

PERSONAL PROFILE

Dr. Vilas Ajabrao Tabhane, D.Sc.



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Resi.
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Raghukulnagri Hou. Society
38, Aundh Road, Bopodi, Pune -411020

Personal Details:
Date of Birth: 25-06-1951
Place of Birth: Nagpur (Maharashtra)
Languages known:
Marathi, Hindi, English

Qualifications, Fellowships & Awards

D.Sc.	1996	"Molecular interaction models and related thermodynamic behavior in real fluid mixtures"
Ph.D.	1984	"Ultrasonic studies in some binary liquid mixtures"
M.Sc.	1976	First Division
LL.B.	1980	Second Division
MS C.I.T.	2001	Information Technology

Fellow

- **Acoustical Society of India**
- **Ultrasonic Society of India**

Awards

- **Best Teacher Award**, (2006-07) The Institute of Science, Nagpur
- **Dr. Ambedkar Rashtriya Manavi Kalyan Puraskar** (2008)
(Human Welfare Social Organization)

Certificate of Honor

- **Outstanding Achiever in education/social field** (2000),
(Dr. Ambedkar Teachers Welfare Association).

Career Brief

- **Present**
 - **Professor** Dept. of Physics, University of Pune, **Pune** (26-6-2009 onwards)
- **Past - Administration and Teaching**
 - **Director** Govt. Institute of Science, **Mumbai** (1-5-2009 to 25-6-2009)
 - **Professor & Head** Dept. of Physics, Institute of Science, **Mumbai**- 400032.
(26-6-2004 to 17-4-2006 & 19-3-2008 to 25-6-2009)
 - **Director** Govt. Institute of Science, **Nagpur** (19-4-2006 to 26-10-2007)
 - **Professor & Head** Dept. of Physics, Institute of Science, **Nagpur**- 440001.
(18-4-2006 to 18-3-2008)
- **Past Selections/ Offers**
 - **Reader (MPSC)** Institute of Science (14-02-1987)
 - **Professor (Theo. Physics)** Nagpur University (03-04-2003)

Affiliation, Period, Posts and Courses

Govt. Institute of Science, Nagpur

01/07/1976 to 07/08/1978
08/08/1978 to 28/07/1982, 01/07/1985 to 13/02/1987
14/02/1987 to 10/11/2003, 18/04/2006 to 18/03/2008
27/07/1998 promotion under CAS

Govt. Vidarbha Mahavidyalaya, Amravati

29/07/1982 to 30/06/1985

Govt. Institute of Science, Mumbai

26/06/2004 to 17/04/2006, 19/03/2008 to 25/06/2009

JRF (UGC)
Lecturer
Reader
Professor

Research
UG, PG & Research

Lecturer

11th, 12th, UG, PG & Research

Professor (CAS)

PG & Research

Total Experience - Teaching: PG : 34 years, UG: 29 years, 11th, 12th : 3 yrs ,
- Administration: 5 Years.
- Academic/Educational administration: 24 Years.

Research Experience & Publications

Research (Experience 35 years)

Recognized Ph.D. Supervisor	RTM Nagpur, SG Amravati & Pune University.
Ph.D.s produced	31 (in different areas of Physics)
Recent Ph.D. thesis submission	01
Registered Ph.D. students	03

Research Papers:

150 Research papers in *national* (121) and *international* (29) journals of repute.

Regular referee/Reviewery:

Articles in Acoustics, dielectric studies, Spectroscopy and material science for the following National and International Research Journals of repute

Acoustica (Germany); *Acoustics Letters* (Amsterdam, UK); *Indian Journal of Pure and Applied Physics*; *Indian Journal of Physics*; *Journal of Acoustical Society of India*; *Journal of Ultrasonic Society of India*; *Bulletin of Electrochemical Sciences*.

Ph.D. Thesis Evaluator:

Regular examiner for Ph. D. thesis from other universities.

Research Fields/ Specializations

Pure & Applied Ultrasonics; Solid State/Condensed Matter/Theoretical/ Polymer Physics; Mathematical Modeling; Materials Science; Nanoscience.

