


Faculty Profile

Name of Faculty : Dr. B. D. Vhanmore		
Designation : Assistant Professor		
Qualification : M.Sc., Ph. D. (Physics)		
Specialization: Theoretical Physics		
Official Email ID: dr.bandopantvhanmore.dypcet@dypgroup.edu.in		
Courses Taught	<ul style="list-style-type: none"> • <i>Applied Physics for B. Tech. Students.</i> • <i>Numerical Techniques for M.Sc. Students.</i> • <i>Electronic for M.Sc. Students.</i> 	
Roles and Responsibilities	<ul style="list-style-type: none"> • <i>JUNO Coordinator (Dept.)</i> • <i>Feedback Coordinator (Dept.)</i> • <i>Roll Call and Division Coordinator (Dept.)</i> • <i>Coding and Programming Coordinator (Dept.)</i> • <i>Media and Publicity Coordinator (Dept.)</i> • <i>Class Teacher</i> • <i>Social / Rural Internship Coordinator (Two Batches)</i> • <i>Capstone Project Coordinator (One Division)</i> 	
Research Contribution <i>(write only if available else delete)</i>	<ul style="list-style-type: none"> • B. D. Vhanmore, A. T. Valkunde, T. U. Urunkar, K. M. Gavade, S. D. Patil, M. V. Takale, “Self-Focusing Of Asymmetric Cosh-Gaussian Laser Beams Propagating Through Collisionless Magnetized Plasma,” <i>Laser And Particle Beams</i>, 35 (2017) 670-676. • B. D. Vhanmore, A. T. Valkunde, T. U. Urunkar, K. M. Gavade, S. D. Patil, M. V. Takale, D. N. Gupta, “Effect Of Q-Parameter On Relativistic Self-Focusing Of Q-Gaussian Laser Beam In Plasma”, <i>Optik</i>, 158 (2018) 574-579. 	

- **B. D. Vhanmore**, A. T. Valkunde, T. U. Urunkar, K. M. Gavade, S. D. Patil, M. V. Takale, "Effect Of Decentred Parameter On Self-Focusing Of In The Interaction Of Cosh Gaussian Laser Beams With Collisionless Magnetized Plasma", *AIP Conference Proceedings*, **1953**, (2018) **140047**.
- **B. D. Vhanmore**, A. T. Valkunde, T. U. Urunkar, K. M. Gavade, S. D. Patil, M. V. Takale, "Self Focusing Of Higher-Order Asymmetric Elegant Hermite-Cosh-Gaussian Laser Beams In Collisionless Magnetized Plasma", *Eur. Phys. J. D*, **73** (3) (2019) **45**.
- **B. D. Vhanmore**, A. T. Valkunde, T. U. Urunkar, K. M. Gavade, S. D. Patil, M. V. Takale, "Self Focusing Of Asymmetric Cosh-Gaussian Laser Beams In Weakly Ionized Collisional Magnetoplasma," *AIP Conference Proceedings*, **2142** (1) (2019) **110017**.
- **B. D. Vhanmore**, A. T. Valkunde, T. U. Urunkar, K. M. Gavade, S. D. Patil, M. V. Takale, "Influence Of Light Absorption In The Interaction Of Asymmetric Elegant Hermite Cosh Gaussian Laser Beams With Collisionless Magnetized Plasma," *Physics Of Plasmas*, **27**(6) (2020) **063104**.
- A. T. Valkunde, S. D. Patil, M. V. Takale, **B. D. Vhanmore**, T. U. Urunkar, K. M. Gavade, D. N. Gupta, "Exponential Density Transition Based Self-Focusing Of Gaussian Laser Beam In Collisional Plasma," *Optik*, **158** (2018) **1034-1039**.
- A. T. Valkunde, S. D. Patil, **B. D. Vhanmore**, T. U. Urunkar, K. M. Gavade, M. V. Takale, V. J. Fulari, "Analytical Investigation On Domain Of Decentered Parameter For Self-Focusing Of Hermite-Cosh-Gaussian Laser Beam In Collisional Plasma," *Physics Of Plasmas*, **25** (2018) **033102**.
- S. D. Patil, A. T. Valkunde, **B. D. Vhanmore**, T. U. Urunkar, K. M. Gavade, M. V. Takale, "Influence Of Light Absorption On Relativistic Self-Focusing Of Gaussian Laser Beam In Cold Quantum Plasma," *AIP Conference Proceedings*, **1953**, (2018) **140046**.
- T. U. Urunkar, A. T. Valkunde, **B. D. Vhanmore**, K. M. Gavade, S. D. Patil, M. V. Takale, "On The Exploration Of Effect Of Critical Beam Power Propagation Of Gaussian Laser Beam In Collisionless Magnetized Plasma," *AIP Conference Proceedings*, **1953**, (2018) **140087**.
- A. T. Valkunde, **B. D. Vhanmore**, T. U. Urunkar, K. M. Gavade, S. D. Patil, M. V. Takale, "Effect Of Exponential Density Transition On Self-Focusing Of Q-Gaussian Laser Beam In Collisionless Plasma," *AIP Conference Proceedings*, **1953**, (2018) **140088**.

