

Yogyata Pathania, Ph.D.

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DoB: 12th March, 1977

Employment History

2021 – till date	Asst Professor. DAV College, Sector-10, Chandigarh.
2017 – 2021	DST WoSA Fellow, IISER Mohali.
2014 – 2017	Post Doc Fellow. IISER Mohali.
2013 – 2014	Asst Professor. GGSDS College, Sector-32, Chandigarh.
2012 – 2013	Assoc Professor. Surya World, Rajpura.
2008 – 2012	Asst Professor. Chitkara University, Barotiwala.
2005 – 2008	Asst Professor. IJET, Baddi.

Education

2001 – 2007	Ph.D., Himachal Pradesh University, Shimla. Thesis title: <i>Molecular Simulation Studies of Two & Three Dimensional Classical Fluids using Double Yukawa Potential.</i>
1999 – 2000	M.Phil. Physics, Himachal Pradesh University, Shimla. Thesis title: <i>Monte Carlo Simulations: Methods and Applications.</i>
1997 – 1999	M.Sc. Physics, Himachal Pradesh University, Shimla.

Research Publications

1. Pathania, Y., Chakraborty, D., & Höfling, F. (2021). Continuous demixing transition of binary liquids: finite-size scaling from the analysis of sub-systems. *Adv. Theory Simul.*, 2000235. <https://doi.org/10.1002/adts.202000235>
2. Pathania, Y., & Gaganpreet. (2021). Self-passivated nanoporous phosphorene as a membrane for water desalination. *Desalination*, 497. <https://doi.org/10.1016/j.desal.2020.114777>
3. Pooja, Pathania, Y., & Ahluwalia, P. K. (2015). Molecular dynamic simulation of ar-kr mixture across a rough walled nanochannel: Velocity & temperature profiles, In AIP conference proceedings. <https://doi.org/10.1063/1.4915458>
4. Pathania, Y., & Ahluwalia, P. K. (2013). Quantum and classical molecular dynamics simulations of liquid methane, In AIP conference proceedings. <https://doi.org/10.1063/1.4791165>
5. Mullick, S., Pathania, Y., & Ahluwalia, P. K. (2011). Molecular dynamics simulation of binary fluid in a nanochannel, In AIP conference proceedings. <https://doi.org/10.1063/1.3653622>
6. Pathania, Y., & Ahluwalia, P. K. (2006a). Freezing transition of two- and three-dimensional classical fluids using double Yukawa potential. *Indian Journal of Pure and Applied Physics*, 44(1).
7. Pathania, Y., & Ahluwalia, P. K. (2006b). Vapour-liquid equilibria of the two- and three-dimensional monoatomic classical fluids interacting via double Yukawa potential. *Pramana - Journal of Physics*, 67(6). <https://doi.org/10.1007/s12043-006-0029-6>
8. Pathania, Y., & Ahluwalia, P. K. (2005). Molecular dynamics study of two- And three-dimensional classical fluids using double Yukawa potential. *Pramana - Journal of Physics*, 65(3). <https://doi.org/10.1007/BF02704203>

Books and Chapters

1. Pathania, Y., & Mahajan, M. (2010). *Engineering physics*. Chitkara University Publication. ISBN: 978-81-920249-0-5.

2. Pathania, Y., & Ahluwalia, P. K. (2005). Fluctuation Metrics and Ergodic Convergence Properties of Double Yukawa Liquids, In Solid state physics: Proc. of the solid state physics symp. 50, 341. ISBN: 81-8362-019-6.
3. Pathania, Y., & Ahluwalia, P. K. (2004). Thermodynamic and Transport Properties of Liquid Nitrogen: A Molecular Dynamics Study using Double Yukawa Potential, In Solid state physics: Proc. of the solid state physics symp. 49, 748. ISBN: 81-8372-000-5.
4. Pathania, Y., & Ahluwalia, P. K. (2003). Vapour – Liquid Equilibria of Two Dimensional Double Yukawa Fluid, In Solid state physics: Proc. of the solid state physics symp. 46, 27. ISBN: 81-7764-652-4.
5. Pathania, Y., Raman, S., & Ahluwalia, P. K. (2002). Freezing Transition of Two Dimensional Systems using Double Yukawa Potential, In Solid state physics: Proc. of the solid state physics symp. 45, 15. ISBN: 81-7764-484-X.

Completed Sponsored Research Projects/Fellowships

2017 – 2021 Project Title: Critical Dynamics of confined binary fluids.
 PI: Yogyata Pathania
 Funding Agency: DST

Current Research Interest

My broad area of specialization is Computational Condensed Matter physics. My research interests include application of statistical mechanics methods in the areas of condensed matter physics, molecular dynamics simulations of the critical phenomenon of single component systems and binary systems. I am also interested in applications and developments within the framework of density functional theory and currently focusing on nanomaterials for biosensing and water desalination applications.

Invited as Resource Person

2019 National Workshop on In Silico Approach for Modelling New Materials: Methodology & Applications, 14-20 January, 2019 held at Central University of Himachal Pradesh, Dharamshala (Resource person).
 2006 Refresher course in Computational Physics organized by H. P. University, Shimla during March, 2006.(Resource person).

Awards and Achievements

2011 Qualified Joint CSIR-UGC Test for Lecturership (NET) held on 19.06.2011
 2000 Gold Medal in M. Phil.