



# AISSMS

## COLLEGE OF ENGINEERING

ज्ञानम् सकलजनहिताय

Approved by AICTE, New Delhi, Recognized by Government of Maharashtra  
Affiliated to Savitribai Phule Pune University and recognized 2(f) and 12(B) by UGC  
(Id.No. PU/PN/Engg./093 (1992))

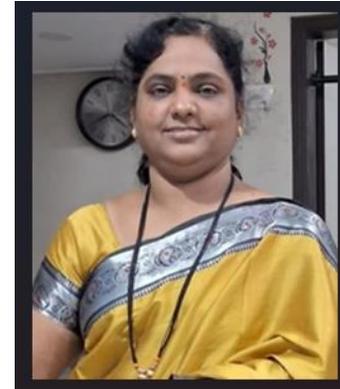
Accredited by NAAC with "A+" Grade | NBA - 6 UG Programmes



## Department of Electronics and Telecommunication Engineering

### Faculty Profile

**Name:** Mrs. Rajeshri Rahul Itkarkar  
**Address:** Rajeshri Rahul Itkarkar B1/5, Shubhashree woods,  
Pimple Saudagar, Pune 411027 8412988834  
[rritkarkar@aissmscoe.com](mailto:rritkarkar@aissmscoe.com), itkarkarrajashri@yahoo.com



**Date of Birth:** 26/02/1973  
**Designation:** Assistant Professor

Experience:

- Currently working as Assistant Professor with AISSMS, College of Engineering, Pune since 3rd July 2017.
- Worked with JSPM's RSCOE, Pune from 3rd Jan 2009 to 31st June 2017. (8 years 5months)
- Worked as Lecturer with Vishwakarma Institute of technology, Pune from 12<sup>th</sup> December 2000 to 31<sup>st</sup> December 2008 ( 8 years.)

**Areas of Interest :** Image Processing, Signal Processing, Artificial Intelligence, Analog and Digital Communication, Mobile Communication and Video Engineering.

### Academic Qualification Attained:

Degree	University/College	Year of Passing	% age Grades	Specialization
Ph.D	Vishveshwarya Technological University, Belgum. B V Bhommaraddi COE & Technology Hubali Karnataka	2022	-	Vision Based method for hand gesture recognition for Indian Sign Language
ME- E & TC	Kolhapur Institute of Technology's COE, Kolhapur	2007	68 %	Electronics and Telecommunication

BE	Kolhapur Institute of Technology's COE, Kolhapur	of 1995	64%	Electronics
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**Teaching Experience : Total Teaching experience of 22 Years (3 years for PG)**

Institute	Duration	Post Held	Main Subjects Taught
AISSMS COE, Pune	Since 3 <sup>rd</sup> June 2017 till date	Assistant Professor	Artificial Intelligence Mobile Communication, Electromagnetics and Wave propagation, Wireless Sensor Networks Analog Communication, Digital Communication,
JSPM's Rajarshi Shahu College of Engineering, Pune	Since 03/01/2009 till date (7 Years)	Assistant Professor, Senior Lecturer	UG- Analog Communication, Digital Communication, Information Theory and Coding Techniques, Mobile Communication, Audio and Video Engineering,  PG- Reconfigurable Computing, System On Chip, Image Processing and Computer Vision.
Vishwakarma Institute of Technology, Pune	18/12/2000 to 31/12/2008 (8 years)	Lecturer	Basic Electronics, Analog Communication, Digital Communication, Information Theory and Coding Techniques, Television Engineering,
Bharati Vidyapeet's College of Engineering Pune	15/07/2000 to 15/10/2000	Visiting Faculty	Control System, Basic Electronics.

