

CURRICULUM VITAE

Dr. Mrs. Kalyani Jitendra Kulkarni

Head of Department of Electronics and Telecommunication

Dean IQAC

Pune Vidyarthi Griha's College of Engineering & Technology, Pune-9

Member and Upadhyaksh, Karyakarini of BSM, Pune Mahanagar

E-mail: kjk_entc@pvgcoet.ac.in

Ph: 020 24228258 (310) (O) Mobile: 9545936111



PERSONAL DETAILS

Residence: 3, Yogiraj, Gokul Housing Society, Near Mhatre Bridge, Dattawadi, Navi Peth, Pune-30

Email id: kjk_entc@pvgcoet.ac.in

Phone No (Work place): 020-24228258-310

Mobile: 91 9545936111 **Home:** 020 24536199

Website: <http://pvgcoet.ac.in/> and <https://kjkulkarni.wordpress.com>

Birth Date: 24/7/1969 **Blood Group:** A Rh+

Adhar Card No: 655946794726

Passport No: N2264651

EDUCATION

- **PhD (Electronics & Telecommunication)**, Savitribai Phule Pune University, Pune (SPPU), 2016, Area of research: Cognitive Radios
- **ME (Electronics)**, Shivaji University, Kolhapur, 2002
- **BE (Electronics)**, Savitribai Phule Pune University, Pune, 1991
- **DEE (Electrical Engineering)**, Board of Technical Examinations, Maharashtra State, 1987

PROFESSIONAL EXPERIENCE

- *Approved Teaching Experience: 1/7/1994 till date (30 years)*
 - *January 2023-till date*
Associate Professor
 - *August 2005-December 2022*
Assistant Professor, PVG's COET, Pune
 - *July 1994-July 2005:*

Lecturer, at PVG's COET, Pune

- *August 1992-June 1994:*
Technical Assistant, PVG's COET, Pune
- *Industrial Experience: (01 year)*
- *June 1991-June 1992:*
Trainee Engineer, NASA Computers, Pune

AWARDS/RECOGNITIONS

- **Faculty Leadership Award** by Indo-US Faculty Leadership Institute at Infosys, Mysore.
- **SAP Award of Excellence** for Use of ICT in Education for Online and Blended Learning by IIT, Bombay.
- **Associate Faculty of IIT, Bombay** for Use of ICT in Education.
- **Manpatra** by The International Association of Lions Club, Pune Branch
- **Letter of Appreciation** by SPPU, Pune for preparing Question Bank of Basic Electronics Engineering Online Examination at First Year Engineering-2008 Course

NATIONAL SERVICES

- **Workshop Coordinator** of NMEICT-MHRD Project at PVG'S COET, Pune.
- **Mentor** for Two-Week AICTE approved FDP under the aegis of Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (**PMMMMNMTT**) on 'Foundation Program in ICT for Education'.
- **Mentor** for Two-Week AICTE approved FDP under the aegis of Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (**PMMMMNMTT**) on 'Pedagogy for Online and Blended Teaching-Learning Process'.

TEACHING

- Data Structures
- Wireless Sensor Networks
- Signals and Systems
- Digital Communication

- Information Theory and Coding Techniques
- Internet of Things, Open Elective
- Other courses include Digital Image Processing (which I introduced in 2005 as an Elective at BE level) and Mobile Communication.

SOFTWARE

- Unit 3D and Vuforia
- MATLAB AND SIMULINK
- SEAMCAT
- NETSIM
- LINUX
- C/C++
- SCILAB BASIC

OER

<https://pvgcoetoer1017team04.wordpress.com/oer-course-on/random-processes/>

<https://youtu.be/4L80D26Ivpc>

<https://www.youtube.com/watch?v=fO7PdVfYZN4&feature=youtu.be>

ADMINISTRATIVE RESPONSIBILITIES

INSTITUTE LEVEL

- In-charge Principal of the College
- Vice Principal of the College
- Head of E&TC Department
- Dean IQAC
- NEP 2020 Coordinator
- Dean Academics
- College Development Committee Member (Maharashtra Public University Act, 2016)
(Elected Member from Teaching Staff in June 2017)

RESEARCH

RESEARCH FOCUS

Fifth Generation Communication Technologies.

