Open Positions in the Living Matter Theory Group
Institute for Basic Science Center, Ulsan

January 2023

The ***Theory Group*** currently hiring **post-doctoral fellows** (2 years with potential extension), and **Ph.D. students** interested in doing theoretical and computational research at the crossroads of physics, chemistry, and biology. Our Group is part of a renewed *Center* of the *Institute of Basic Science* (IBS) at Ulsan National Institute for Science and Technology (UNIST), Korea.

We study living and chemical systems at multiple scales, with an emphasis on understanding their emergence, evolution, and hierarchical self-organization (see our recent research directions and publications). We use various theoretical and computational approaches, such as deep learning, statistical physics and information theory, and algorithmic chemistry to study frontier problems. Many of our projects are in tight collaboration with the *Systems Chemistry Group* of Bartosz Grzybowski. Subject areas of active interest include, but are not limited to: 1) Physics of proteins: evolution, sequence-to-function mapping, enzymes , nanomachines; (2) Catalysis: autocatalysis, prebiotic chemistry, self-replication.

We are seeking applicants who are curious, independent thinkers. Applicants are expected to study new problems and learn new skills. Applicants will have the communication skills and broad scientific interests necessary to effectively participate in group discussions and collaborate on projects. Postdocs are encouraged to suggest research directions but should not expect to do direct continuations of their previous work.

Applicants should have expertise in one or more of the following techniques: Molecular simulation, phenomenological modeling, molecular simulation, statistical physics, information theory, bioinformatics, machine learning and AI. Applicants may come from diverse backgrounds, such as computer science, systems biology and chemistry, quantitative biology, non-equilibrium physics, and related fields.

Our Center offers world-class experimental and computational facilities and competitive benefits. Candidates should send an application consisting of a CV, and a brief statement of research experience and interests. We may ask later for letters of recommendation. Starting date is flexible. Please write to Dr. Tsvi Tlusty at lifeIBS@gmail.com.