**Books Published:**

Publisher	Year of publication	Title of the book
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Publisher	Year of publication	Title of the book
Wiley India Publication	Dec.2015	Television Engineering (Audio and Video System)  Included in syllabus of SPPU Pune under Audio video Engineering Subject for BE-E & TC

**Research Publications : Total publications -30**

- a. Journals:
  - i) International- 14
- b. Conference / Seminar / Symposia etc.:
  - i) International- 14
  - ii) National- 07
- c. Patents - 6

**Fellowship of Professional Societies .: ISTE & IETE**

ISTE- Membership no. LM -32009  
 IETE-Membership no. M-165712  
 IAENG Membership no- 241492  
 IE(I) Membership no – M1592216  
 Solar Energy Society- LM/2553/2021

**Number of M. Tech dissertations (Guided) :**

- a. Completed- 15

**Academic / Administrative Contributions at Department / Institute Level:**

**AISSMS COE, Pune**

- Project Co-ordinator
- Faculty Advisor AISSMS COE IEEE student Branch
- Department Mentoring Co-ordinator
- GFM-Guardian Faculty Member
- Student Activity Co-ordinator
- Supporting Department NAAC Co-ordinator (Department Presentation)
- Audit Course Co-ordinator

JSPM's Rajarshi Shahu College of Engineering, Pune.

- PG- Co-ordinator since 2013 till 2017
- **NBA- Work – handling Criteria-2**
- Asst. senior supervisor for Pune university exam – May-June-2009.

- AICTE Compliance Report work for year 2011 to 2015.
- IEEE student branch Co-ordinator for 2010 till date.
- Departmental Project Co-ordinator since 2009 to 2013.
- Department Central Library co-ordinator in year 2010 & 2011.
- Communication Laboratory In charge since 2009 till date.
- Compliance report of research center- Electronics.
- Custodian for University exam April- May 2012.
- ME- Admission and Counseling-- 2013 to 2015
- Senior Supervisor – Savitribai Phule, University theory Exams Oct/Nov 2014.
- Department Discipline Committee member.
- Guardian Faculty Member from 2009 till date.

#### **Workshops/Seminars/Conferences/Expert Lectures Organized. (AISSMS COE Pune)**

<b>A. Y</b>	<b>Workshops</b>	<b>Seminars/Expert sessions</b>	<b>Industrial Visit</b>	<b>Conference</b>
<b>2017-18</b>	<b>1</b>	<b>3</b>	<b>1</b>	
<b>2018-19</b>	<b>5</b>	<b>4</b>	<b>1</b>	
<b>2019-20</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1 -National</b>
<b>2020-21</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>1-International</b>
<b>2021-22</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>1-National</b>

#### **MOUs**

1. "SEED IT IDOL" competition on Jan 2018.(1 Year)
2. " Dzine Arena Pvt. Ltd" Pune 2018( 5 years)
3. **Certificate of Appreciation for sharing Knowledge, expertise and Mentoring students for a Consultancy projects by KONECRANES, March 2019, 2021 and 2022 .**
4. Certified Innovation Ambassador foundation and advance level by MoE's Innovation cell & AICTE cell 21-22

#### **Other Institute Correspondence**

- Resource Person in "Mobile Telecommunication System" for the subject "Mobile Computing" at the Faculty Orientation Workshop on BE(E&TC) revised syllabus (2019) under the aegis of Board of Studies (E&TC/Elex.), Savitribai Phule Pune University, organized by, Dept. of E&TC

Engineering, STES, Sinhgad Institute of Technology and Science, Narhe, Pune-41, from 30/01/2023 to 1/02/2023.