In connection with this participated in “Short Term Course on Cooperative 4G/5G MIMO Wireless Communication” at IIT, Kanpur.

DEVELOPMENT PROJECTS UNDERTAKEN

PhD RESEARCH TOPIC

Resource Allocation Strategies for Multimedia Transmissions over Cognitive Radio based Multi Carrier CDMA Systems

FUNDED PROJECT

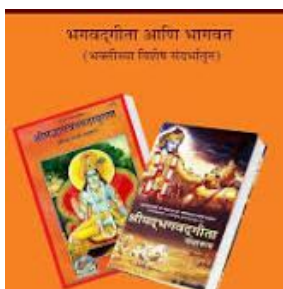
- **Title:** Raga Identification in Indian Classical Music using Digital Signal Processing Techniques
- **Area:** Signal Processing
- **Sponsoring Agency:** BCUD, Savitribai Phule Pune University, Pune
- **Amount of Funding:** Rs. 1 Lac

BOOK PUBLISHED

- Authored a book Bhagwadgita and Bhagwat (Bhaktichya Vishesh Madhyamatun), published by Sunidhi Publishers, Pune.

<https://www.amazon.in/Bhagwatgeeta-Aani-Bhagwat-Prof-Dr-B-R->

[Joshi/dp/9385262610](https://www.amazon.in/Bhagwatgeeta-Aani-Bhagwat-Prof-Dr-B-R-Joshi/dp/9385262610)



PUBLICATIONS

- International Journals: 04
- International Conferences – 02
- National Conferences- 04

Details:

- Vedika Kulkarni and Kalyani Kulkarni, “A Blockchain-based Smart Grid Model for Rural Electrification in India”, 2020 8th International Conference on Smart Grid (icSmartGrid), <https://doi.org/10.1109/icSmartGrid49881.2020.9144898>
- Prof. R. K. Patil, Prof. Dr. K. J. Kulkarni and Prof. V. V. Sovani presented papers on two different topics at **National Youth Conference on IKS**, IIT, Roorkee on 25th to 27th August 2023. The topics are “**भाव-भावना-सर्वेदना के उत्थान से जीवन का उत्कर्ष प्राप्त करना**” and “Yogic lifestyle - A key to resolve young girl’s psychosomatic disorders- health complication issues and stepping stones to nurture humanity through ‘Atmanirbhar’.
- K. J. Kulkarni and B. S. Chaudhari, “Non-Cooperative Game-Theoretic Modeling of Cognitive Radio Network for Enhancement of Bit Error Rate Performance,” *British Journal Applied Science & Technology*, vol. 13, no. 02, pp. 1- 8, 2016
- K. J. Kulkarni and B. S. Chaudhari, "Nash Bargaining based Bandwidth Allocation in Cognitive Radio for Delay Critical Applications," *ICTACT J. on Communication Technology*, vol. 6, no. 4, pp. 1167 -1172, 2015
- K. J. Kulkarni and B. S. Chaudhari, “Enhancement of Capacity for MC-CDMA based Cognitive Radio Networks using Non-Cooperative Game Model,” *International Conference on Game Theory for Networks*, ICGTN-2015, Chicago, USA, vol. 9, no. 10, 2015
- K. J. Kulkarni and B. S. Chaudhari, “Development of Heuristic Crossover for Optimization of Utility Function in Cognitive Radio,” *International Conference on Electronics and Communication Engineering*, ICECE’ 2015, pp. 52 - 55, 2015
- K. J. Kulkarni and B. S. Chaudhari, “Game Theoretic Approach for Cognitive Radio,” *International Journal on Recent and Innovation Trends in Computing and Communication*, vol. 3, no. 4, pp. 2938 - 2941, 2014
- K. J. Kulkarni and B. S. Chaudhari, “Spectrum Sensing for Cognitive Radio Networks,” *International Workshop on Low-Cost Wireless Networking* organized by ICTP, Italy and ITU – BDT, Pune, 2012

