Somaiya Vidyavihar University

Name:	Arati Shirish Phadke	E-mail:aratiphadke@somaiya.edu
Contact No:	**9821053269**	

Department/Section: Electronics and Computer Engineering			
College: K J Somaiya College of Engineering			
DOJ Somaiya: 18/11/1991	Career Experience: 35 Yrs	Industry Experience:2.5Yrs	Teaching Experience: 32.5Yrs
Present Academic Designation: Assistant Professor		Present Administrative Designation:	

Area of research/specialization and Courses Delivered

Research domain/interests/areas
1. Digital System Design
2. Embedded Systems
3. Microprocessors & Microcontrollers
4. Engineering Education

Courses Delivered
5. **Under Graduate Courses:** Digital Systems Design I & II, HDL, Microcomputers and Microcontrollers I and II , Microcomputer Systems Design, Embedded Systems, Real Time Operating Systems, Power Electronics, ASIC Verification, Python Programming, Computer Organization, Engineering Exploration, Programming in C , Analysis of Algorithms , Project Based Learning
6. **Post Graduate Courses:** Microprocessor and Systems I and II, Digital Systems Design , Advanced Processor Architecture, Embedded Systems
7. **Audit Courses/ Open elective :** Introduction to eYantra Robotic Platform (Sem IV) , Reconfigurable Logic Design (Sem V) Engineering Exploration (Sem III, IV), Arduino Platform and C Programming (Sem V)
8. **Exposure Course :** Painting and Sketching (First Year)since 2014-15

Recognition as a teacher by any University	UG: Yes	PG: Yes	Ph.D : No

Details of Recognitions
1. Ranked Second in University of Pune, 1987
2. Recipient of Best Teacher Award in 2000
3. Successfully completed two PG level CEP courses in IIT Bombay, in 2007.
4. Successfully completed two FDPs on Engineering Education and Pedagogy organized by IIT Bombay in 2017
5. IUCEE Showcase Award in Teaching and Learning, given in ICTIEE 2024 in KLE Tech Univ, Hubbali. On Jan 4, 2024

Education

Examination	Name of the Degree	University/Board	Institute/College	Year	CPI/SPI/ %Marks
PG	Master of Technology M Tech (Power Electronics)	IIT Bombay	Indian Institute of Technology, Bombay	1989	8.67
UG	B. E. (Electrical Engineering)	University of Pune	College of Engineering, Pune	1987	84%

Notable Experience Details

Sr. No	Name of the organization	Designation	Date of Joining	Date of Leaving	Experience (Years)
1.	NELCO, Andheri	Asst Manager	01/09/1989	15/11/1991	2.5 Yrs
2.	K J Somaiya College of Engineering	Lecturer, Assistant Professor	18/11/1991	Till Date	32.5 Yrs

Research Accomplishments and Projects	
No of students pursuing Ph.D as on date: Nil	No of students completed Ph.D as on date:Nil
No of students completed PG thesis / Project work as on date: 10	No of students / groups completed UG projects as on date: More than 200
Publications Total:22	Number of Peer review Journal papers: 4	Number of Conference papers: 18

Details of Publications:

International Journals

1. "Innovative Step towards Quality in Faculty Recruitment Process", Journal of Engineering Education Transformations, DOI: 10.16920/jeet/2020/v33i0/150138, Year: 2020, Volume: 33, Issue: Special Issue, Pages: 175-178

2. "Experience of Engineering Exploration Course in Audit Mode for Second Year ", Journal of Engineering Education Transformations, DOI: 10.16920/jeet/2019/v33i1/149027, Year: 2020, Volume: 33, Issue: Special 1, Pages: 80-83

3. "Use of Network Model for Analysis of Curriculum and its Mapping to program Outcomes", Journal Of Engineering Education Transformations, DOI: 10.16920/jeet/2018/v31i3/120752, Year 2018, Volume 31, Issue 3, pages 30-34

4. "A Case Study: Efforts for Improvement in Attainment of Course Outcomes in Control System Engineering", Journal Of Engineering Education Transformations, DOI: 10.16920/jeet/2017/v0i0/111740, Year: 2017, Volume: 30, Issue: Special Issue

Conferences

1. "Development of Entrepreneurship Mindset of Students through Curriculum: A Case Study", 9th International Conference on Transformations in Engineering Education (ICTIEE 2022),Online , January 8-9, 2022.