- Resource person at Induction Program for FE, at AISSMS COE Pune from 14<sup>th</sup> Nov 2022 to 25<sup>th</sup> Nov 2022 on Innovation
- Expert Talk “Information Theoretic Approach to Communication System”, for Digital communication at the Faculty orientation workshop on TE E&TC revised syllabus (2019) , Organized under the aegis of Board of Studies (E&TC/ Electronics) Savitribai Phule Pune University, Hosted By AIT Pune July 2022
- Expert Session on unit 5 -”Wireless system planning” for Cellular Network, Faculty orientation workshop on TE E&TC revised syllabus (2019) 28/01/2022, Organized under the aegis of Board of Studies (E&TC/ Electronics) Savitribai Phule Pune University, Hosted By KBTCOE, Nashik
- Expert Session on Digital Image Processing, 31/06/2022 Shree Siddheshwar Women’s COE, Solapur
- Invitation as Expert for demonstration of Vlab Experiments at, AISSMS Polytechnic, Shivaji Nagar Pune on 05/20/21
- Invitation as Expert for demonstration of Vlab Experiments at Annasaheb Awate College Manchar on 03/03/21
- Invitation as Expert for demonstration of Vlab Experiments at PDEA’s Baburaoji Gholap College Sangvi Pune on 07/05/21
- Invitation as Expert for demonstration of Vlab Experiments at Pratibha College Pune on 29/05/21
- Invitation as Expert for demonstration of Vlab Experiments at Parikrama COE, Kashti, 18/08/2020
- Invitation as Expert for demonstration of Vlab Experiments at SKN COE Pune, 07/10/2020
- Guest Lecture at S B Patil COE Indapur for TE( E & TC) on Digital Communication subject on 5th October 2020
- Faculty Mentor and Grader for IUCEE Course on “AI for all” Sep to Nov 2020
- Evaluator for PG Project Exhibition ePGPEX-15 on, held on 29-30<sup>th</sup> May 2015 at AISSMSIOIT, Pune under Savitribai Phule, University, Pune
- Panel Judge for Phase-1 evaluation of communication based project competition, held on 24<sup>th</sup> March, 2014 by IEEE communication society, Pune.
- Delivered an expert lecture on “Analog Communication” for SE(E&TC), held on 20<sup>th</sup> January 2014 at JSPM Narhe Technical Campus, Pune.
- Paper Setter for end semester examination from 14<sup>th</sup> September 2013 till date, at VIT Pune (Autonomous Institute affiliated to University of Pune.)
- Virtual Lecture conducted twice in Digital Communication for 5 JSPM’s campus transmitted JSPM corporate office Katraj, Pune.

Place:

Date:

(Prof.R.R.Itkarkar)

### **International Journals:**

1. Suraksha Surywashi , Prof. R R Itkarkar, “High quality text to speech synthesizer using phonetic integration”, International journal of advance research in electronics and communication Engg. Feb 2014.

2. Prof. Rajeshri R Itkarkar, Dr. Anil Kumar Nandy, “A Study Of Vision Based Gesture Recognition For Human Machine Interaction”, International journal of Innovative Research in Advanced Engg Volume 1 Issue 12 , December 2014, ISSN :2349-2163