RECENT PROJECTS GUIDED (UG STUDENTS)

- Development of Digital Twin using AR/VR Technology
- A Sensor-based Low-Cost Drowning Detection System for Human Life Safety

- Semi-automatic Cleaning System for Printing Cylinders

STUDENTS ACHIEVEMENTS

- **Best Paper Award** to A Sensor-based Low-Cost Drowning Detection System for Human Life Safety at ICRITO-2016 (<http://ieeexplore.ieee.org/document/7784970/>)
- Publication: Virtual Keyboard (<https://www.ijser.org/researchpaper/Virtual-Keyboard-2014.pdf>)

PROFESSIONAL AFFILIATION

- IEEE Communication Society (Membership Number: 94617306)
- ISTE (Membership Number: LMISTE 29632)
- ISGF (India Smart Grid Forum) (A Public-Private Trust of Ministry of Power, Government of India)
- <https://vidwan.inflibnet.ac.in/profile/388887>
- <https://vidwan.inflibnet.ac.in/profile/388887>

EXTRA-CURRICULAR DOMAIN

- District-level Kho-Kho player
- Passionate of Music and can well-play Harmonium
- Deep interest in studying Philosophy of Science and allied developments
- Anchoring at institute level (anchoring in more than 60 programs).

CONTRIBUTIONS in Last Five Years

At Institute Level

Significant contributions and achievements in the last five years in **academics, administration and developing a goal oriented human resource** in the capacity of **Dean Academics, NAAC Coordinator, NBA Coordinator, Head of the Department, Vice Principal**

and In-charge Principal of the college. At present shouldering the responsibility of Dean IQAC and NEP 2020 Coordinator of the college.

Many new and innovative next practices introduced at department and college level are now Best Practices of the college.

Year	Role and Responsibilities	Key Contributions and Next Practices which are now Best Practices
2023-24	Dean IQAC and NEP 2020 Coordinator at college level. NAAC Coordinator for Cycle-3	From AY 2023-24 shouldering responsibilities of Dean IQAC and NAAC Coordinator at Central Level.
2022-23	NEP 2020 Coordinator	Lead role in awareness and implementation of Nep 2020 recommendations at college level. Initiatives in activities of Universal Human Value (UHV) activities and completed two levels of the same.
2020-21	In-charge Principal	Merger of PVG's G. K. Pate (Wani) Institute of Management into PVG's COET, Pune.
		Introduced new and innovative academic and administrative practices in the challenging period of pandemic- Covid-19
		Passionately searched the online education platforms and then contacted Coursera on April 9, 2020 and applied for the Campus Application. Campus Response Program of Coursera was launched on 15 th April 2020.