2. "G-Suit Based Application for Calculation of Course and Program Outcome Attainment", 6th International Conference on Transformations in Engineering Education (ICTIEE 2019), Chitkara University, Chandigadh, January 11-12, 2019.

3. "Enriching Curriculum Through Laboratory Courses for Technology-Enhanced Learning", 9th International Conference on Technology for Education T4E 2018 , IIT Madras, December 2018.

4. "Internet of Things based vehicle monitoring system", Fourteenth International Conference on Wireless and Optical Communications Networks (WOCN), 2017 24-26 Feb. 2017, Thakur College of Engineering and Technology (TCET), Mumbai, India

5. "Curriculum Design for Effective Attainment of Graduate Attributes through Laboratory Courses", 4th International Conference on Transformations in Engineering Education (ICTIEE17), Jaipur., January 2017.

6. "A Pilot Study: Introducing HDL Lab Course for Effective Learning of Digital Design", 8th International Conference on Technology for Education T4E 2016 to be held at IIT Bombay, Mumbai, India. , December 2-4, 2016.

7. "Safety Interlock Implementation using FPGA", International Conference on Electrical, Electronics & Communication Engineering (ICEECE) , November 2016.

8. " Multi Axes Motion Control System using Ping Pong Buffers with Vibration Analysis" IJSRP Volume 5, Issue 11, November 2015 Edition

9. "Asynchronous Router for Network-on-chip on FPGA", International Conference on Communication Technology(ICCT 2015) on September 25-26, 2015 at D J Sanghavi COE , Mumbai.

10. "Ethernet based Machine to Machine Communication System for Petroleum Reservoir Modelling", International Conference on Industrial Electrical & Electronics Engineering (ICIEEE) on June 8th,2014 at Pune, India

11. "Testing of AMBA Compliant Memory Controller using Pattern Generator/ Logic Analyser ",International Journal of Advanced Research in Electrical, Electronics and Instrumentation

Engineering, Vol. 2, Issue 6, June 2013

12. "Implementation of AMBA compliant memory controller using FPGA", International Journal of Emerging Trends in Electrical and Electronics, April 2013
13. "VHDL implementation of circular convolution using vedic mathematics" - National Conference on Role of Engineers in Nation Building-2013 (NCRENB2013) in march 2013
14. "VHDL implementation of signed vedic multiplier"International Conference Emerging Trends in Technology and Applications   (ICETTA2013), in March 2013
15. Paper Presented in National Conference on Engineering Research And Applications (NCERA-2012) at Sanjeevan Institute Of Technology, Kolhapur on "Implementation of AES Algorithm on NIOS II Platform Using Altera FPGA" dated 22/06/2012.
16. Paper Presented in International Conference on Engineering Research And Applications (ICERA-2012) at Godavari College Of Engineering, Jalgaon on "FPGA Implementation of AES Algorithm " dated 02/03/2012 .
17. Paper presented in National conference recent advances   in computers and communication VIT Mumbai on "FPGA implementation of Vedic Multiplication Algorithm " on 29th & 30th Sept 08.
18. Paper presented in International Conference in Priydarshini Inst. of Tech. – Nagpur , on "Dynamic Branch Prediction using Neural Networks" 13th & 14th July 2006

Books/Book Chapters

Patents/Copy Rights
1.

No of Research / consultancy / projects completed: Rs:	No of Research / consultancy / projects on-going: Rs:	No of Research / consultancy / projects on applied as on date: Rs:

Details of Research / consultancy / projects:
1.

IPR/ Copyrights
1.