- T. U. Urunkar, S. D. Patil, A. T. Valkunde, **B. D. Vhanmore**, K. M. Gavade, M. V. Takale, "Effect Of Critical Beam Radius On Self-Focusing Of Cosh-Gaussian Laser Beams In Collisionless Magnetized Plasma," *Communication To Theoretical Physics*, **70**, (2018) 220-224.
- T. U. Urunkar, S. D. Patil, A. T. Valkunde, **B. D. Vhanmore**, K. M. Gavade, M. V. Takale, "On The Exploration Of Graphical And Analytical Investigations Of Effect Of Critical Beam Power On Self-Focusing Of Cosh-Gaussian Laser Beams In Magnetised Plasma," *Laser And Particle Beam*, **36**, (2018) 254-260.
- T. U. Urunkar, A. T. Valkunde, **B. D. Vhanmore**, K. M. Gavade, S. D. Patil, M. V. Takale, "Effect Of Light Absorption And Critical Beam Power On Self-Focusing Of Gaussian Laser Beam In Collisionless Magnetized Plasma", *AIP Conference Proceedings*, **2142** (1), (2019) 110003.
- S. D. Patil, A. T. Valkunde, **B. D. Vhanmore**, T. U. Urunkar, K. M. Gavade, M. V. Takale, "Exploration Of Temperature Range For Self-Focusing Of Lowest-Order Bessel-Gaussian Laser Beams In Plasma With Relativistic And Ponderomotive Regime", *AIP Conference Proceedings*, **2142** (1), (2019) 110012.
- K. M. Gavade, **B. D. Vhanmore**, A. T. Valkunde, T. U. Urunkar, S. D. Patil, M. V. Takale, "Effect Of Light Absorption On Self-Focusing Of Cosh-Gaussian Laser Beams In Collisional Plasma", *AIP Conference Proceedings*, **2142** (1), (2019) 110016.
- K. M. Gavade, **B. D. Vhanmore**, A. T. Valkunde, T. U. Urunkar, S. D. Patil, M. V. Takale, "Self focusing of Hermite-Cosh-Gaussian Laser Beams In Plasma Under Weakly Relativistic And Ponderomotive Regime.", *Journal Of Applied Spectroscopy*, **87**(3), (2020) 499-504.
- K. M. Gavade, T. U. Urunkar, B. D. Vhanmore, A. T. Valkunde, M.V. Takale, "САМОФОКУСИРОВКА ЛАЗЕРНЫХ ПУЧКОВ ЭРМИТА-КОШИ-ГАУССА В ПЛАЗМЕ В СЛАБОРЕЛЯТИВИСТСКОМ ПОНДЕРОМОТОРНОМ РЕЖИМЕ", *Журнал прикладной спектроскопии*, **87** (3), (2020) 473-478.
- S. D. Patil, **B. D. Vhanmore**, M. V. Takale, "Analysis Of Temperature Range For Self-Focusing Of Lowest-Order Bessel-Gaussian Laser Beams In Plasma", *Journal of Optics*, **49** (4), (2020) 510-515.
- S. D. Patil, **B. D. Vhanmore**, M. V. Takale, "Analysis Of Intensity Range For Self-Focusing Of Lowest-Order

Bessel-Gauss Laser Beams In Plasma”, *Journal of Russian Laser Research*, **42**, (2021) 45-52.