3. Prof.R.R. Itkarkar, Dixit Rohan, Pattewar Balaji , Deshmukh Saurabh,” Hand Gesture Controlled Pick And Place Robot”, International Journal of Advanced Technology in Engineering and Science, Volume No.03, Issue No. 04, April 2015
4. Shilpa Bhople, Itkarkar Rajashri, Pooja Bhoir , ”Indian Sign Language Recognition”, *International Journal of Electrical, Electronics and Computer Science Engineering* Volume 2, Issue 3 (June 2015)| E-ISSN : 2348-2273|P-ISSN:2454-1222.
5. Pooja Bhoir , Itkarkar Rajashri , Shilpa Bhople ”Hand Gesture Recognition Based on Hidden Markova Model” *International Journal of Electrical, Electronics and Computer Science Engineering* Volume 2, Issue 3 (June 2015)| E-ISSN : 2348-2273|P-ISSN:2454-1222.
6. Neelam Tambe, Itkarkar Rajashri, “Remote Data Acquisition System (DAS) using GSM/GPRS” International Journal of Engineering Research and Technology, Vol. no 4, Issue 06, June-2015: ISSN:2278-0181
7. R R Itkarkar etal “ Car detecting method using high resolution images” International Journal of Recent and Innovation Trends in Computing and Communication” vol 4, Issue 2, Feb 2016.
8. R R Itkarkar et.al “ Image Fusion using double density discrete wavelet transform” International Journal of Computer Science and Network (IJCSN) vol 5, issue 1, Feb 2016.
9. Ashwini Khole, R R Itkarkar , Anilkumar Nandi, Robust Part-Based Hand Gesture Recognition Using Finger- Earth Mover’s Distance International Journals of Advanced Research in Computer Science and Software Engineering ISSN: 2277-128X (Volume-7, Issue-7)
10. Sonali Munde<sup>1</sup> , Prof. Rajashri Itkarkar<sup>2</sup>, Dr. D.G. Bhalke<sup>3</sup>, Dr. D. S. Bormane<sup>4</sup> Automatic Detection of Text Labels of Hand-Held Objects for Blind Persons, International Journal of Electronics, Electrical and Computational System IJEECS ISSN 2348-117X Volume 6, Issue 8 August 2017
11. Shuhangi Shinde, R R Itkarkar , Anilkumar Nandi Gesture to Speech Conversion for Sign Language Recognition, , International Journal of Electronics, Electrical and Computational System IJEECS ISSN 2348-117X Volume 6, Issue 8 August 2017
12. Itkarkar Rajeshri R, **Anil Kumar V. Nandi**, Vaishali B. Mungurwadi Indian Sign Language Recognition using Gabor Feature extraction International Journal Of Scientific & Technology Research, Vol 8, Issue 11, NOVEMBER 2019 ISSN 2277-8616 **Elsevier Scopus indexed**
13. Itkarkar Rajeshri R, **Anil Kumar V. Nandi**, Vaishali B. Mungurwadi Design and development of a Real Time hand gesture recognition system for India Sign language using Tensor flow LINO Journal, ISSN: 0211-2574 Feb 2021 SSN-0211-2574- Elsevier scopus Indexed- Q3 Scopus Journal
14. Itkarkar Rajeshri R, **Anil Kumar V. Nandi, et. al** Histograms of Oriented Gradients-Based Gesture to Voice Conversion System for Indian Sign Language using Raspberry Pi SAMRIDDHI Volume 12, Special Issue 2, 2020 Print ISSN: 2229-7111 Online ISSN: 2454–5767UGC approved journal