FDPs/Seminars/Workshops/Training Programs Attended/ Organized/ Delivered

Attended
1. Attended FDP on Generative AI for Educators: Revolutionizing Education organized by FSDC, Somaiya Vidyavihar University during September 23 – 27, 2024
2. Attended Course Design Workshop in Centre for Learning Futures in Ahmedabad University on April 6, 7, 2024
3. Attended International Conference IUCEE's ICTIEE-2024, Eleventh International Conference on Transformations in Engineering Education on January 2-4, 2024, at KLE Technological University , Hubbali.
4. Attended National Level Workshop on " Curriculum Framework 2022 for Universities, Engineering Colleges and Degree Colleges" held on 21st & 22nd March 2022 conducted by "Institute for Academic Excellence, Hyderabad" in collaboration with "Collegiate Education & Technical Education Department, Govt. of Telangana.
5. Attended Workshop on Transformation through NAAC ACCREDITATION PROCESS organized by Institute of Academic Excellence ,Collegiate Education & Technical Education Department Govt. of Telangana during June 21- 22 , 2021
6. Attended FDP on Online course on Foundations of Reliable Embedded Systems conducted by Safety Systems Ltd during 12 April 2021 to 29 April 2021.
7. Attended JEET Mentored Reviewer Program as a mentor during Dec 2020 to February 2021 organised by IUCEE and JEET.
8. Attended Online Conference IUCEE's ICTIEE-2021, Eighth International Conference on Transformations in Engineering Education on January 8-10, 2021
9. Attended a workshop on Pedagogy Workshop on How to teach Programming Basics conducted by IITBombayX an online learning initiative of Indian Institute of Technology Bombay during 16 December 2020 to 06 January 2021
10. Attended National Finals of eYantra Ideas Competition on July 10-12, 2020

11. Attended IUCEE Leadership Summit on July 10-12, 2020.
12. Attended Faculty Development Programme on "Online Teaching and e- Content", organised by SK Somaiya College and IIDE, on June 11-12, 2020
13. Attended Online STTP on "Sensor IoT and Machine Learning", organised by Dept of ETRX ,KJSCE, on June 1-5, 2020.
14. Attended Workshops on "Introduction to PBL", " System Thinking", "PBL and assessment" in Regional research Symposium on PBL (RRSPBL) in KLE Tech , Hubali, during November 21-23, 2019.
15. Attended Workshop on " Data Organization for Revised Framework of NAAC" in Vidyalankar Institute of Technology, Wadala on June 26, 2019
16. Attended eYantra Symposium 2019, on April 5-6, 2019 in IIT Bombay. Mentored Project Named "Autonomous Surface Rover and Underwater Surveillance" and presented case study in eYantra Symposium.
17. Attended "Examination Reforms Workshop" organized by AICTE , Western region in College of Engineering, Pune , on 1st , February, 2019.
18. Attended 6th International Conference on Transformations in Engineering Education (ICTIEE 2019), as a collaborator for First Year Engineering Experiences Cluster in Malla Reddy College of Engineering , Hyderabad. January 7-8, 2019.
19. Attended Phase I of IUCEE International Engineering Educators Pre Certification Workshop conducted by Dr Sohum Sohoni , Arizona State University, December 18-20, 2018.
20. Attended FDP on Engineering Exploration Course at KLE Tech , Hubbali, on May 14-18, 2018.
21. Visited KLE Tech, Hubbali on April 19-20, 2018 for understanding their best practices.
22. Attended eYantra Symposium 2018, on March 23-24, 2018 in IIT Bombay.
23. Attended and presented paper in 5th International Conference on Transformations in Engineering Education (ICTIEE 2018), Thiagarajar College of Engineering, Madurai, January 2018
24. Attended International Conference on Engineering Education in the Digital Age (13th Annual CDIO), in University of Calgary, Canada, during June 18- June 22, 2017.
25. Attended eYantra Symposium 2017, on April 7-8, 2017 in IIT Bombay.
26. Presented a paper on " Curriculum Design for effective attainment of graduate attributes through laboratory courses" , at International Conference on Transformations in Engineering Education (ICTIEE 2017), at Manipal University Jaipur on January 11-12, 2017.
27. Presented a paper on " A Case Study: Efforts for Improvement in Attainment of Course Outcomes in Control System Engineering" , at International Conference on Transformations in Engineering Education (ICTIEE 2017), at Manipal University Jaipur on January 11-12, 2017.
28. Presented a paper "A Pilot Study: Introducing HDL Lab Course for Effective Learning of Digital Design " 8th International Conference on Technology for Education in IIT Bombay, on December 2-4, 2016.
29. Attended LATICE 2016, Fourth International Conference on Learning and Teaching in Computing and Engineering, IIT B on April 1-3, 2016 in IIT Bombay
30. Attended eYantra Symposium 2016, on April 11-12, 2016 in IIT Bombay.
31. Attended one week faculty development programme module on " ASIC Verification with System Verilog", in Sardar Patel Institute of Technology, on December 21-26th 2015.
32. Attended Workshop on Robotics , under eYantra , IIT B on July 24-25, 2015, in IIT Bombay.
33. Attended Workshop on NBA Outcome Based Accreditation on June 11, 2015 in COEP, Pune.
34. Attended Workshop on "Embedded System Design Flow on Zynq using Vivado" on December 10-11, 2014 in VJTI, Mumbai.
35. Attended Workshop on NBA Outcome Based Accreditation on September 7, 2014 in VJTI, Mumbai.
36. Attended Workshop on NBA Outcome Based Accreditation on February 8, 2014 and February 14-16, 2014 in SPIT, Andheri.
37. Attended training on Cypress Programmable System on Chip as part of the MoU signed between KJSCE and Eduvance. on Friday, 25th of October 2013
38. Attended Workshop on NBA Accreditation on November 4, 2012 at VJTI , Matunga
39. Attended ISTE workshop on Basic Electronics Course by IIT Bombay on June 28 to July 08,

