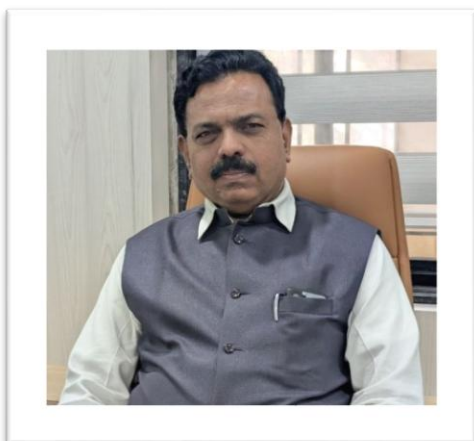


## Curriculum Vitae



**Prof. Dr. ASHOK E. KALANGE**

**Vice-Principal and Professor,  
Head, Department of Physics**

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Mobile: 9420480080

### EDUCATIONAL QUALIFICATION

S.N.	Degree	Branch & specialization	Name of the University	Year of passing	% Marks & Class
1	Ph.D.	Physics	University of Pune (Currently SPPU, Pune)	2011	-
2	PG [M.Sc.]	Physics	University of Pune (Currently SPPU, Pune)	1988	65.65 [First]
3	UG [B.Sc.]	Physics	University of Pune (Currently SPPU, Pune)	1985	68.2 [First]
5	H.S.C.	Compulsory Subjects	Pune Divisional Board Pune	1982	42.68 [Pass]
6	S.S.C.	Compulsory Subjects	Pune Divisional Board Pune	1980	76.14 [First]

- **M. Sc.** Pune University, Pune, (Currently SPPU, Pune) Maharashtra, INDIA, with First Class in 1988.
- **Ph.D.** University of Pune (Currently SPPU, Pune)

**Title of Thesis:** Development of data acquisition system and analysis of human pulse for *vata*, *pitta* and *kapha* dominance in *pakruti* (Date of Declaration:12/12/2011)

## ACADEMIC EXPERIENCE: 35 YEARS

Sr. No	Name of the College/ Institute	Designation	Name of the affiliating University	From	To	University Approval No. & date
1	Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati	Lecturer	University of Pune	1/8/1989	14/06/1996	CCO/25/1791 [21/11/1989]
2	College of Engineering, Malegaon (Bk)	Lecturer	University of Pune	20/8/1996	20/07/98	CCO/K/1144 [07/05/1997]
3	Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati	Lecturer	University of Pune	21/07/1998	16/10/1999	CCO/2391/ [14/11/1998]
		Lecturer in senior scale	University of Pune	17/10/1999	16/10/2004	
		Lecturer in Selection scale	University of Pune	17/10/2004	16/10/2006	
		Associate Professor	University of Pune	17/10/2006	31/12/2015	
		Associate Professor (13 A)	University of Pune	01/01/2016	04/02/2022	
		Professor	University of Pune	05/02/2022 onwards		CCO/819 04/03/2022

**A. RESEARCH PAPERS PUBLISHED:**

<b>Sr No.</b>	<b>Title with page Nos.</b>	<b>Journal</b>	<b>ISSN/ ISBN No.</b>
1.	Response of cardiac pulse parameters in humans at various inclinations via 360° rotating platform for simulated microgravity perspective	<b>NATURE:</b> npj Microgravity 2023 Impact Factor: 5.1	2373-8065
2.	Simulations of piezoelectric pressure sensor for radial artery pulse measurement”,	Materials Science and Engineering: B Volume 168, Issues 1-3, 15 April 2010, Pages 250-253 [Elsevier] Thomson Reuters No: 2095 Impact factor: <b>3.315</b>	0921-5107
3.	Nadi-Parikshan Yantra and Analysis of Radial Pulse	IEEE Xplore 7-10 March 2012 , Pages 165-168 Thomson Reuters No: 285 Impact factor: <b>9.107</b>	2279-0845
4.	Piezoelectric Sensor for Human Pulse Detection	Defense Science Journal, Vol. 57, No. 1, January 2007, pp. 109-114, 2007. Thomson Reuters No: <b>10978</b> Impact factor: <b>0.510</b> Group A of UGC-CARE List No: <b>60</b>	0011-745X
5.	Data Acquisition system for Radial pulse detection using NIDAQ card and Lab VIEW software	Journal of Instrument Society of India, Vol 38 No. 4 UGC Approved Journal No.: 45516	0970-9983
6.	PC based human arterial pulse detection System	Journal of Instrument Society Of India, Vol 39 No. 4 (2009) pp 298-300 UGC Approved Journal No.:	0970-9983
7.	Fabrication and Characteristics of Nano Sized ZnSe Thin Films by Chemical Bath Deposition	International Research Journal of Science & Engineering UGC Approved Journal No.: 63628	2322-0015
8.	Fast Fourier Transform (FFT)- A useful tool for analysis of Physiological signal	Bulletin of the Marathwada Mathematical society Vol. 14, No.2, December 2013, Pages 35-39	-
9.	Generation of Electricity from Anaerobic Waste Water Treatment in Microbial Fuel Cell	International Research Journal of Science & Engineering 2018 Special Issue A4 PP 37-40.	2322-0015