Collaborations with International/National Institutions

International

- **Energy Conversion and Storage Processing Laboratory**, Chonnam National University, Gwang-ju, **South Korea**.
- **University Tunku Abdul Rahman**, Kuala Lumpur, **MALAYSIA**.
- **International Atomic Energy Agency**, Wagramstr. 5,A-1400 Vienna **Austria**.

National

- **National Physical Laboratory**, New Delhi.
- **Pondicherry University**, Pondicherry.
- **Andhra University**, Waltair.
- **Gandhigram Rural University**, Gandhigram.
- **St. Joseph's College** (Autonomous), Tiruchirappalli.
- **Presidency College** (Autonomous), **Chennai**.

International Exposure

Participated and presented research papers in International conferences held at Singapore, Spain and also in India

National Exposure

Participated in National conferences held at various places in India.

Key Major Research Projects

Completed

- **"Ultrasonic studies in some biomaterials"**, Science and Tech. Cell, MACOST, Govt. of Maharashtra, 5 lakhs, (1988-1994).
- **"Photo acoustics studies of molecular relaxation in conducting polymers"**, DST, 20 lakhs, (1997-2000).

Ongoing

- **"Preparation of Polyaniline /ZnO Nanocomposites and their physico-chemical Properties"**, B.C.U.D., University of Pune, 2 lakhs.

Under Consideration

- **"Polyaniline/Metal oxide Nanocomposites: Synthesis, Properties and Applications"**, DST, New Delhi, Rs. 23.48 lakh.

Conference Positions held & Invited Talks Delivered

Occupied various positions and delivered several invited talks in Seminars/ Symposiums.

Some selected events:

Plenary Lecture

Organic-inorganic hybrids: A Man Made Nanocomposite Materials

International Conference on Chemistry for Mankind: Innovative Ideas in Life Sciences (ICCM-2011), **Nagpur**, (9-11, Feb, 2011).

Key note address

Recent trends in material synthesis and characterization

National Conference on recent trends in material synthesis and characterization, Bhalerao Science College, Saoner, Dist. **Nagpur**, 4-5 Dec, 2009.

Nano technology: Materials of 21st century, National Symposium on recent advancements in material science,

Ramakrishna Mission Vivekananda College (Autonomous), **Chennai** (29-30 Dec 2006).

Invited Talk

- **Hetero-junction polymer solar cells**; National conference on lasers and advanced materials, Dept. of Physics, S.G.B. Amravati University, **Amravati** (30 May, 2012).
- **Molecular interaction effecting changes in molecular shapes: SPT**; National conference on materials characterization by Ultrasonics, Dept. of Applied Physics, ASET, New Delhi (**3-4 April 2012**).
- **Nano-biomaterials for emerging biosensors in bio-medical technology: Glucose detection**; National seminar on recent advances in chemical and environmental Science, Prof. Ramkrishna More Atrs, Commerce & Science College, Akurdi, Pune, (**10-12 Feb' 2012**).
- **Nanocrystalline metal oxides: potential biosensors**; National conference on recent trends in material synthesis and characterization, Bhalerao Science College, Saoner, **Dist-Nagpur**; (**17th Dec, 2011**).
- **Ultrasonic methods in bio-materials research**, Indo-US workshop on Nanosonics and Ultrasonics & International conference on Nanotechnology & Ultrasound, St. Joseph's College (Autonomous), **Tiruchirapalli** (12-14 Jan, 2011).
- **Advance in smart material research**, State level seminar on Recent Advances in Nano Crystalline Materials & Applications, P.S.G.V.P. Mandal's Arts, Science and Commerce College, Shahada, Dist. **Nandurbar** (6-7 Feb 2009).
- **Molecular interaction effecting changes in molecular shapes- scaled particle theory**, National Symposium on Ultrasonics, National Physical Laboratory, **New Delhi** (19-20 Nov 2006).
- **Ultrasonic velocities and theories of liquid state**, Holy Cross College (Autonomous), **Tiruchirapalli** (T.N.) (1-2 Dec 2005).
- **Ultrasonic studies of binary liquid mixtures**, Holy Cross College (Autonomous), **Tiruchirapalli** (T.N.) (1-2 Dec 2005).

