

Postdoctoral Research Position

Computational Materials Physics Group
Kyungpook National University (KNU), South Korea

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Research Focus & Project

The **Computational Materials Physics group**, led by **Prof. Bongjae Kim**, is looking for a highly motivated postdoctoral researcher to investigate **Quantum Materials**. Our research focuses on unconventional magnetism, superconductivity, and strongly correlated systems.

The candidate will employ first-principles methods, model Hamiltonians, and advanced computational techniques to address the impact of magnetic fluctuations on superconductivity and the role of long-range many-body interactions. We expect the candidate to be independent, self-motivated, and to collaborate actively with other theoretical and experimental teams.

Qualifications

We seek candidates with a rigorous background in **Condensed Matter Physics**.

- **Methodology:** Proficiency in **DFT** and advanced methods (DFT+U, DMFT).
- **Theoretical Depth:** Background in many-body physics and electronic structure theory.
- **Hamiltonian Modeling:** Experience with **Model Hamiltonian** construction is a significant advantage.
- **Technical Skills:** Programming experience (Python, Fortran, C++) is expected.
- **Communication:** Excellent English skills (written and oral).
- **Independence:** Ability to drive research projects independently.

Why Join Kyungpook National University (KNU)?

- **No. 1 Flagship National University in South Korea:** KNU is consistently recognized as the top-ranking national university. (Website: <https://en.knu.ac.kr/>)
- **High-Tech Hub:** Access to state-of-the-art computational infrastructure and research facilities.

Life in Daegu

- **Vibrant Urban Life:** As South Korea's **4th largest city** with a population of over **2.2 million**, Daegu offers a vibrant city life with excellent living facilities, modern infrastructure, and a rich cultural scene.
- **Strategic Location:** Excellent transport hub; reach **Seoul in 1.5 hours** and **Busan in 45 minutes** via KTX high-speed rail.
- **Quality of Life:** Safe, modern metropolitan environment with a lower cost of living compared to Seoul.

Terms & Conditions

- **Salary: 3.0M KRW per month** (Negotiable based on expertise and track record).
- **Start Date:** Negotiable (Position open until filled).
- **Duration:** Initial 1-year contract, renewable upon mutual agreement.

How to Apply

Applicants should prepare a statement of research interest (2-3 pages), a Curriculum Vitae, and contact information for two or three references. Please submit your application directly to **Prof. Bongjae Kim** (bongjae@knu.ac.kr).

Kyungpook National University is an Equal Opportunity Employer.