



### 1. Personal Information:

- **Name:** Dr. VIJAYA RAVINDRA THOOL
- **Position:** Associate Professor and Head of Department.
- **Department:** Instrumentation Engineering
- **Contact Information:** [vrthool@sggs.ac.in](mailto:vrthool@sggs.ac.in), 9960899486

### 2. Educational Background:

- **Degrees:**  
B.E.(Instrumentation),1990, Marathwada University, Aurangabad.  
M.E.(Instrumentation),1994, Marathwada University, Aurangabad  
PhD (Agricultural Instrumentation),2009, SRTMU Nanded.
- **Postdoctoral Experience:** Nil.
- **Certifications:** Nil

### 3. Research Interests:

- **Areas of Expertise:** Agricultural Instrumentation, Biomedical Instrumentation.
- **Ongoing Projects:** Nil
- **Interdisciplinary Work:** Nil

### 4. Teaching Experience:

- **Courses Taught:**

- 1 Sensors and Transducers
- 2 Biomedical Instrumentation-I
- 3 Electronic Instrumentation
- 4 Analog and Digital Instrumentation
- 5 Biomedical Instrumentation-II
- 6 Metrology and Precision
- 7 Computer Programming C and Basic.
- 8 Electrical Engineering
- 9 Advanced Sensors
- 10 Chemical and Analytical Instrumentation
- 11 Computer Oriented Numerical Methods
- 12 Computer Network
- 13 Sugar Instrumentation
- 14 Biomedical Instrumentation (UG AND PG)
- 15 Instrumentation & Control
- 16 Data Communication for automation
- 17 Intelligent Sensors
- 18 Agricultural instrumentation

- **Course Development:** Sensors and Transducers

## 5. Publications and Presentations:

### Papers Published in Journals

Sr. No.	Authors	Paper Title	Journal	Vol	No	Pages	Year
1	V. R. Thool, R. C. Thool, Shrivastav, Ullagaddi.	Automation in Drip Irrigation System	IETE Special issue on Agriculture Electronics. May-June 2003	Vol 20	3		2003

2	V. R. Thool, S.G.Kahalekar, Patil Prasad, Nalawade Vijay	Electronic Nose	Invention Intelligence, September-October 2006			34-36	2006
3	V. R. Thool S. R. Pokharkar	Early Pest Identification In Greenhouse Crops Using I mage Processing Techniques	Paper Id 'IJCSN-2012-1-3- 49' IJCSN Volume 1, Issue 3, June 2012	V1	3		2012
4	V. R. Thool, S. Nandurkar	Design of a soil moisture sensing unit for smart irrigation application.	IJCA , USA 2012				2012
5	N. D. Agham, V. R. Thool	Labview-Based physiological parameters monitoring system for patient healthcare.	International journal of engineering research and technology (IJERT) , Vol-3 Issue 2, February 2014.				2014
6	V.R.Thool, R.C.Thool, A.Biradar	Genetic algorithm-based energy efficient intelligent unipath routing for MANET	ICC-2014			276- 282	2014
7	P. S. Vikhe · V. R. Thool	Mass Detection in Mammographic Images Using Wavelet Processing and Adaptive Threshold Technique	Journal of Medical System				2016
8	Vikhe PS, Thool VR	. Morphological operation and scaled Rényi entropy-based approach for masses detection in mammograms.	Multimedia Tools and Applications. 2018 Sep 1;77(18):23777- 802.				2018
9	Vikhe PS, Thool VR	Detection and Segmentation of Pectoral Muscle on MLO-View Mammogram Using Enhancement Filter.	Journal of medical systems. 2017 Dec 1;41(12):190.	41	12	190	2017
10	Vikhe PS, Thool VR	A wavelet and adaptive threshold-based contrast	International Journal of				2019