- **Molecular interaction using ultrasonic technique,**
Presidency College (Autonomous), **Chennai** (20-1-98).

Chairman

National Symposium on Acoustics - Jan 1998

St. Joseph College (Autonomous), **Tiruchirappalli** (T.N.)

Section Chairman

National Symposium on Phonon Physics - Jan 1997,

Cochin University of Science and Technology, **Cochin**.

National Symposium on Ultrasonics – Feb 1989

Guru Nanak Deo University, **Amritsar**.

Scientific, Academic and curricular events organized: Positions held

Convener	“National Symposium on Ultrasonic Applications to Molecular Interactions” Dept. of Physics, Institute of Science, Nagpur , 15-17 Dec 1988.
Co-organizer	7th National Convention of I.A.P.T. - Nagpur , 8-9 Oct. 1992.
Organizer	Workshop on teaching physics in the framework of U.G.C. guidelines: A new approach, for B.Sc. I - Institute of Science, Nagpur , 24-8-2001.
Organizer	Workshop on U.G. and P.G. physics syllabi, Dr. Ambedkar College, Nagpur , 7-2-2002.
Organizer	Students’ seminar competition on physics curriculum held from 1999 to 2009 at different colleges under Nagpur University .
Organizer & Chairman	“Symposium on science in Nagpur University: Retrospect and Prospect” 30-12-2002 at Institute of Science, Nagpur , as a part of Nagpur Tercentenary Celebrations.
Chairman	One-day seminar on “Research in Institute of Science: Retrospect and Prospect” - 07-10-2006, Institute of Science, Nagpur .
Organizer	Felicitation functions for achievers in social and professional fields of Nagpur city, 31-05-1999, Hotel Orange city, Nagpur . Felicitation functions for eminent retired physics teachers, Dec 1997, Hotel Orange city, Nagpur .
Inaugurator/ Chief Guest	Several University- / State- / National- level Conferences, Symposia and Workshops.

Key Academic Administrative Positions /Memberships /Expertship Held

U.G.C.

Expert Member Plan Review Committee (2009)

R.T.M. Nagpur University: Academic Officer

Principal Sec. Nominee Management Council (2006) (issue of University Land encroachment)

Dean Faculty of Science (2001-2003)

Chairman Board of Studies in Physics (2001-2003 & 2006-2010)

Member Academic Council (2001-2003 & 2006 onwards)

Member Board of University Teaching & Research, (2001-2003 & 2006 onwards)

Member Research & Recognition Committee, (2001-2003 & 2006 onwards)

Member Board of Examinations (2001-2003)

Chairman/Member Local Enquiry Committees

Vishvesharaiyya National Institute of Technology, Nagpur

Member Senate (2006)

Maharashtra State Board of Secondary and Higher Secondary Education

Convener	Board of Studies in Physics (1996-2008)
Member	Academic Council (1996-2008)
Member	Research Advisory Committee (1996-2008)

Scientific Organizations

Member	Advisory committee, Raman Science Center, Nagpur,(2002-2003)
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Selection Committees for Lecturers, Readers, Professors

Govt. Nominee/ Expert	Maharashtra Public Service Commission
Govt./V.C. Nominee/ Expert Member	Affiliated U.G./P.G. Colleges Committees of various Universities for staff selection, course affiliation, academic inspection, project & Ph. D. thesis evaluation

Positions on Teacher's / Academic Associations

President	Vidarbha Universities Physics Teachers Association
Ex-Secretary	Regional Council (Maharashtra & Goa), IAPT
Ex-President	Indian Physics Association (Nagpur Chapter)
Life Member	Indian Science Congress Association, Indian Association of Physics Teachers & Marathi Vidnyan Parishad.