		UGC Approved Journal No.: 63628	
10.	Synthesis and Characterization of Thermally Annealed SnO <sub>2</sub> Thin Film Using Thermal Evaporation Technique”	The Online International Interdisciplinary Research Journal (OIIRJ) UGC Approved Journal No.: 46964	2240-9598
11.	The radial pulse analysis: review paper	Review of research Vol-8 Issue - 8, May – 2019 PPP 1-5 UGC Approved Journal No. : 48514	2249-894x
12.	Structural, Morphological and optical properties of as deposited and Annealed SnO <sub>2</sub> thin film using Thermal Evaporation Technique	Journal of Physics IOP Publishing	1742-6596
13.	Synthesis and Characterization of WO <sub>3</sub> thin films deposited by Thermal Evaporation Technique	International Research Journal of Science and Engineering Special Issue: A2	2322-0015
14.	Temperature Dependent Photocatalytic activity of BIFEO <sub>3</sub> Nanoparticles by Sol-Gel Method	Journal of Physics IOP Publishing	1742-6596
15.	Synthesis ,Characterization and magnetic Properties of cobalt ferrite nanoparticles by simple Co-precipitation Technique	International Research Journal of Science and Engineering Special Issue: A2	2322-0015
16	Performance analysis of the portability of water resources through smote	Journal of the Maharaja Sayajirao University of Baroda Volume-58, No.1(I): 2024	0025-0422
17	Functionalized Superparamagnetic Iron Oxide Nanoparticles for Magnetic Fluid Hyperthermia Application in Cancer Treatment	Int. Res. Journal of Science & Engineering, 2023, Special Issue A12: 15-21.	2322-0015
18	Heart disease prediction using machine learning algorithms	Journal of the Maharaja Sayajirao University of Baroda Volume-58, No.1(I): 2024	0025-0422

## BOOKS PUBLISHED

### B. Reference Books

Sr. No.	Title of the Book	Type of Books	Year of Publication	Publisher	ISSN/ ISBN No.
1	<i>Nadi Parikshan Yantra (Pulse Examination system)</i>	Reference	2019	Lulu Publishers	978-0-359-35879-3
2	Embedded Systems	Reference	2023	Alpha International publication (AIP)	9789357621335

				Kammangudi, Adichapuram, Thiruvavur District, Tamilnadu- 614717, India	
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### C. Text Books

Sr. No.	Title of the Book	Type of Books	Year of Publication	Publisher	ISSN/ISBN No.
1	Electronics-II S.Y.B.Sc.PHY-232 Sem-III SPPU Pune	Text	2020	Prashant Publication, Jalgaon	978-93-89493-20-7
2	Mathematical Methods in Physics, S.Y.B.Sc. Physics Textbook S.Y.B.Sc.PHY-231 Sem-III SPPU Pune	Text	2020	Prashant Publication, Jalgaon	978-93-89493-19-1
3	Instrumentation S.Y.B.Sc. Physics Textbook	Text	2021	Prashant Publication, Jalgaon	978-93-90483-11-2

### D. Book Chapters

Sr. No.	Title of the Book	Type of Books	Year of Publication	Publisher	ISSN/ISBN No.
1	Synergies in defense Exploring the interplay of science technology arts and commerce	Role of Physics in Defense	2023		978-81- 19079-84-1

