

CURRICULUM - VITAE



Name : Mr. ANKOSH DADARAM DESHMUKH

1. Communicating Address:

Mr. Ankosh D. Deshmukh
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2. Permanent Address:

c/o, Dadaram D. Deshmukh
Mr. Ankosh D. Deshmukh,
At: Pathari, Post: Chichal, Tal: Pauni, Dist: Bhandara - 441903 (Maharashtra), India.

3. Personal Details:

- **Nationality:** INDIAN
- **Category:** OBC
- **Date of Birth:** 15th April, 1994
- **Gender:** Male
- **Language Known:** Marathi, Hindi, English - (Read, Write, Talk)

4. Academic Record:

Examination	Name of Board/University	Year	Percentage	Division	Subjects (Specialization)
S.S.C. (10 th)	Nagpur Divisional Board, Maharashtra State	2010	76.40	I st	Marathi, English, Hindi, Maths, Science, Social Science.
H.S.C. (12 th)	Nagpur Divisional Board, Maharashtra State	2012	61.50	I st	Marathi, English, Physics, Chemistry, Maths, Biology
B. Sc.	R T M Nagpur University, Nagpur	2015	55.85	II nd	Physics, Chemistry, Maths
M. Sc. (Physics)	R T M Nagpur University, Nagpur	2017	73.24 (CGPA-7.86)	I st Distinction	Materials Science (Specialization subject)
B. Ed.	R T M Nagpur University, Nagpur	2020	71.25 (CGPA-7.55)	I st	Physics, Maths
SET	Maharashtra State	2021			Physics
Ph. D. (Pursuing)	Savitribai Phule Pune University, Pune	2022			Physics

5. Higher Qualification:

- **Doctor of Philosophy (Ph.D. Pursuing) in Physics.**
- **Master of Science (M.Sc.) in Physics.**
- **Percentage: 73.24 % (CGPA-7.86 : out of 10 point scale)**

6. Project in Master Degree (for 6 Months):

- **Topic:** Variational Principle
- **Supervisor:** Prof. Prashant M. Gade, Former Head, Department of Physics, R T M Nagpur University, Nagpur.
- **Project Reference:** **B. Cameron Reed, Am J Phy., Vol.58, No. 4, (April 1990)** had worked out variational calculations for linear potential.
In my master degree project, I read this paper and worked out entire calculations in details. I worked out two different trial wave functions for the linear potential and was able to reproduce the results.

7. Research Area:

- Computational Physics, Condensed Matter Physics, Density Functional Theory (DFT), Molecular Dynamics (MD) study.

8. Fellowship Awarded/ Offered:

- **Awarded:**
 1. **Project Fellow** under **DST SERB, New Delhi** under the supervision of Prof. Prashant M. Gade. **(Completed)**
 2. **Junior Research Fellow (JRF)** under **National Supercomputing Mission (NSM) of India at Savitribai Phule Pune University Pune** under the supervision of **Dr. Vaishali Shah** in collaboration with SPPU Pune, IISc Bangalore, IIT Bombay, IIT Madras, and IIT Hyderabad. **(Ongoing)**
- **Offered:** I had been offered a **10 thousand TWD Dollar fellowship per month** for **Ph.D. degree** study at **Southern Taiwan University of Science and Technology (STUST)** in **Taiwan**.

9. Research (Place, Guide & Topic):

Research Project-I :: DST-SERB India (Completed)

- ◆ **Duration:** 26th February, 2018 to 23rd April, 2021 **(3 Years and 2 Months)**.
 - ◆ **Project Title:** “Dynamical Phases and Phase Transitions in Spatially Extended Systems”
 - ◆ **Supervisor (PI):** Prof. Prashant M. Gade.
 - ◆ **Position held on project:** Junior Research Fellow
 - ◆ **Funding Agency:** DST-SERB Research scheme, New Delhi, India
 - ◆ **Research Institute:** Department of Physics, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.
- **Research Experience:**
 - ◆ **Experience :** 4 Years and 9 Months.
 - **Research Publications in SCI Journal:**
 1. Ankosh D. Deshmukh, Maneesh B. Matte, and Prashant M. Gade, "Emergence of long range order for sublattice update in coupled map lattices", *European Physical Journal B* **92**, 185 (2019). **(IF:1.44)** <https://doi.org/10.1140/epjb/e2019-100078-1>
 2. Bhakti P. Rajvaidya, Ankosh D. Deshmukh, Prashant M. Gade and Girish G. Sahasrabudhe, “Transition to Coarse-Grained Order in Coupled Logistic Maps: Effect of Delay and Asymmetry”, *Chaos, Solitons and Fractals* **139**, 110301 (2020). **(IF: 9.922)** <https://doi.org/10.1016/j.chaos.2020.110301>

3. Ankosh D. Deshmukh, Nitesh D. Shambharkar, and Prashant M. Gade, "Effect of Mode of Update on Universality Class: Directed Ising to Ising", *International Journal of Bifurcation and Chaos* **31**, 2150042 (2021). (IF: 2.469) <https://doi.org/10.1142/S0218127421500425>
4. Nitesh D. Shambharkar, Ankosh D. Deshmukh, and Prashant M. Gade, "Transition to Fully or Partially Arrested State in Coupled Logistic Maps on a Ladder", *International Journal of Bifurcation and Chaos* **31**, 2150185 (2021). (IF: 2.469) <https://doi.org/10.1142/S0218127421501856>
5. Manoj C. Warambhe, Ankosh D. Deshmukh, and Prashant M. Gade, "Absorbing phase transition in a unidirectionally coupled layered network", *Physical Review E* **106**, 014303 (2022). (IF: 2.707) [10.1103/PhysRevE.106.014303](https://doi.org/10.1103/PhysRevE.106.014303)
6. Ankosh D. Deshmukh, Arjun R. Varma, M. P. Gururajan and Vaishali Shah, "First-principles Investigation of The Solid-Solid Interface Energy of *bcc* Ti/*hcp* Ti", *AIP Conference Proceeding in 66th DAE Solid State Physics Symposium* (2022). (in press)
7. Abhishek Kumbhar, Ankosh D. Deshmukh, Arjun R. Varma, M. P. Gururajan and Vaishali Shah, "Ab-initio Simulations of Ni and Ni_{0.5}Cu_{0.5} Generalized Stacking Fault Energies", *AIP Conference Proceeding in 66th DAE Solid State Physics Symposium* (2022). (in press)

