



Tae-Hun Lee

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Physics, Mathematics

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Korea(South)

I worked in Theoretical Particle Physics for PhD. I obtained my PhD in 2008 at Purdue University, US. Particularly I worked in Flavor Mixing Matrices. Since then I had worked in Quantum Field Theories. Recently I got interested in Foundation of Quantum Mechanics and am trying to work in it. Also, currently I found some interest in research on Magnetic Monopole and a Black hole Thermodynamics.

CURRENT RESEARCH

Topic

Magnetic Monopole

Methodology

- How to reformulate the current theory when a magnetic monopole exists
- How to understand the symmetry due to a magnetic monopole

Application

How to see a magnetic monopole indirectly through, for example Aharonov–Bohm effect.

UKZN main Publications

1. Tae-Hun Lee, "Parametrization of degenerate density matrices", arXiv:1309.1238v1 [math-ph](2013)

Past Researches

Particle Physics:

Flavor Mixing Matrices(Phys. Rev. D71, 093011(2005), Phys. Rev. D79, 013012(2009)), Quantum Field Theories(JHEP 0808, 039(2008), arXiv:1011.3428 [hep-th](2010), arXiv:0811.0362 [hep-th](2008).)

Future Interests

1. Research in Foundation of Quantum Mechanics and Quantum Gravity

Extra Interests

Tennis, Playing Go, Music(Korean Songs)