		enhancement of masses in mammograms for visual screening.	Biomedical Engineering and Technology. 2019 Jun 20;30(1):31-53.				
11	<u>Ramyashri B. Ramteke , Vijaya R. Thool</u>	“ECG Based Stress Detection in Automobile Drivers Using Long Short-Term Memory (LSTM) Network.	Part of the <u>Communications in Computer and Information Science</u> book series (CCIS,volume 1441) <u>First Online: 21 October 2021</u>				2021-2022
12	<u>Ramyashri B. Ramteke &amp; Vijaya R. Thool</u>	“Heart Rate Variability-Based Mental Stress Detection Using Deep Learning Approach	<u>Applied Information Processing Systems</u> pp 51–61 , <u>21 July 2021</u>				2021-2022
13	<u>Ramyashri B. Ramteke &amp; Vijaya R. Thool</u>	Acute mental stress level detection:A ECG SCALOGRAM BASED ATTENTIVE CONVOLUTION NETWORK	FRANKLIN OPEN				2025
14	Nitin Lokhande,Vijaya Thool	Plant Leaf Disease Detection with Feature Extraction and Dense Maxout Forward Harmonic Network	INTERNATIONAL JOURNAL OF COMPUTATIONAL INTELLIGENCE AND APPLICATIONS				2025

- **Books:**

*Instrumentation Schemes and Optimization of Parameters in Drip Irrigation System*

*Vijaya Thool, Tapan Kumar Basu and Ravindra Thool*

**Paperback:** 220 pages

**Publisher:** LAP Lambert Academic Publishing (18 July 2012)

**Language:** English

**ISBN-10:** 3846500054

ISBN-13: 978-3846500057

- **Journal Articles:**

## 6. Awards and Honors

- **Grants:**

*Title of the Project: Design and Development of Low-Cost Solar Powered Various Precision Agriculture Systems*

Dr. Vijaya Thool

**Granted by:** All India Council for Technical Education (AICTE)

**Grant-in-aid Sanctioned:** Rs. 852941/-

**Year:** 2017-18

- **Awards:**

Sr. No.	Award	Organization	Details
1	Best Teacher Award for the year 1998-99	SGGSCE&T, NANDED	College Students Council
2	Selected by International who's who organization for publishing name in their proceeding from women.	International who's who organization	Marquies Who's Who proceeding 2007.
3	Mahatma Jyotirao Phule Purskar: Best Teacher Award 2016	Mahatma Jyotirao Phule Teacher's Council, Maharashtra	Mahatma Jyotirao Phule Teacher's Council, Maharashtra
4	Mahatma Jyotirao Phule Purskar: Nari Ratna Award 2017	Mahatma Jyotirao Phule Teacher's Council, Maharashtra	Mahatma Jyotirao Phule Teacher's Council, Maharashtra

- **Fellowships:**

## 7. Professional Experience

- **Administrative Roles:** Head of Department since 2022.
- **Industry Collaboration:** Nil
- **Consulting Work:** Nil

## 8. Supervision and Mentoring:

- **PhD/Master's Supervision:**

Registration No.	Name of Student	Project Topic	Registered Year
1	Pratap S. Vikhe	Studies of computer-aided diagnosis schemes for early breast cancer detection.	Under QIP 2014-15(SGICO3)
2	Anjali Birajdar	Heart rate variability	Under SRTMU 2015
3	Balasaheb More	Smart grid	Under SRTMU 2015 Thesis submitted to university.
4	Ramyashri B. Ramteke	Heart Rate Variability based Stress Analysis using Deep Learning	Under IRSS 2017
5	Nitin N.Lokhande	Novel Techniques for plant disease identification based on deep learning.	Under SRTMU 2017

## 9. Professional Memberships

- **Associations:**

SN	Organization	Membership Details		
		Type	Date	Number
1	Indian Society for Technical Education	Life member	July 1995	21180
2	American Society of Agricultural and Biological Engineers	Member	15 April 2003	1023115
3	Instrument Society of India	Life Member	3 Dec.2005	1322

## 10. Miscellaneous

- **Languages:** Marathi, Hindi, English
- **Skills:** Design of various Agricultural Projects
- **Personal Interests:** Reading Books, Drawing and Paintings.