

## Postdoctoral positions for the Advanced Study Group “Entanglement and Dynamics in Quantum Matter”

The Advanced Study Group on “Entanglement and Dynamics in Quantum Matter” at the IBS Center for Physics of Complex Systems, starting from September, 2022, is looking for several postdoctoral fellows. The ASG bundles the activities of Yong Baek Kim (U. Toronto, convenor), Moon Jip Park (IBS PCS), Eun-Gook Moon and Sungbin Lee (KAIST), and Gil Young Cho (POSTECH).

The research topic focuses primarily on the following themes:

- Frustrated magnetism, quantum spin liquids, topological phases of matter
- Quantum dynamics, many-body localization, and novel phases in ultra cold atoms.
- Non-equilibrium quantum systems, quantum computing/algorithms
- Tensor network, density matrix renormalization group, dynamical mean-field theory, ab initio electronic structure computations

The postdoctoral fellows will benefit from the active collaborative environment at the PCS as well as from the opportunity to develop their own independent research topics. The initial appointment will be for two years. Strong oral and written communication skills, excellent computational skills (analytical and/or numerical are both welcome) and the ability to work on the main research interests of the group are essential for these positions.

The candidates are requested to send their CV with the publication list and a research plan to [pcs@ibs.re.kr](mailto:pcs@ibs.re.kr). They should also arrange for three reference letters to be directly sent to [pcs@ibs.re.kr](mailto:pcs@ibs.re.kr). The applications will be reviewed as soon as they arrive, and the review will continue until the positions are filled.

The Institute for Basic Science (IBS), established in November 2011, is Korea’s first dedicated basic science research institute. Currently, 31 research centers in physics, chemistry, mathematics, life sciences, earth science, and interdisciplinary fields operate under the IBS. For more information see [www.ibs.re.kr](http://www.ibs.re.kr).

The Center for Theoretical Physics of Complex Systems (PCS), operated under the IBS, was founded in December 2014, with scientific activities starting in May 2015. Besides hosting resident researchers, the PCS runs an active Visitor and Workshop Program aimed at providing young scientists an excellent research environment and connections with worldwide leaders in a broad variety of emerging fields. For more information see [pcs.ibs.re.kr](http://pcs.ibs.re.kr).

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