### Patent Published / Granted

Sr. No.	Title	International / National	Year
1.	Development of High-Performance TiO <sub>2</sub> Thin Films Using Titanium Isopropoxide for electrochemical Applications Photo	Indian Utility Patent	2024
2.	Artificial Intelligence based Cyber security Device for Military Networks	United Kingdom	2023
3	Photo electrochemical Water Splitting Reactor	United Kingdom	2024
4	Room air pollution monitoring system using IoT	INDIA	2022
5	DEVICE FOR TESTING MOISTURE CONTENT IN SOIL	INDIA	2023
6	Rapid Pathogen Detection Device	INDIA	2024

7	Design of Vibrating sample magnetometer assembly using Electromagnet, Hall sensor and loudspeaker	United Kingdom	2024
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## RESEARCH GUIDANCE

- Number of students Pursuing Ph.D.: 06

Sr. No.	Name of Scholar	Name of University	Month and Year Registration	Title of the Research
1	Mr. Kakade Sandip B	SPPU, Pune	Mar 2018	Synthesis and Characterization of metal oxide thin film for Gas sensing Application
2	Mr. Thorat Sopan Muralidhar	SPPU, Pune	Mar 2018	Physical and Chemical properties of Bismuth ferrites (BFO) and its applications in Visible Light Induced Photo Catalysis
3	Mr. Mhaske Sujit Sambhaji	SPPU, Pune	April 2022	Construction and Calibration of a Low Cost, Versatile and Sensitive Vibrating Sample Magnetometer and its application for the measurement of magnetic properties of ( $\text{Fe}_3\text{O}_4$ , $\text{CoFe}_2\text{O}_4$ , $\text{ZnFe}_2\text{O}_4$ , $\text{MnFe}_2\text{O}_4$ ) ferrites.
4	Miss. Nikam Preeti Amol	SPPU, Pune	May 2023	Design and fabrication of polyvinylidene fluoride (pvdf) /pvdf-copolymer film sensor for bio-medical Application
5	Miss. Godse Priyanka Abasaheb	SPPU, Pune	May 2023	Synthesis, Characterizations of metal oxides ( $\text{TiO}_2$ , $\text{WO}_3$ , $\text{SnO}_2$ ) based Nanomaterials and their application for Bio-sensing
6	Mr. Patel Saddamhusen Hamid	SPPU, Pune	May 2023	Studies On Structural, Electrical, Magnetic Properties and Photocatalytic Activities Of Co, Mn And Sm Doped with Batio 3 Nanoparticles.

## RESEARCH PROJECTS:

Sr. No.	Name of Funding Agency	Project Title	Funds Received	Month and Year of sanction	Duration of the Project	Status of Project
1	Pune University, Pune	Design and development of hand-held	2,00,000/-	2007	2007 to 2009	Completed

		embedded system for human pulse detection				
2.	BiFeO <sub>3</sub> (BFO) based photo electrode for superior photoelectrochemical water splitting	Tuljaram Chaturchand College of Arts, Science and Commerce , Baramati (Autonomous)	1,00,000/-	2023	2023-2024	Completed

**PAPERS PRESENTED IN SEMINAR / CONFERENCE:**

Sr. No.	Name of the Conference/ Seminar	Title of the paper	Date	Level (State/ National/ International)	Name of the Organizer
1.	Second International Conference on advanced Material and polymers for Defense Applications (SAMPADA-2008)	"Simulations of piezoelectric pressure sensor for radial artery pulse measurement"	12 /12/2008	International	YASHADA Pune
2.	Third International conference on Nanostructure d Materials and Nanocomposites (ICNM 2015)	"Synthesis of Electron beam Evaporated Titanium Dioxide Thin Films and their use as Photo catalyst"	12/10/2015 to 14/04/2015	International	Hindustan College, of Science and Tech. Farah, Mathura (UP)
3.	Second International Conference on Recent Multidisciplinary Research (ICRMR 2018)	"Synthesis and Characterization of Thermally Annealed SnO <sub>2</sub> Thin Film Using Thermal Evaporation Technique"	22-23 November, 2018	International	Asian Institute of Technology Conference Centre, Pathum Thani, Thailand
4.	National Symposium on recent trends in molecular	Nadi Parikshan and analysis of Pulse	22-25 Jan 2005	National	University of Pune