1. Itkarkar Rajeshri R, **Anil Kumar V. Nandi**, Vaishali B. Mungurwadi Indian Sign Language Recognition using Combined Feature Extraction Advances in Medical Physics and Healthcare Engineering (AMPHE2020) conference **Springer book series** – (SCOPUS Indexed) Lecture Notes in Bioengineering Presented online on 25<sup>th</sup> September 2020 Scopus conference
2. Rajeshri R. Itkarkar, Anilkumar Nandi , Bhagyashri Mane, “ Contour-Based Real-Time Hand Gesture Recognition for Indian Sign Language” Computational Intelligence in Data Mining pp 683-691, Part of the Advances in Intelligent Systems and Computing book series (AISC, volume 556) (**SCOPUS CONFERENCE**) DOI 10.1007/978-981-10-3874-7\_65, © Springer Nature Singapore Pte Ltd. 2017

### **International conference**

1. International conference on sensors, signal processing, communication, control & instrumentation (SSPCCIN) AT Vishwakarma Institute of Technology, Pune on 3<sup>rd</sup> – 5<sup>th</sup> Jan 2008. “ Video Compression using H.264 Video Codec”
2. International Conference on Recent Trends in Computer Science and Engg.. (ICRTCSE 2012) Tamil Nadu. “ Sign Language Interpreter(Gesture to Speech System)”
3. International Conference on Electronics & Communication Engg-ICECE-2012, Bhubenehswar. “Intelligent Transport System”
4. Prof. Rajeshri R Itkarkar, Dr. Anil Kumar Nandy, “Hand Gesture to Speech Conversion using Matlab.” International Conference on Computing, Communications and Networking Technologies (ICCCNT), 4-6 July 2013.
5. Asutosh Verule, Shivardhan Suryawanshi, Poonam Rajput, Rajashri Itkarkar, “ Application Control Using 3D Gesture Recognition” , International Conference on Convergence of Technology -2014, 978- 1-4799-3759-2/14/\$31.00©2014 IEEE. 6<sup>th</sup> -8<sup>th</sup> April 2014
6. R.R. Itkarkar, Dixit Rohan, Pattewar Balaji , Deshmukh Saurabh,” Hand Gesture Controlled Pick And Place Robot”, International Journal of Advanced Technology in Engineering and Science, Volume No.03, Issue No. 04, April 2015
7. Prof. Rajeshri R Itkarkar, Dr. Anil Kumar Nandi, “ A survey of 2D and 3D imaging used in hand gesture recognition for human-computer interaction (HCI)”, IEEE WIECON-ECE-2016. IEEE International Women in Engineering Conference on Electrical and Computer Engineering 2016, 19-21 December, 2016, 97-1-5090-3745-2/16/\$31.00 ©2016 IEEE.
8. Priyanka Dhyarkar, Prof. Rajeshri R Itkarkar, “Comparison analysis for signature verification of bank cheque” 2016 International Conference on Automatic Control and Dynamic Optimization Techniques (ICACDOT) International Institute of Information Technology (I<sup>2</sup>IT), Pune, doi:10.1109/icacdot.2016.7877718
10. Rajashri Itkarkar<sup>1</sup>, Chetana Patil<sup>2</sup> Depth-Based Hand Gesture Recognition, 3rd International Conference on Advancement in Engineering, Applied Science and Management (ICAEASM-2017), 20<sup>th</sup> August 2017, ISBN: 978-81-934288-1-8
11. Manisha Ghortale, Rajashri Itkarkar, D S Bormane Secret-Fragment Visible Mosaic Image Technique for Image Hiding 3rd International Conference on Advancement in Engineering, Applied Science and Management (ICAEASM-2017), 20<sup>th</sup> August 2017, ISBN: 978-81-934288-1-8
12. Sonali Munde, Rajashri Itkarkar, D G Bhalke, D S Bormane Automatic Detection of Text Labels of Hand-Held Objects for Blind Persons 3rd International Conference on Advancement in Engineering, Applied Science and Management (ICAEASM-2017), 20<sup>th</sup> August 2017, ISBN: 978-81-934288-1-8

13. Shital Gaikwad<sup>1</sup>, R.R.Itkarkar<sup>2</sup>, Dr.D.G.Bhalke<sup>3</sup>, Dr.D.S.Bormane<sup>4</sup> 2D to 3D Image and Video Conversion Methods 7th International Conference on Research Trends in Engineering, Applied Science and Management (ICRTEASM-2017), 27<sup>th</sup> August 2017, ISBN: 978-81-934288-2-5

14. Nishigandha Kale, R R Itkarkar Smart Museum Based on IOT, 3rd International Conference on Advancement in Engineering, Applied Science and Management (ICAEASM-2017), 20<sup>th</sup> August 2017, ISBN: 978-81-934288-1-8

### **National Conferences**

1. AICTE sponsored National Conference on Communication and Computing (NACC-2011) 22<sup>nd</sup> -24<sup>th</sup> September 2011 Department of Information Science and Engineering

Acharya Institute of Technology, Bangalor. “ Sign Language Interpreter using Matlab( Gesture To Speech Conversion)”

2. National level technical colloquium- at Amrutvahini COE, Sangmner on 23<sup>rd</sup> Feb 2011 with ISBN No. 988-93-80697-68-0 “ HART Modem”

3. National conference in Emerging trends in Computing & Communication –ETCC-2010 at Medicaps Institute Indore on 19-20 Nov 2010.” Wireless Sensor Networks for Environment Monitoring”

4. Shweta Joshi, Gayatri Jamadar, Sagar Nachan, R R Itkarkar, “Chilli Disease Detection” Proceeding of National Conference on Recent Innovations in Science Engg and Technology, 15<sup>th</sup> Feb 2015, Pune India, ISBN : 978-93-84209-92-6

5. Prof. Rajeshri R Itkarkar, et.al “ Sign Language Recognition using Hidden Markova Model” International organization of scientific research (IOSR), at the National Conference on Innovation in Engg. Science and technology (NCIEST-15) 28<sup>th</sup> and 29<sup>th</sup> December 2015

6. Mrs. R.R. Itkarkar et.al. "Theft Detection System using Raspberry Pi" National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016)EEE-2016) IETE Cynosure, 23-24 April 2016.

7. Mrs. R.R. Itkarkar et.al. "Convex Shape Decomposition Method For Hand Gesture Recognition " National Conference on Computer, Electrical and Electronics Engineering (NCCEEE-2016)EEE-2016) IETE Cynosure, 23-24 April 2016.