"**

**Awarded at Jaipur, this Day, 16 of June, 2018**

Issued under the seal of the university and the signature of the said Authority

PHOTO COPY



*DBudath*  
President

*Proth*  
REGISTRAR  
K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharin (Jaipur)

*[Signature]*  
DIRECTOR  
K. E. Society  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharin (Jaipur)

For further details of this certificate visit [www.gyanvihar.org](http://www.gyanvihar.org)

# Shivaji University, Kolhapur



the Chancellor, Vice-Chancellor and  
Members of the Management Council on  
the recommendation of the Academic Council certify that

*Gaikwad Pratapsingh Vijaysingh*  
Mother's Name - *Laxmi*



has passed the

## Doctor of Philosophy

*in Chemistry*

*in faculty of Science And Technology*

*on 10<sup>th</sup> February, 2021.*

*The said degree has been conferred on him*

*at Kolhapur in the Summer Session*

*of the year two thousand twenty one.*

**In Testimony** *whereof are set the seal of the  
university and the signatures of the Registrar and the Vice-Chancellor.*

*2021*

*[Signature]*  
Registrar

**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)



*[Signature]*  
Vice-Chancellor

**DIRECTOR**

K. E. Society's

Rajarambapu Institute of Technology

An Autonomous Institute

Rajaramnagar, Sakharale, (Islampur)

Sr. No. B-21

36015

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI  
KARNATAKA, INDIA



*This is to certify that,*

VAIBHAV SIDRAYA GANACHARI

*has been conferred the Degree of*

**Doctor of Philosophy**

*in*

FACULTY OF MECHANICAL ENGINEERING SCIENCES

*for the thesis entitled*

EXPERIMENTAL INVESTIGATION OF DRY AND NEAR DRY EDM PROCESS.

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

PH  
23 00660

Given under the seal of the University

USN: 5VY15PMJ02




BELAGAVI

DATE : FEBRUARY 24, 2023

REGISTRAR

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
VICE CHANCELLOR/DIRECTOR

K.E.S. Society's  
Rajarambapu Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale, (Islampur)



# भारतीय प्रौद्योगिकी संस्थान मुंबई

जलवाडी सुधींद्र नारायण

को एतद्द्वारा

विद्या वाचस्पति

की उपाधि प्रदान करता है।

अभिपद की अनुशंसा पर संस्थान की मद्रकित यह उपाधि  
अब्रासि हेतु विनियमों में विहित अपेक्षाओं को पूरा कर लेने पर  
तथा अपने शोध-प्रबन्ध के सफल पक्षपोषण के उपरांत  
मुंबई, भारतीय गणराज्य में आज 20 अगस्त, 2022 को दी गई है।

## Indian Institute of Technology Bombay

upon recommendation of the Senate hereby confers the degree of

### Doctor of Philosophy

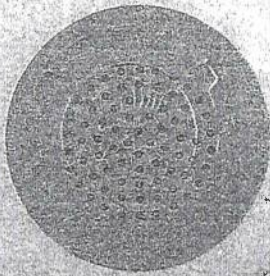
on

**Jalwadi Sudhindra Narayan**

who has fulfilled the requirements for the degree as prescribed under the  
regulations and successfully defended the thesis entitled

“Progressive Damage Evolution in Quasi-brittle Materials using the Virtual Internal Bond  
Technique.”

Given this day, under the seal of the Institute at Mumbai in the  
Republic of India, the 20th day of August, 2022.



*Schandi*

अध्यक्ष, अभिपद  
Chairperson, Senate

*gkm*

कुलसचिव  
Registrar

*Sharma*

अध्यक्ष, शासी मंडल  
Chairperson, Board of Governors

*pr*

REGISTRAR


K. S. P. Indian Institute of Technology  
Rajaramnagar, Sakharale (Islampur)

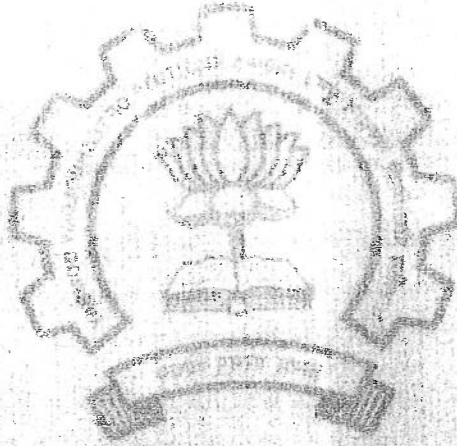
Verify at <https://portal.iitb.ac.in/verify/>  
Verification Ticket Number: GC43838300 3685 6047

DIRECTOR  
K. S. P. Society's

Rajaramnagar Institute of Technology  
An Autonomous Institute  
Rajaramnagar, Sakharale (Islampur)

Certified ORIGINAL Degree

  
Jt. Deputy Registrar (Academic)  
IIT Bombay, Powai, Mumbai-76.



  
**REGISTRAR**

K.E.S. Rajarambapu Institute Of Technology  
Rajaramnagar, Sakharale (Islampur)

  
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