

Curriculum Vitae

Dr. Bhushankumar Jagannath Patil

Assistant Professor

Department of Physics, Abasaheb Garware College, Karve Road, Pune – 411 004

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Educational Qualification

Degree	Name of University / Board	Year of Passing	% of Marks	Class / Grade
Ph.D. in Physics	University of Pune, Pune	08 th Feb. 2011	Guide: <u>Dr. S. D. Dhole</u>	
Title: Studies on (i) Characterization of Bremsstrahlung Spectra from High Z elements and (ii) Development of Neutron Source Using MeV Pulsed Electron Beam and Their Applications.				
M.Sc. in Physics	University of Pune, Pune	2003	60.10	First Class under
B.Sc. in Physics	North Maharashtra University, Jalgaon	2001	80.42	Distinction
H.S.C. (XII th)	Nasik Divisional Board	1998	62.33	First Class
S.S.C. (X th)	Nasik Divisional Board	1996	73.60	First Class
JEST 2004	92.30 percentile	(All India rank 305)		
SET 2015	Qualified SET examination held on 06 th Sept 2015.			

Teaching Experience:

- Working as Full Time Assistant Professor, at Maharashtra Education Society's Abasaheb Garware College, Pune for graduate and postgraduate center since **18th November 2011**.

Research Work Supervised

Student Awarded Ph.D. Degree: 01 , (Ongoing – 4)

Sr. No.	Student	Thesis title	Date of registration	Date of Ph.D. award
1.	Mr. Jagtap Amol Shankar	Contamination Studies of Secondary Electron, Photon and Neutron in Telecobalt and Medical LINAC for cancer therapy	25th August 2015	9th November 2019

Research Experience:

Research Publications: 48 (32 International Journal & 16 International conference proc.)

Research projects: Three (Rs. 62,33,000/-)

Research Projects:

- Title:** Study of depth dose distribution for 6 – 20 MeV energy electron accelerator based bremsstrahlung radiation therapy
Position held Project Investigator
Total funds Rs. 2,35,000/- **Funding agency:**BCUD, University of Pune, Pune
Duration: Two years 2013-2015(Completed)

2. **Title:** Development of Nuclear Batteries using radioactive sources.
Position held Project Co-Investigator
Total funds Rs. 19,98,000/- **Funding agency:** ISRO-UoP Joint Research Programme
Duration: Two years 2015-2017 (Completed)
3. **Title:** Measurement of formation cross section of metastable states of a few nuclei produced through Photon induced reaction.
Position held Project Co-Investigator
Total funds ~ 40 Lakhs **Funding agency** DAE-BRNS, Mumbai
Duration: Two years 2017-2020 (Ongoing)

Books Published:

- Contributed a chapter in “**Radiation in Medicine and Biology**” book compiled by Pandit Vidyasagar, Sagar Jagtap, et al, and published by **Pan Stanford Publishing**, Singapore.
 - **BJ Patil**, VN Bhoraskar, SD Dhole, Generation of bremsstrahlung radiation from different low to high Z targets for medical applications: A simulation approach, ISBN 9789814745925(Print)
- **Published Text books**
 - ‘Physics Principles and Applications & Electromagnetics’ Text book of F.Y.B.Sc. Physics, Success Publication, ISBN No. 978-93-84916-97-8
 - Computational Physics’ Text book of T.Y.B.Sc. Physics, Success Publication, 978-93-5158-370-7

Awards and Recognition

Fellowships

- UGC Dr. D.S. Kothari Post doctoral Fellow**, 16th May 2011 – 17th Nov 2011
 Funded By: University Grant Commission, New Delhi. Mentor: Prof. M. A. More
- Senior Research Fellow**, 1st June 2009 – 14th May 2011
 Funded By: Society for Applied Microwave Electronic Engineering and Research (SAMEER), Mumbai
- Junior Research Fellow**, 15th July 2008 – 30th May 2009
 Funded By: DAE-BRNS, Mumbai
- Junior Research Fellow**, 15th June 2004 – 14th July 2008
 Funded By: SAMEER, Mumbai

