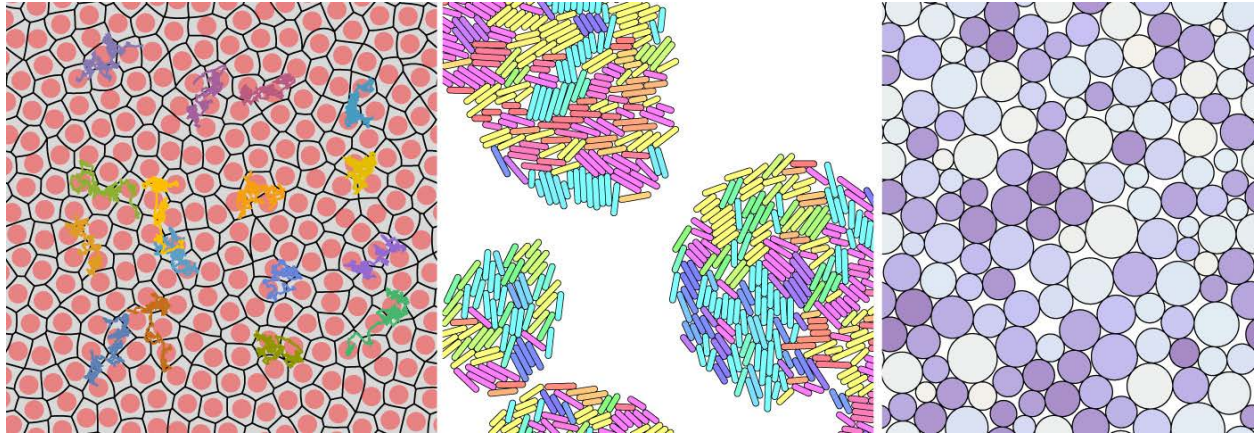


STI – PhD/Postdoc in Mechanics of Soft and Biological Matter Laboratory



We are excited to invite a passionate and motivated PhD student and a postdoctoral fellow to join our lab! The Mechanics of Soft and Biological Matter Laboratory (MESOBIO) at the Institute of Mechanical Engineering, EPFL, focuses on gaining fundamental understanding of biological and living systems as well as soft and active materials. We strive to develop novel theoretical frameworks to better understand emergent structures, dynamics, and mechanical properties within these systems using physics and mechanics principles. We have one available position for a PhD student and one-year position available for a postdoctoral fellow, with the possibility of annual contract renewal based on performance. Applications will be reviewed until the positions are filled.

We endeavor to study problems broadly in the field of biomechanics, biophysics, and soft condensed matter physics. Our work encompasses a wide range of research questions, including but not limited to the following: embryonic development, tissue morphogenesis, structures and mechanics of soft materials, inherent structures of amorphous materials, non-equilibrium dynamics of active matter.

We are currently seeking a candidate for a research position focused on the **theoretical modeling of living multicellular systems**, including embryonic tissues and bacterial aggregates. Our work involves developing a general theoretical framework, taking into account key features at cellular and subcellular scales to understand emergent properties at tissue scale. We investigate how multicellular systems actively regulate their cellular and subcellular properties to achieve desired structures, emergent dynamics, and mechanical states, including phase transition behaviors that play a crucial role in embryonic development and tissue morphogenesis.

We are looking to build a diverse and collaborative group, and welcome applications from candidates with different backgrounds. Preferred skills and qualifications for successful candidates include: (1) Bachelor's and/or Master's degree in Mechanical Engineering, Materials Engineering, Applied Mathematics, Physics, Applied Physics, or Biology for a PhD student, (2) PhD Degree in equivalent fields for a postdoctoral fellow, (3) demonstrated excellence and previous research experience in analytic modeling, numerical methods, (4) strong background in Mathematics, Physics, and Mechanics, (5) previous simulation experience with discrete element modeling is preferred, (6) excellent communication skills in English (both written and spoken), (7) a self-driven individual with an open mind and a willingness to explore new fields.

We offer a highly competitive salary commensurate with previous experience, accompanied by comprehensive social benefits. All students and postdocs will have access to state-of-the-art computation and experimental facilities, enabling cutting-edge research opportunities, and they will also have the opportunity to participate in collaborations within multidisciplinary projects

Interested candidates are requested to prepare their application as a **single PDF file**, including a cover letter (maximum 1 page), describing research interests and demonstrating how your background and previous experiences align with the direction of our group, and a comprehensive CV, providing detailed information about your academic and professional background and skills, accompanied by contact information for three references. The application should be directly submitted to Professor Sangwoo Kim (sangwoo.kim@epfl.ch) with the subject line, "Name: Application for PhD (or postdoc) Position". For additional information regarding the position, please feel free to reach out to Professor Sangwoo Kim.