



No: GHRUA/R&D Cell/Ph.D./RRC/2020-21/ MATHS 007

Date: 01st March 2021

To: Geetanjali Prasanna Kale

It is to inform you that the Research and Recognition Committee held on **22/02/2021** has accepted your application for Registration for Ph.D. Degree in the discipline of **Mathematics** under the faculty of **Science & Technology**.

The approved topic, Supervisor, Place of Research and Date of Registration are as under:

Topic of Research	:	<b>"USE OF NOVEL ARTIFICIAL INTELLIGENCE METHODOLOGY FOR THE DEVELOPMENT OF MATHEMATICAL MODELING"</b>
Supervisor	:	<b>Dr. Seema Sudhir Raut, School of Sciences, GHRU Amravati</b>
Co-Supervisor	:	<b>Dr. Sudhir N.Shelke, Principal, Guru Nanak Institute of Technology, Nagpur.</b>
Place of Research	:	<b>School of Sciences, GHRU Amravati</b>
Date of Registration	:	<b>w.e.f. 1<sup>st</sup> June 2020</b>
Suggestion if any	:-	

In addition to above, the candidate shall follow the instructions as mentioned below:

01	You are informed to submit six months progress report on following dates:		
	1st Progress report – 1st December 20	3rd Progress report – 1st December 21	5th Progress report -1st December 22
	2nd Progress report – 1st June 21	4th Progress report – 1st June 22	6th Progress report – 1st June 23
	<b>Note:</b> you shall submit to the Controller of Examinations through the Head, Place of Research and the guide the progress report of your research after every six months. If you fail to submit three reports consecutively, your registration may be cancelled by Research and Recognition Committee on the recommendations of the guide and of Head of Place of Research.		
02	Minimum two research publications in Science Citation Index (SCI) journal / Institute of Scientific Information (ISI) indexed journals / Scopus indexed journal / web of science indexed journal. The 'final accepted for publication' research paper may also be considered.		
03	It is clarified that if the paper is co-authored by more than one research scholars apart from supervisors, then only one research scholar whose name appears in the first amongst list of scholars would get credit of paper publication for submission of the Thesis.		
04	The regular yearly fees as prescribed by University will have to be paid in time.		
05	You have to submit the Ph.D. Thesis within SIX Years from the date of registration, otherwise; your registration shall stands cancelled as per the provisions of the concerned ordinance(s).		
06	<b>Please note that this registration of Ph.D. is subjected to the verification and truthfulness of all necessary documents at any level at any time during the tenure.</b>		
07	Notwithstanding anything stated in this letter, for any unforeseen issues arising, and not covered by Ordinance 9 of 2018, or in case of any dispute/ ambiguity or in the event of differences of interpretation, the decision of the Vice-Chancellor shall be final.		
	<b>This letter is subject to correction, if any.</b>		

Registrar  
G. M. Raisoni University  
AMRAVATI.

Mr. Snehil G. Jaiswal  
Officiating Registrar  
G H Raisoni University, Amravati

Copy to:

1. Dr. Seema Sudhir Raut, Supervisor
2. Office of Controller of Examination, GHRUA
3. Dean, Research & Development, GHRUA



Address : G H Raisoni Nagar, Anjangaon Bari Road,  
Amravati - 444701 (MH)  
Tel. : +91-0721-2385429 / 32 / 35  
Web : www.ghru.edu.in | Email : info@ghru.edu.in  
Corporate Office : 345, Shradha House, Kingsway, Nagpur- 440001 (MH)  
Tel. : +91-712-6617181/82





**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

"(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Public Universities Act, 2016.) (Mah. Act No VI of 2017)"

**Examinations and Evaluation Department  
(Ph.D. Cell)**

**Examination & Evaluation Building, Laxminarayan Institute of Technology Premises,  
Amravati Road Nagpur-440033**

No. RTMNU/Ph.D.Cell/RRC/Guide/2020/1131

Dated : 02/01/2021

To,

Dr. Sudhir Namdeorao Shelke  
Asso. Professor  
Gurunank Institute of Technology  
Nagpur


**Subject :- Recognition for Guiding/Supervising Ph.D. Scholars in the subject  
Electronics Engineering under the faculty of Science & Technology.**

**Reference :- Your application dated 16.01.2020**

Sir/Madam,


With reference to your application, I am pleased to inform you that the Board of Deans in its meeting held on 05.12.2020 has granted recognition as a Guide/Supervisor for Ph.D. in the subject **Electronics Engineering** under the faculty of **Science & Technology**.

Yours faithfully,

  
Deputy Registrar  
(Ph.D. Cell)



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Principal  
Gurunank Institute of  
Technology

**Research Proposal**  
**on**

**“Use of Novel Artificial Intelligence methodology for the development of Mathematical modeling”.**

Submitted for Confirming Registration of Degree of Doctor of  
Philosophy in Mathematical Science (Faculty of Basic Sciences)

By

**Mrs. Geetanjali Prasanna Kale**



Under the guidance of,

**Dr. Seema Sudhir Raut**

**Assistant Professor in Mathematical Science & Supervisor**  
**Raisoni Centre for research and Innovation G. H. Raisoni**  
**University, Amravati**

And

**Dr. Sudhir N. Shelke Co-Supervisor**

**Designation: Principal GuruNanak Institute of**  
**Technology, Nagpur**  
**GNI**

**G.H. Raisoni University, Amravati 2020-21**



*Shak*  
**Principal**  
**Guru Nanak Institute of**  
**Technology**



G. H. RAISONI UNIVERSITY, AMRAVATI

CERTIFICATE

Research proposal entitled "Use of Novel Artificial Intelligence methodology for the development of Mathematical modeling".