- **B. D. Vhanmore**, S. P. Rajmane, S. D. Patil, M. V. Takale, “Influence of Magnetic field and Decentred Parameter on Self-Focusing of cosh-Gaussian Laser Beam in Collisional Magnetized Plasma”, *Journal of Mathematical Techniques and Computational Mathematics*, **1(2)**, (2022).
- **B. D. Vhanmore**, S. P. Rajmane, “Influence of Magnetic field and Decentred Parameter on Self-Focusing of cosh-Gaussian Laser Beam in Collisional Magnetized Plasma”, *Journal of Optical & Quantum Electronics*, (2022).
- B. D. Vhanmore, S. P. Rajmane, S. B. Sadale, S. D. Patil. M. V. Takale “A comparative study of extraordinary and ordinary modes in self-focusing of elegant Hermite cosh-Gaussian laser beams in an collisionless magnetized plasma”, *AIP Proceedings (2023)- Accepted*.
- S. P. Rajmane, **B. D. Vhanmore**, S. B. Sadale, K. Y. kandale, S. D. Patil, M. V. Takale, “An Comparative Study of Extraordinary and Ordinary Modes in the Presence of Static Magnetic Field in Self-Focusing of Higher order mode, $TEM_{m,n}$ of Elegant Hermite Cosh-Gaussian Laser Beams in Collisionless Plasma Medium”- *Journal of Optics-Submitted (2023)*.
- **B. D. Vhanmore**, S. P. Rajmane, P. V. Gaikwad, H. M. Shinde, R. J. Kamble, S. D. Patil, M. V. Takale, “Combined Effect of Absorption Coefficient and Polarization modes on self-focusing of cosh-Gaussian Laser Beams with Collisionless Magnetized plasma” *Springer Nature-Submitted. (2023)*
- **B. D. Vhanmore**, S. P. Rajmane, S. D. Patil, S. B. Sadale, M. V. Takale, R. J. Kamble, H. M. Shinde, “A Comparative Study of Extraordinary and Ordinary Modes in Presence of External Magnetic Field in Self-Focusing of Higher order modes of Elegant Hermite Cosh-Gaussian Laser Beams in Collisionless Plasma Medium”, *Applied Physics B Lasers and Optics-Submitted. (2023)*
- **B. D. Vhanmore** , S. P. Rajmane, S. D. Patil, H. M. Shinde, R. J. Kamble, M. V. Takale, “An Comparative Study of Extraordinary and Ordinary Modes in the Presence of Static Magnetic Field in Self-Focusing of Higher order mode, TEM_{mn} , of Elegant Hermite Cosh-Gaussian Laser Beams in Collisionless Plasma Medium”, *Journal of Nonlinear Optical Physics & Materials-Submitted. (2023)*
-

<p><i>FDP/Workshop Attended</i></p>	<ul style="list-style-type: none"> • Participated In ONE-Week Faculty Development Program On Arduino Organized By Bajaj College Of Science, Wardha Offered By The Spoken Tutorial Project, IIT Bombay, Funded By National Mission On Education Through ICT, MHRD, Govt., Of India. Dated 5th May 2020 • Participated In ONE-Week Faculty Development Program On Latex Organized By Sanjay Ghodawat University, Kolhapur Offered By The Spoken Tutorial Project, IIT Bombay, Funded By National Mission On Education Through ICT, MHRD, Govt., Of India. Dated 6th May 2020 • Participated In ONE-Week Faculty Development Program On Sci-Lab Organized By Rajarshi Shahu Mahavidyalaya, Latur Offered By The Spoken Tutorial Project, IIT Bombay, Funded By National Mission On Education Through ICT, MHRD, Govt., Of India. Dated 7th May 2020 • Participated In TWO-Week Faculty Development Program On MOOC Organized By Ramanujan College, Delh, Offered By The Spoken Tutorial Project, IIT Bombay, Funded By National Mission On Education Through ICT, MHRD, Govt., Of India. Dated 6th May 2020 • Attended web One Day International Seminar on Energy Storage and Conversion Devices Organized By Karmveer Bhaurao Patil College, Vashi, Navi Mumbai, under the Aegis of RUSA, Dated 12th Jan. 2021 • Attended Online Lecture Series Programe (UGC-Stride) Seminar Organized By Shivaji University, Kolhapur, Dated 7-10 April 2021. • Participated In TWO-Days Faculty Orientation Program Organized By D Y patil College of Engineering & Technology Kolhapur. Dated 5-6 August 2022.
<p><i>Awards</i></p>	<ul style="list-style-type: none"> • Awarded GOLDEN JUBILEE RESEARCH FELLOSHIP (GJRF) Department of Physics, Shivaji University, Kolhapur 16 Oct 2017. • Written Exam Passed Of Airforce NCC Taken Under The MINISTRY OF DEFENCE, GOVERNMENT OF INDIA, Rank- Cdt, Regtl.No. MAH/JD/04/21811. Held in 2006.