



7.12. 2017 16:00 s.t.

## Prof. Dr. Taekjip Ha

Johns Hopkins University, Baltimore, USA

## Revisiting and Repurposing the Double Helix

DNA is an iconic molecule that forms a double helical structure, providing the basis for genetic inheritance, and its physical properties have been studied for decades. In this talk, I will present evidence that sequence and methylation dependent physical properties of DNA such as flexibility and self-association may be important for biological functions. In addition, I will present a new application of DNA where mechanical modulations of cell behavior can be studied at the single molecule level using rupturable DNA tethers. We found that cells can change their behavior dramatically in response to just two molecules strongly tugging on them.

Host: Stefan W. Hell