Being submitted by Mrs. Geetanjali Prasanna Kale to the G. H. Raison University Amravati for the registration of Ph.D. Degree under the Faculty of Basic Sciences has been prepared as per the guidelines given by Raison centre for Research and innovation.

*Geetanjali*  
14/03/2021

Mrs. Geetanjali Prasanna Kale  
(Research Student)

*Seema*  
14/03/2021

Dr. Seema Sudhir Raut,  
Assistant Professor  
G.H.Raison University Amaravati  
(Research Supervisor)

*Sudhir N. Shelke*  
14.03.2021

Dr. Sudhir N. Shelke  
Principal  
Guru Nanak Institute of Technology, Nagpur  
(Research Co-Supervisor)

Date: 14. 03. 2021

Place:-Nagpur



*Shake*  
Principal  
Guru Nanak Institute of  
Technology



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY

\* Established by Government of Central Province & Southern Department by Notification No. 523 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Universities Act, 1958 [2]

Ph.D. Cell

President's Research Laboratories, Institute of Tech. B.T.M. Nagpur University, Amravati Road, Nagpur-440022.  
Phone No. A Pbx No. (020) 2534842 (020) 2534843 (020) 2534847 Fax No. 0202534851 e-mail ID: [prabhatkumar@rediffmail.com](mailto:prabhatkumar@rediffmail.com)

No. Ph.D. (Cell)/RRC/ 328

Nagpur, dated 23/06/2015.

From : Mr. Umesh Wulke,  
Deputy Registrar (Ph.D. Cell)  
Rashtriya Sanshodhan Mandal,  
Nagpur University, Nagpur

To.

Dr. Ganesh D. Awchat,  
Assoc. Prof. & Dept. of Civil Engg.,  
Gurunarak Institute of Engineering & Tech.,  
Dahegpur, Nagpur.

Subject :- Recognition as a Supervisor for M.E. By Research & Ph.D.

Reference :- Your application dated 20/03/2014.

Sir/Madam,

With reference to above, I am directed to inform you that the Hon'ble Vice-Chancellor has, on behalf of the Board of University Teaching & Research accepted the recommendations of the Research and Recognition Committee on 29/01/2015 granting recognition as a Supervisor for a Ph.D. in the Subject Civil Engineering Under the faculty of Engineering & Technology

You are therefore, directed to submit your Mark list/ Degree /Ph.D. Degree Verification Certificate in Original within 30 days from receipt of this letter failing which your approval of Supervisor- ship will stands cancelled.

Yours faithfully,

(Umesh Waikey)  
Deputy Registrar (Ph.D. Cell)  
Rashtrasant Tukadoji Maharaj  
Nagpur University



**Principal  
Guru Nanak Institute of  
Technology**



RASHTRASANT TUKADOJI MAHARAJ

**NAGPUR UNIVERSITY**

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No. Ph.D. (Cell)/RRC/Guide/E & T/4236/0/326 Nagpur, Dated the 14 Dec. 2006

From :

The Deputy Registrar (Exams.)  
Nagpur University,  
**NAGPUR.**

To,

✓ Dr. N.S. Ranga,  
Scientist, CISA  
Neeri, Nehru Marg,  
N A G P U R.

**Subject :- Recognition as a Ph. D. Supervisor.**

Sir/Madam,

It gives me pleasure to inform you that the Board of University Teaching & Research in its meeting held on 26-9-2006 resolved to grant you recognition as Ph.D. Supervisor for the subject Civil Engg. (Env. Engg.) in the faculty of Engg. & Tech.

Yours faithfully,

*[Signature]*

Deputy Registrar (Exams.)  
Nagpur University.

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13/12/06  
*[Signature]*  
**Principal**  
**Guru Nanak Institute of Technology**

# University of Pune



Telephone Nos : 25601258/1259  
E-mail : boards@unipune.ac.in  
Telegraph : 'UNIPUNE'  
Fax No. : 25691233

ACADEMIC SECTION  
Ganeshkhind, PUNE-411 007

Ref. No. : BUTR/Engg./136/ 213

Date : 17 / 2 / 2014

To

Dr. Ragit Satishchandra Shamrao  
Amrutvahini College of Engineering,  
Sangamner, Dist. Ahmednagar - 422 608

**Subject : Recognition as a Ph.D Guide.**

Sir,

Please refer to your application for Recognition as a Ph.D Guide of this University, I am directed to inform you that the University authorities have been pleased to recognize you as a Ph.D Guide of University of Pune, under the provision of Section 36A of the Maharashtra Universities Act, 1994.

*The details of your recognition are as under :*

1. You have been recognized for guiding maximum eight (8) Ph.D. students including all universities in the subject of **Mechanical Engineering** for a period of eight (8) years with effect from 25/11/2013 to 24/11/2021.

I am further directed to inform you that, if you are not a full-time teacher in the University Department/Affiliated College / Institute recognized by the University of Pune, you shall be required to apply again for recognition giving the details of your previous recognition and independent research work, publications etc., for considering the question of grant of continuation of recognition to you. Needless to say that the recognition granted to you is always subject to the terms and conditions prescribed by the University, from time to time, in this behalf.

Please contact this office within fifteen days for correction in the approval letter if any.

Thanking you,

Yours Sincerely,

For Director  
(BCUD)

Copy fws to :

1. The Dean, Faculty of Engineering.
2. The Principal, Amrutvahini College of Engineering, Sangamner Dist. A'nagar - 422 608
3. The Assistant Registrar (Admissions), University of Pune, Pune-411 007.

**HOD**

Department of Mechanical Engg  
Imperial College of Engineering  
& Research  
Wagholi, Pune- 412 207.

**Principal**  
Amrutvahini Institute of  
Technology