The works (i-iii) are related to change in dynamics and possible impact on nature of dynamic phase transition due to nature of update. The work (iv) is related to the phase transition in coupled logistic maps on ladder system. The work (v) is related to the contact process on layered networks in which each layer is unidirectionally coupled to the next layer.

The work (vi and vii) are related to interfacial and stacking fault energy calculations in solid phases of matter. I have a good expertise in nonequilibrium phase transitions, nonlinear dynamics as well as condensed matter physics. I have carried out more extensive computational work for above problems.

10. Conference/Symposium Attended:

❖ International:

1. Ankosh D. Deshmukh: *Effect of A Mode of Update on Universality Class: Directed Ising to Ising*, ICAPCM-2020, RTM Nagpur University, Nagpur.
2. Ankosh D. Deshmukh : *Transition to Absorbing State in Contact Process on Multiplex network*, (CONIAPS XXVI)-2021, Gondwana University, Gadchiroli.
3. Ankosh D. Deshmukh: The solid-solid interface energy calculation of Ti(*bcc*)/Ti(*hcp*) : A first-principles study (AMSCA Maverick, 18-20th October, 2022) (Received BEST Poster Award).

❖ National:

1. Ankosh D. Deshmukh (Participant): *One week National School on Computer-Assisted Spectroscopic Data Interpretation Techniques*, NSCASDIT-2019, Dept. of Physics, RTM Nagpur University, Nagpur.
2. Ankosh D. Deshmukh: *First-principles calculations of stacking fault energy for Cu-Al alloy* (Raman Memorial Conference, 17-18th March, 2023) at Dept. of Physics, SPPU Pune. (Oral Presentation).

■ Symposium:

1. Ankosh D. Deshmukh: *66th DAE Solid State Physics Symposium* (18-22th December, 2022) organized by Bhabha Atomic Research Centre, Mumbai, at BIT Mesra, Ranchi (Jharkhand), India.

11. Lecture Series/ Webinars/ Internship/Short Term Courses/Seminars Attended:

❖ Lecture Series:

1. **(6-10 Aug., 2018)** Lecture series on Numerical Methods and Computer Programming (NMCP2018) organized by UGC-DAE CSR, Indore.

❖ Webinar:

1. Role of Youth on **Nation Building and National Integration** organized by *IIIT Nagpur, NIT Rourkela, VNIT Nagpur, IIITDM Kurnool and IGNOU Center Nagpur* .
2. **(20 Days: 5th Oct. to 24th Oct., 2020)** Webinar series on **AI Master Class** by **PYTHON** language organized by *Andra Pradesh State Skill Development Corporation (APSSD) and Pantech Prolabs India Pvt. Ltd.*
3. National webinar on **National Education Policy 2020: A way to Aatmanirbhar Bharat** organized by *RTM Nagpur University Nagpur and NAAC, Bangalore.*
4. National Webinar on **“An Insight towards Assessment & Accreditation Process for Affiliated Colleges in India”** organized by *RTM Nagpur University Nagpur and NAAC, Bangalore.*

❖ Internship:

1. **(30 Days: 1st Sep. to 30th Sep., 2020)** 30 Days Internship Program on **Matlab** organized by *www.pantechsolutions.net* in association with *IETE Mumbai.*

❖ Short Term Courses:

1. **(One Week)** Current Trends in Condensed Matter Physics organized by Department of Physics, NIT Jalandhar.

❖ Seminar:

1. International Seminar on **Nonlinear Physics** organized by *SSN- Centre for Radiation, Environmental science & Technology* in association with *Indian Spectro Physics Association* conducted at *SSN college of Engineering, Kalavakkam.*

12. Skills:

- **Scientific:** Programming, Data visualization , handling of HPC Cluster for simulations and programming, etc.
- **Administrative:** Maintaining laboratory, Helping administrative and financial responsibilities in project.

13. Administrative Experience: I have carried out administrative work for purchasing equipments in the Laboratory. For that I have used different forms and made various proposal for purchasing equipment in computer Lab and even for my Physics Department also. I have done my administrative work of Utilization for my project for more than five times.

I have more than 3 years experience of this type of work.

14. Computer Proficiency: Fortran, Matlab. I have handled Linux systems and was in-charge of Prof. P. M. Gade's computer laboratory for more than 3 years.

- Cleared Computer Examination: CCC
- Programming languages: **FORTRAN (simple programming, not scientifically as well), PYTHON (learning)**
- Knowledge of:
Operating Systems & its writing tools like: Linux, Windows, LaTeX, LaTeXila, MS-Office
Software(plotting & simulations): Origin, MATLAB, Gnu-plot, VESTA, OVITO, & VASP, LAMMPS.

Declaration:

I hereby declare that I have carefully read this provided information by me, and that all entries in this CV are true to the best of my knowledge and belief. I will be fully responsible if any information is found to be incorrect during the process of selection or even later on.



(Mr. Ankosh D. Deshmukh)