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Professor
Department of Physics



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Key Words Skyrmions, Topological numbers, Tensor network, Strongly correlated materials

Research Area Theory of topological matter, Theory of photon-electron composite matter
Theory of tensor network matter

Education

- 1991-1997 PhD University of Washington
- MSc
- 1987-1991 BSc Seoul National University

Experience

- 1997-1999 Post-doctoral fellow at Asia Pacific Center for Theoretical Physics
- 1999-2001 Post-doctoral fellow at UC Berkeley
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Position

- 2001-2003 Konkuk University
- 2003-2016 Sungkyunkwan University
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Selected Publication

- When Chiral Photons Meet Chiral Fermions: Photoinduced Anomalous Hall Effects in Weyl Semimetals, *Physical Review Letters* (2016)
- Manifold Mixing in the Temporal Evolution of a Spin-1 Spinor Bose-Einstein Condensate, *Physical Review Letters* (2014)
- Manifestation of magnetic quantum fluctuations in the dielectric properties of a multiferroic, *Nature Communications* (2014)
- Emergence of Chiral Magnetism in Spinor Bose-Einstein Condensates with Rashba Coupling, *Physical Review Letters* (2012)
- Dynamics of Skyrmion Crystals in Metallic Thin Films, *Physical Review Letters* (2011)
- Chiral Orbital-Angular Momentum in the Surface States of Bi₂Se₃, *Physical Review Letters* (2012)
- Spin-Orbit Coupled Bose-Einstein Condensate Under Rotation, *Physical Review Letters* (2011)
- Orbital-Angular-Momentum Based Origin of Rashba-Type Surface Band Splitting, *Physical Review Letters* (2011)

Others

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