2011 held at K J Somaiya College of Engineering.

40. Attended Course on Embedded System Modular Training Programme conducted by MSME, IDEMI, Mumbai on 10th Dec 2010 held at K J Somaiya College of Engineering.
41. Attended Short Term Training Program on 'Open Source Softwares', organized by Department of Information Technology, KJSCE, Mumbai, December 2009.
42. Attended Short Term Training Program on PLC, SCADA and Drives', organized by Godrej and Boyce, Vikhroli, Mumbai, December 2009.

Organized

1. Organised Microcontroller fabrication workshop in association with IIT Bombay WEL labs , for TY Students of ETRX and EXTC in KJSCE, June 2017.
2. Organized workshop on "Introduction to Experiential Learning "in K J Somaiya College of Engineering, on July 4, 2016.
3. Organized Workshop on NBA Outcome Based Accreditation on June 7, 2014 and June 25-27, 2014 in KJSCE, Vidyavihar.
4. Convener for STTP on "Hardware Description Languages" in Department of Electronics Engineering in January 2009.

Delivered

1. Delivered Session on Understanding Importance of CO-PO mapping and assessment in Shah and Anchor Kutchhi College of Engineering , Chembur, Mumbai.
2. Delivered Lecture in ISTE approved SIX-DAY FDP on Effective Teaching and Research Methodologies on "Innovative Assessment Strategies " in St Xaviours Institute of Technology, Mahim , Mumbai, on Septemeber 1, 2021
3. Delivered Webinar in IUCEE_KJSCE Webinar series on " Transformations in KJSCE due to opportunities at IITB", On October 16, 2019
4. Delivered Lecture on "Case Study: Implementation of an Outcome Based Education: Critical Issues and Solution" in STTP sponsored by AICTE under AQIS titled "Outcome Based Education: Critical Issues and Solution (A Case Study Approach)" organized by SPIT, Andheri, Mumbai, on January 5, 2020.
5. Delivered session on " CO-PO articulation and measurement" on December 17, 2018 in K J Somaiya Science and Arts college, Vidyavihar, Mumbai.
6. Delivered a lecture on "Effective Learning of Digital Design using Helium and Krypton boards " in QIP Course on "Basic Digital Systems: Theory and Practice", EE Dept, IIT Bombay , on May 11, 2018.
7. Delivered Lecture on " Guidelines for Filling NBA SAR" in Modern College of Engineering, Pune , on June 12, 2017.
8. Delivered Lecture on ""Applications and Advancements in Digital Systems" in Ramrao Adik Institute of Technology, Nerul, New Bombay on October 5, 2016.
9. Delivered Lecture on ""Design Metrics and Challenges in Real Time Embedded Systems" in VPM Polytechnic , Thane on March 4, 2016.
10. Delivered Lecture on "Intel 80386 features " in K J Somaiya Polytechnic on February 27, 2015.
11. Delivered Lecture on Applications of Digital Circuits on August 22, 2014 in Vivekanand Institute of Technology, Chembur, Mumbai