Professional Recognition:

Selected by review committees at following places:

1. Received Financial Assistance from **University of Pune, Pune** under **Young Teacher Professional Travel Grant** Scheme to present research work in 11th European conference on Accelerators in Applied Research and Technology, Namur, Belgium.
2. Awarded **Travel Grant for College Teacher** by University Grant Commission (**UGC**), New Delhi to attend in **IBIC 2012** at Tsukuba, Japan during 01-04 October 2012.
3. Awarded **Young Scientist Grant** by **Chair, Program Committee**, International Beam Instrumentation Conference 2012 (IBIC’12) held at Tsukuba, Japan, hosted by High Energy Accelerator Research Organization, KEK, Japan.
4. Awarded **Foreign Travel Grant for Young Scientist /Research Scholars** by Council of Scientific and Industrial Research (**CSIR**), New Delhi to attend and present work in Particle Accelerator Conference 2011 (PAC’11) at New York, USA.
5. Awarded **Travel Fellowship** by Centre for International Co-operation in Science (**CICS**) to attend and present work in Particle Accelerator Conference 2011 (PAC’11) at New York, USA.

6. Awarded **Student Grant** to attend and present work in Particle Accelerator Conference 2011 (PAC'11) at New York, USA by Conference chair. PAC'11 was hosted by Brookhaven National Laboratory, and jointly sponsored by the IEEE Nuclear & Plasma Sciences Society and the APS Division of Physics of Beams.
7. Selected for **International travel support** by Department of Science and Technology (**DST**), New Delhi to attend and present work in 10th European conference on Accelerators in Applied Research and Technology, Athens, Greece.
8. Invited to attend the "School on Pulsed Neutrons: Characterization of Materials" to be held at the **Abdus Salam International Centre for Theoretical Physics (ICTP)**, Trieste, from 15 - 26 Oct. 2007 and provided **full financial support** to cover travel, accommodation and living expenses. Moreover, provided financial support for accommodation and living expenses for the period 27-23rd November 2007 under the **Federation Scheme** to University of Pune towards for carrying out literature survey at ICTP, Trieste, Italy.

Key-words suitable to research work:

FLUKA simulation, Photon and Electron mode Medical LINAC, Bremsstrahlung, Neutron radiography, Accelerator based neutron source, Thermo luminescence Dosimetry, Computerized Glow Curve De-convolution, Nuclear reactions.

Specific area of discipline:

- Accelerator Based Research for medical and industrial filed.
- Application of nuclear radiation to Medical Physics.
- Monte Carlo radiation transport simulation studies in materials.
- Thermoluminescence Dosimetry and De-convolution of Thermoluminescence spectra
- Radiation effects on nanoparticles / nanowires.
- Cross section measurement using Accelerator based neutron source

Extra Curricular Activity:

1. **Editor**, Abstract Book, **National Symposium on Medical Biophysics** held at Department of Physics, S.P.Pune University, Pune on 25 – 26 Sept 2015.
2. **Member of Local Organizing Committee**, **National Symposium on Medical Biophysics** held at Department of Physics, S.P.Pune University, Pune on 25 – 26 Sept 2015.
3. **Coordinator**, **Intercollegiate Quiz competition** for Undergraduate students under the banner of Indian Physics Association held at A.G. College, Pune on 9th Jan 2015.
4. **Chairman** of Organizing Committee of **Raman Memorial Conference 2008** at University of Pune, Pune, organized by the research student of Department of Physics, University of Pune.
5. **Voluntary** work in National Seminar on 'Application of Particle Accelerators' 2007 at Pune organized by the Microtron Lab, Department of Physics, University of Pune at Pune
6. **Voluntary** work in International Host Lab Experiment on 'Synthesis of Nano particles by Thermal Plasma' 2004 organized by Department of Physics, University of Pune at Pune.
7. **Executive Member** of Indian Physics Association, Pune Chapter
8. **Life Member** of Indian Association of Physics Teachers, India