		<p>Formation of Admission Cell to improve the admissions of the college on quantitative and qualitative basis.</p> <p>Enhance the college network by introducing the digital media/social platforms such as Facebook, LinkedIn, You Tube etc.</p> <p>Organized a lecture session on engineering entrance examination-CET for students of 12th standard by eminent resource persons followed by a conduction of Mock CET.</p> <p>Started the practice of singing a National Anthem at 11.00 am every day.</p> <p>Introduced AICTE UHV Program in the college and deputed HODs, Deans, Mentor Coordinators and faculty members for the AICTE UHV FDPs from May 2020, September 2020 and onwards.</p> <p>Effective Governance practices and outcome-based activities such as MoM, multimedia equipment in the college (Smart TV, PA System etc), office administration etc</p> <p>Certification of SAP and AICTE has been done</p> <p>Established Nodal Centre for IIRS Outreach Program. Many students have completed the IIRS Courses and Certifications.</p> <p>Initiated an interaction with Dassault Systemes for developing a Center of Excellence in Robotics and Automation.</p>
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		<p>Initiated and promoted large number of students and staff for social, academic and development activities in the lockdown period, some of which are mentioned below.</p> <p>Staff have conducted 1200 online lectures conducted first 3 months of lockdown, 6000 plus experiments using Virtual Labs, more than 600 Certifications using Spoken Tutorial, more than 1200 Certifications of Coursera, 100 plus Webinars, provided IEEE Online access, Google Classroom and Microsoft Teams, TCSion platform training etc. Encouraged students and staff for social activities.</p>
		<p>In the lockdown period, initiated use of technology/social media in administration and ensured online participation of all the staff members and students in the celebration of important events such as Independence Day, Pune Vidyarthi Griha Vardhapan Din and many more events using Facebook Live, You Tube broadcast etc.</p>
		<p>Staff Welfare initiatives in the pandemic period. Financial and psychological support to all the members of college including students, parents and staff.</p>
		<p>Training of Online Platforms to entire faculty by the college faculties itself, Celebration of Marathi Bhasha Gaurav Din, Yoga sessions and other activities.</p>
2019-20	Vice Principal and In-charge Principal from February 2020	<p>Administration Ideation: Organizing a lecture of Alumni in diversified areas, on every Saturday for all the students. Alumni Association of the college successfully executed the idea.</p>
		<p>Introduced a structured way of effective Governance by introducing industry participation in the college Vision and how to plan to achieve the goals.</p> <p>Arranged a full day visit of Hon. Directors, Principal, HODs-Deans and Department NBA Coordinators to TCS, Pune and exhaustive sessions were conducted by the resource persons.</p>
		<p>Supported students for forming a TEDx Club of PVG and First Event was successfully organized on 29th Feb 2020.</p>

		Ideation: Quality Assurance and Benchmarking in Education-organized lectures by industry and academic resource.
	NBA Coordinator	Electrical UG Program has been accredited by NBA for 3 years in July 2019.
2018-19	Vice Principal	Introduced and undertaken Quality Assurance initiatives: NIRF and ARIIA.
		Continuous improvement in the LMS.
		Good governance practices in examination (assessment and declaration of In-semester exam results in 15-days), Annual Social Gathering etc
	NBA Coordinator	Organizing Expert lectures and submission of Application Form of NBA Accreditation of UG Programs of Electrical and Mechanical Department. Preparation of Pre-qualifiers of all the departments.
2017-18	Dean Academics (Appointment from 10/02/2016)	Very well implementation of practice of decentralized and participative governance.
		Initiatives in organizing FDP on Use of ICT in Education in association with IITB for teachers of the college and other colleges.
		Introduced Curriculum Book and its publication on website.
		OBE principles in Teaching-Learning Process and documentation in Academic Record Book
		Introduced Academic Audit and executed it successfully.
		Continuous monitoring and improvements in the Learning Management System.
	NAAC Coordinator	NAAC Accreditation for five years with Grade A
		Guided and helped NAAC Accreditation process of PVG's College of Engineering, Nashik and PVG's College of Science.

		Conducted sessions on NAAC Accreditation at Bharati Vidyapeeth College of Engineering for Women, Pune and other institutes.
		Timely completion, value addition and submission of Annual Quality Assurance Report (AQAR).

At Department Level

Year	Role	Key Contributions and Next Practices which are now Best Practices
		<p>Significant contributions to the development of the department in various roles such as Head of the Department, NBA Coordinator, Project Coordinator, Academic Coordinator, R&D Coordinator.</p> <p>Introduced various new electives and innovative experiments design, and developed laboratories right from the beginning.</p> <p>Contributions as a teacher and BOS Member at Savitribai Phule Pune University. The contributions include Member of Syllabus Revision Committee, Resource Person in FDPs, Chairman of various subjects for examination, member of pioneering team of Online Exam, and many other responsibilities.</p>
2023-24	Head of E&TC Dept	Shouldering responsibility of HOD, E&TC till date
2022-23	Industry Connect and Consultancy	<p>Contacted and visited industries.</p> <p>Interaction and activities are already initiated and formal MoU signing is in process.</p>
	Career Guidance Cell of E&TC Dept	Task: Counselling and guidance for the students about their career and aspirations.
	UHV Coordinator of E&TC Dept	<p>Taken initiative and completed AICTE UHV FDPs: UHV-I and UHV-II.</p> <p>Invited as a Resource Person for FE SIP'22 to conduct three sessions on UHV.</p>