The Institute of Science, Nagpur

Member	Local Advisory Committee (1995-2003)
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Assigned Responsibilities Accomplished

Positions in Teacher's Training Programmes held:

- **Project Course Director**
 - IAPT project "Operation Physics Through Experiments", sponsored by [MHRD, Govt. of India](#) New Delhi. (27-09-1997 to 18-12-1997; Trained around 150 teachers of Vidarbha region.)
- **Chief Co-ordinator cum Chief Resource Person**
 - "In-service teachers training programme" for +2 higher secondary level physics teachers sponsored by [Maharashtra State Board of Secondary and Higher Secondary Education](#), From: Dec. 1999 to May 2002, held at different Divisions of State Education Board.
- **Chief Resource Person**
 - Teachers training programme on "Emerging Role of Science: Golden Decade 1895- 1905", sponsored by [N.C.S.T.C., Scientific Industrial Department, Govt. of India, New Delhi; Science and Tech. Cell, GAD, Maharashtra State, Mumbai; School Education Department, Maharashtra State, Mumbai; S.C.E.R.T., Pune & State Institute of Science, Nagpur.](#)
- **Resource Person**
 - "National Conference on Ultrasonics", Holly Cross College (Autonomus), [Tiruchirapalli \(T.N.\)](#), 1-2 Dec. 2005.
 - "Master resource person's training programme - cum - workshop on emergence of modern science 1895-1905" conducted during Aug 11-12, 2000 at the [Indian Institute of Science, Bangalore](#), by [National Council for Science and Technology communication, D.S.T., Govt. of India & Karnataka Rajya Vijnana Parishad, Bangalore.](#)
- **State Level Resource Person**
 - "Seminar on Grading in place of marking system", organized by [Sinthagadh Springdel School, Pune, 22 - 23 July' 04;](#) & [Sevasadan college of education, Nagpur](#), sponsored by [Nagpur Divisional Board, Maharashtra State Board of Secondary and Higher Secondary Education](#), 22-25 November 2004;
 - "2 days workshop on revised syllabus at +2 level". [Dynana Sadhana College of Science, Thane](#), 4 December'04.

Books

- B.Sc. Level text book, **"Concepts in Terrestrial Physics"**, published by S. Chand & Co., New Delhi, 1985.
- **"Teacher's Handbook, Scope and Limitation of Physics Syllabus and Question Bank"** for 11th and 12th Standard", Published by Maharashtra State Board of Secondary and Higher Secondary Education.

Newspaper articles

- **"The police and offences against property"**, "Nagpur Times", (23-06-82).
- **Biographical Article: "Mr. Anantrao Jaltare"**, Addl. S.P. (retd.) in "Lokmat", dated 31-07-1991.
- **Book Review: "Vedh Vidnyanache" – C.S. Daoo**, in "Tarun Bharat", (23-3-2000)

Dr. Vilas A. Tabhane






Annexure-I:

RESEARCH WORK SUPERVISED




RECIPEINTS OF Ph.D. DEGREES UNDER SUPERVISION (31)

Sr. No.	Name of the Recipient		Year	Title of the Thesis
1	Mrs. Sharda A. Ghosh		1991	Ultrasonic investigation of some Heterocyclic Compounds, Amravati University .
2	Mr. Jeetendra N. Ramteke		1993	Ultrasonic investigation of Associated complexes in some binary liquid mixtures, Nagpur University .
3	Mr. Vilas D. Muley		1993	Investigation of molecular size and interactions in some liquids, Nagpur University .
4	Mr. Vivek D. Bhandakkar		1993	Investigation of ultrasonic waves propagation in some bio-liquids, Nagpur University .
5	Mr. Tukaram N. Dhobe		1995	Ultrasonic studies in some bio-liquids, Amravati University
6	Mr. Ramdas S. Charlewar		1996	Computer aided study of molecular shapes and intermolecular interactions in some binary liquid mixtures, Nagpur University .
7	Mr. Vijay N. Pendse		1996	Computer aided study of molecular shapes and intermolecular interactions in some binary liquid mixtures, Nagpur University
8	Mr. Kunda S. Lokre		1997	Investigation of some aspects of Khasare's equation of state to the real fluid mixtures, Nagpur University
9	Mr. Satish G. Goswami		1997	A comprehensive study of the liquid state & their applications to real fluid mixtures, Nagpur University
10	Mr. Anand D. Rangari		1997	Investigation of photo-acoustic effect in some materials, Nagpur University .
11	Mr. Purshottam G. Hagoné		1998	Investigation of some conducting polymers, Nagpur University
12	Mr. Ramesh W. Nainani		1999	A comparative study of single parameter and multiparameter interaction models for real fluid mixtures, Nagpur University .


