The lab of “Structure and Dynamics of Chromosomes” led by Eugene Kim at the Max Planck Institute of Biophysics is seeking a highly motivated

**PhD student**

to develop and employ novel single molecule approaches for studying the dynamics of DNA/protein interactions in complex DNA topologies (Kim et. al., E. Life 2019; Kim et. al., Nature 2020) at high spatiotemporal resolution. The candidate will generate and visualize different DNA topologies, such as under-/overwound and entangled DNA structures, with high throughput and investigate how different mechanical (e.g. torsion and tension on DNA) and biological factors (e.g. topoisomerases, BAFs, SMCs etc.) may contribute to the segregation of the sister chromosomes. The candidate will learn and combine different imaging and manipulation modalities, including total internal reflection fluorescence and scattering microscopy, single molecule super localization, magnetic tweezers. The candidate will join a dynamic, enthusiastic and international team of biophysicists and biochemists ready to tackle exciting problems related to genome organization in a collaborative fashion.

**Your qualification:**

- An outstanding experimentalist with master’s degree of biophysics, physics, optics, biophotonics, physical chemistry, electrical/bioengineering or the like.
- Prior experience in building/aligning optical setup, programming (LabVIEW, Python, Matlab, C++, etc.) for controlling hardware and/or data analysis.
- Prior experience/knowledge in enzymology, microfluidics, surface chemistry is a plus but not required.
- A creative individual with a strong interest in chromatin biophysics and with a motivation to adapt to new research challenges.
- An independent individual with excellent English communication and writing skills

**Our offer:**

The Max Planck Institute of Biophysics is an internationally leading research institution in the fields of structural biology, biophysics and cell biology located at the center of the Frankfurt science campus. We are offering excellent working conditions, state-of-the-art infrastructure and an international research environment. The salary is in accordance to the Public Sector Collective Agreement Bund (TVöD, E13; 65%). To apply, please send a cover letter (one page maximum), a curriculum vitae, and the contact details of 2-3 references to Eugene.Kim@biophys.mpg.de until 31.03.2021. Do you have any further questions regarding this position? Please contact Eugene.Kim@biophys.mpg.de.

The Institute and the Max Planck Society intend to enhance the proportion of women in areas where they are underrepresented, and they are therefore especially encouraged to apply. The Max-Planck Society welcomes and encourages applications by disabled individuals.