12. Delivered Lecture on CO Articulation and Assessment on July 4, 2014 in St Xaviers Institute of Engineering, Mahim.
13. Lecture Delivered in Vidylankar Institute of Technology on "ARM Controllers in Embedded Applications" in STTP on "Embedded Systems "on July 13, 2010.
14. Lecture Delivered in Fr. Agnel College of Engineering on "Real Time Systems: Overview of Scheduling Algorithms" in STTP on "Real Time Embedded Systems "on Jan 8, 2010.
15. Lecture Delivered in STTP at BGIT, Mumbai on 'Sequential circuit implementation using VHDL' on 11th Feb. 2009.

Somaiya Vidyavihar University

	Notable Key Scholastic Achievements
1.	1. Completed NPTEL course on "Design and Analysis of Algorithms", offered by Prof Madhavan Mukund from Chennai Mathematical Institute, from July 2024 to September 2024. 2. Completed NPTEL course on "Programming, Data Structures using Python", offered by IIT Ropar, from January 2020 to March 29,2020. 3. Completed NPTEL course on "The Joy of Computing with Python ", offered by IIT Ropar, from July 29, 2019 to November 17, 2019. with 95% score, Top 1% 4. Completed NPTEL course on "Hardware Modelling using Verilog", offered by IIT Kharagpur, from July 30, 2018 to October 25, 2018. with 90% score. 5. Completed Leadership Development Program for Building Institutional Leadership conducted at KJSCE between January 2018 to October 2018. 6. Completed FDP 101X : Foundation Program in ICT for Education (August 3, Sept 12, 2017) and FDP 201X : Pedagogy for Blended and Online Teaching -Learning Process(September 14 to October 20, 2017) organised by IIT Bombay. 7. Completed Task Based Training in eYantra conducted by IITB from August 2015 to December 2015.
2.	Appointed as Associate Editor of The Journal of Engineering Education Transformations (JEET) which is a journal having SCOPUS indexing. from February 2019.

	Notable Positions and Responsibility
1.	Associate Editor for JEET since February 2019.
2.	Member of Result Moderation Committee, Admission Committee and Anti-ragging and Student Disciplinary Committee at KJSCE.
3.	Member of Academic Audit for Fr CRCE college of Engineering Bandra, June 2019.
4.	Reviewer in Conferences like ICTIEE 2019, 2020, 2021, 2022, 2023, 2024.
5.	Convener of Local Inquiry Committee of University of Mumbai, April 2008 and March 2010.
6.	Member, IEEE, since 1998. Student Branch Counselor, 2003-2009 Student Branch Mentor since 2009
7.	Life Member of Indian Society of Technical Education, New Delhi, India, since 1993
8.	In charge Accreditation for KJSCE since July 2014 to June 2021
9.	In charge Alumni Activities at KJSCE from July 2012 till December 2013.
10.	Head of Dept from May 2008- June 2011
11.	Dean Students' Affair from April 2005- May 2008
12.	LMC Member from 2002 to 2007
13.	Member for moderation of result committee for University of Mumbai

Date: 15 /10 / 2024   **Signature of Faculty Member**