13	Mr. Sanjay G. Charalwar		1999	Investigation on some aspect of hard sphere model of real fluids, Nagpur University
14	Mr. Vijay R. Pande		1999	Comparative study of scaled particle theory & Khasare's theory to real fluid mixtures, Amravati University
15	Mr. Dilip S. Badwaik		1999	Ultra sonic investigation of some thermotropic liquid crystal, Nagpur University .
16	Mr. Omprakash P. Chimankar		1999	Thermodynamic & related studies in some real mixtures in different environment, Nagpur University .
17	Mr. Ajay A. Yoel		2000	Investigation on the role of defects in domain formation in Lead Niobate single crystals, Nagpur University
18	Mr. Devram V. Nandanwar		2000	Investigation on optical and thermal properties of some conducting polymers, Nagpur University .
19	Mr. Sunil A. Bhagat		2002	Investigation on etch-patterns, line defects and electrical properties of glycine – maleic mono amide mixed crystal, Nagpur University .
20	Ku. Sangeeta R. Agrawal		2003	Investigation on some aspects of molecular interaction model in real fluid mixtures, Nagpur University .
21	Mr. Subhash B. Kondawar		2004	Investigation on thermodynamics behavior & physico –chemical properties of some conducting polymers, Nagpur University .
22	Mr. Chandragupta M. Dudhe		2004	Investigation on defect dependent domain formation in BaTiO ₃ crystal, Nagpur University
23	Mr. Sushil K. Paliwal		2006	Thermodynamic and related investigation on some biologically active materials, R.T.M.Nagpur University
24	Shri. Ranjit A. Mondal		2007	Thermodynamic and related investigation of conducting polymers, R.T.M.Nagpur University
25	Shri. Sunil P. Dongre		2008	Transport properties of some conducting polymer composites, R.T.M.Nagpur University
26	P. D. Wankar		2008	Thermodynamic investigation of some biologically active material, R.T.M.Nagpur University

27	U. B. Mahatme		2009	Study of thermodynamics and electrical properties of composites of some conducting polymers, R.T.M.Nagpur University
28	A. S. Nakhate		2010	Ultrasonic investigation on some biologically active materials, R.T.M.Nagpur University
29	S. D. Bompilwar		2011	Transport properties of organic conducting polymer-inorganic conductor nano composites, R.T.M.Nagpur University
30	Mrs. Vandana A. Khati		2012	Magnetic and electrical conductivity studies of conducting polymer semiconductor composite materials, R.T.M.Nagpur University
31	Mr. Amardeep T. Shende		2012	Study of molecular interaction in aqueous biologically active sample, R.T.M.Nagpur University

RESEARCH SCHOLARS REGISTERED FOR Ph.D. (03)

Sr. No.	Name of the Recipient		Year	Title of the Thesis
1	Shri. Vishal G. Dudhe		2006	Study of ultrasonic wave propagation in some Bio-Fluid, R.T.M.Nagpur University
2	Shri. Ajay D. Dahegaonkar		2006	Surface morphology, conductivity and dielectric behavior of some conducting polymers – Fly ash composites , R.T.M.Nagpur University
3	Sandeep Arote		2010	Studies on factors influencing the performance of Tin Oxide based dye sensitized solar cells, University of Pune.

M Phil Guidance (01)

Sr. No.	Name of the Recipient		Year	Title of the Thesis
1	Ravi Vinayak Ingle		2012	Synthesis characterization of doped and undoped Polyaniline its composites with CdS nanoparticles.