	&Medical physics				
5.	11th National Seminar on Physics and Technology of Sensors	"Radial pulse (nadi) detection system using Lab View"	27/2 to 1/3/2006	National	University of Pune
6.	National Seminar on Advances in Electro ceramics	"Piezoelectric Sensor for Human Pulse Detection"	05-06May 2006	National	DRDO
7.	National Seminar on Interdisciplinary Applications of Electronics	National Seminar on Interdisciplinary Applications of Electronics	28-29 Jan 2006	National	ASC college Chopda , Jalgaon
8.	National Seminar	"National Symposium on Instrumentation (NSI-31)"	12-15 Oct 2006	National	ITM Gwalior (M.P.)
9.	12th National Seminar on Physics and Technology of Sensors	Classification of Human pulse on the basis of Vata, Pitta and Kapha, using in-house developed pulse detection system	2007	National	University of Pune
10.	13th National Seminar on Physics and Technology of Sensors	"NAdi-PARikshan Yantra :An Instrument for Pulse Examination"	2008	National	University of Pune
11.	13th National Seminar on Physics and Technology of Sensors	" Design And Development of An Embedded System for Human Pulse Detection"	2008	National	University of Pune
12.	National Conference	"An Instrument for Radial Pulse Examination"	17-19 Oct 2008	National	IAPT Convention at Bangalore
13.	14th National Seminar on Physics and	"Comparison of responses of the ultrasonic sensors PZT sensors and	2009	National	University of Pune



	Technology of Sensors	commercially available pulse sensors for detection of human arterial pulse."			
14.	National Conference	"Effect of Contact pressure on Radial pulse."	ICI2009 & NSI-34, 2010	National	Instrument society of India, Bangalore
15.	15th National Seminar on Physics and Technology of Sensors, 2010	"Non-Invasive Technique to Study Arterial Stiffness Characteristics Using Arterial Pressure Pulse"	04-06 Mar 2010	National	University of Pune
16.	National seminar	"Nano science and Technology: Frontiers in Science and Technology"	07-09 Feb 2011	National	B.G. College, Sangavi, PUNE
17.	National Conference on Recent Developments in graduate Mathematics	"Fast Fourier Transform (FFT) – A useful tool for analysis of physiological signal"	6-8 Feb 2012	National	Nashik
18.	18th National Seminar on Physics and Technology of Sensors	"Study of Human Arterial pulse width to evaluate Arterial stiffness"	06/03/14 to 08/03/2014	National	Dept of Physics and Electronic Science, T. C. College, Baramati Dist-Pune
19.	National conference	"Frontiers of Chemistry and Materials"	12/02/15 to 14/02/2015	National	T.C. College, Baramati Dist-Pune

#### FOREIGN VISITS FOR ACADEMIC PURPOSES

1. Vietnam
2. Thailand
3. Uzbekistan

#### ORIENTATION / REFRESHER COMPLETED EXAM ACTIVITIES

Has been working as an Examiner, Paper Setter, Moderator, Chairman, Jr. & Sr. Supervisor (Internal & External), Member of Vigilance Committee, Coordinator & Examiner for Practical Examination, Custodian, Revaluation at Local and University Levels.

#### **LIFE MEMBERSHIP OF PROFESSION BODIES:**

Sr. No.	Name of Professional Body
1	Indian Association of Physics

#### **MEMBERS OF ACADEMIC BODIES:**

1. Member of BoS in Physics, Walchand College (Autonomous), Solapur from 2021 to 2024.
2. Chairman of BoS in Physics at Tuljaram Chaturchand College (Autonomous), Baramati from 2023.
3. Member Secretary of Academic Council at Tuljaram Chaturchand College (Autonomous), Baramati.
4. Member of governing body at Tuljaram Chaturchand College (Autonomous), Baramati.
5. IQAC Member and Criteria Coordinator at Tuljaram Chaturchand College (Autonomous), Baramati.
6. Chairman of alumni Association of Tuljaram Chaturchand College (Autonomous), Baramati.

#### **MEMBERS OF LOCAL INQUIRY COMMITTEE:**

1. Worked as a member at university level.

#### **MEMBERS OF SELECTION COMMITTEE:**

1. Worked as a subject expert in Physics.

## PERSONAL DETAILS:

Date of Birth : 20/08/1965

Marital status : Married

Languages known : English, Hindi, Marathi.

Address : Mahalaxmi, 34, Gurusadan Housing Society,  
Jalochi, Opposite Sahyog society  
Bhigwan Road, Baramati Dist. Pune 413102

**(Ashok Eknath Kalange)**