	NEP 2020 Coordinator	Conducted and organized awareness programs of NEP 2020 recommendations and implementation
2020-21	In-charge Principal	Contributions as In-charge Principal are listed below.
2019-20	Head of the Department In-charge Principal from 8 th February 2022	Successful Development of part of Bionic Arm as a BE (E&TC) Project in the Product Innovation Lab. Remarkable contributions as an inter-disciplinary project Appreciations by industry
		Development of Smart Classroom Inauguration of Smart Classroom by an innovative way- given idea of developing a robotic platform for raising the curtain. Received excellent remarks and appreciation by the Guest and faculty and students. Significant utilization of Smart Classroom.
		Inclusion of Outcome Based Education principles in the day-to-day academic and administrative activities.
		Ideation and execution: Recreation program for the First Year Students of E&TC Branch and informal sessions by the alumni.
		Innovative and outcome-based activities are encouraged, promoted and set in the department.
2018-19	Head of the Department	Development of Robotics Lab to encourage students of E&TC and other departments with the objectives: <ul style="list-style-type: none"> ▪ Training by alumni and other professionals ▪ Hands-on experiences ▪ Development of small projects ▪ Participation in various competitions Contributions: Students won various prizes in Robotics Competition at CME, Pune and many other events. Students were preparing for ROBOCON. Unfortunately, it was not continued because of Pandemic.
		Academic Alliance- Campus wide licence of MATLAB. Awareness programs for the students of all departments.

2017-18	Head of the Department	Noteworthy contributions by the Department Team in NAAC Accreditation process
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Industry Connect (few domains)

Sr. No.	Name of the Industry	Domain/Profile	Type of Association
1.	Defence Institute of Advanced Technology (DIAT)	Communication, SDR and AI	Internships and Projects
2.	Infogen Labs	XR Technologists	Project Sponsorship, Training Sessions, Internship and placement
3.	Wynum Automation	AI Solutions	Internship and placement
4.	Rubiscape Pvt Ltd	IoT, AI and Data Science	Project Sponsorship, Training Sessions, Internship and placement
5.	Texas Instruments	Analog, Embedded, Semiconductor manufacturing	Center of Excellence at E&TC Dept Kits and Human Resource for FDP and Training Sessions
6.	Dassault Systemes	Design and Engineering, 3D Experience etc	Project sponsorship
7.	Thuse Electronics	Electronics Manufacturing Services	Internship
8.	True and Upright Technologies	Robotics and Wearables	Project Sponsorship
9.	Nichrome India Pvt Ltd	Automation- Packaging Machines	Field Visits
10.	RCF, Thal, Alibag	Public Sector Govt Undertaking- Chemical industry with automated manufacturing processes	Field Visits

11.	Tata Consultancy Services (TCS), Pune	Education, Banking, Communication, Healthcare, Energy etc	Participation in articulation and implementation of Governance and Quality parameters.
12.	IITTech	IoT Consultant	Guest Lectures Industry Expert for Project Competitions
13.	Dhirubhai Ambani Knowledge City, Navi Mumbai	Jio-Telecommunications	Field Visit

Strengths

- Passionate teacher along with creative, and innovative outlook
- Ownership of work and responsibilities
- Visionary Administrator
- Problem solver and solution finder
- Strong connect with alumni, industry, academia, parents and colleagues
- Proficiency in Professional skills, life skills and Communication Skills
- Mentoring and counselling abilities
- Life-long learning attitude
- Proficiency in platforms used for disruptive technologies such as Unity 3D and Vuforia
- Confident and engaging public speaker

Date: April 11, 2024

Place: Pune

(Dr. Mrs. Kalyani Jitendra Kulkarni)