MUHAMMAD SHAHBAZ

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EDUCATION

2012-2019

- PhD (Doctor of Philosophy) in Physics.
- Department of Physics & Astronomy, University of Delaware, USA.
- Advisor: Krzysztof Szalewicz
- Thesis: Dispersion Energy in Density-Functional Theory

2005-2007

- MSc (Master of Science) in Physics
- *Department of Physics, University of the Punjab, Lahore, Pakistan.*
- Specialization: Particle Physics
- CGPA: 3.99

2003-2005

- BSc (Bachelor of Science)
- *Islamia College Gujranwala, University of the Punjab, Lahore, Pakistan.*
- Major: Physics, Mathematics, Chemistry

RESEARCH INTEREST

- Theory of atoms, molecules, and solids.

EXPERIENCE

2008-to date

- Lecturer, *Department of Physics, University of the Punjab, Lahore, Pakistan.*

Taught the following subjects to BS and MSc classes:
- Quantum Mechanics
- Solid State Physics
- Nuclear Physics
- Particle Physics

AWARDS & HONORS

- Merit Scholarship in MSc.
- Gold Medal for First Position in MSc
- Competitive Dissertation Fellowship, University of Delaware, USA.
- Daicar-Bata prize for best publication in 2017-2018 in the Department of Physics & Astronomy, University of Delaware, USA.

CONFERENCES/PRESENTATIONS

- Telluride Science Research School (TSRC), USA (2014).
- Multidisciplinary University Research Initiative (MURI), USA (2014).
- Multidisciplinary University Research Initiative (MURI), USA (2015).
- Multidisciplinary University Research Initiative (MURI), USA (2016).
- Penn Conference on Theoretical Chemistry (PCTC), USA (2016).
- Sanibel Symposium, USA (2017).

PUBLICATIONS

- **M. Shahbaz** and K. Szalewicz, "Do Semilocal DensityFunctional Approximations Recover Dispersion Energies at Small Intermonomer Separations?," Phys. Rev. Lett., vol. 121, 113402, 2018.
- **M. Shahbaz** and K. Szalewicz, "Evaluation of Methods for Obtaining Dispersion Energies used in Density-Functional Calculations of Intermolecular Interactions," Theor Chem Acc (2019) 138: 25.
- **M. Shahbaz** and K. Szalewicz, "Dispersion Energy from Local Polarizability Density." Phys. Rev. Lett., vol 122, 213001, 2019.