

Nynke Dekker wins Physica Prize 2023

The Physica Prize 2023 has been awarded to Nynke Dekker, professor single molecule nanoscale biophysics at the Kavli Institute of Nanoscience at Delft Technical University. She has invented and developed innovative physical methods within molecular biology, which she applies to current and relevant issues in biology and medicine. Her research takes place at the interfaces of physics, chemistry and biology.

Nynke Dekker studies a range of bio-molecular processes that play essential roles in life and health. She uses quantitative, physical measurement methods that enable her to monitor the subtle interactions in time and space that take place between proteins and the nucleic acids DNA and RNA. Professor Dekker has always developed original techniques for her research, in which precise measurements, carefully controlled parameters and pure components are central to understanding the underlying mechanisms. For example, with the help of self-designed magnetic and optical tweezers, she has determined how forces and torques influence the mechanics of DNA and RNA and utilized this knowledge to examine the control over their topology, compaction, or transcription by different types of proteins. More recently she has expanded this research with fluorescence microscopy in order to enable the study of the protein complexes that are essential in the copying of DNA.



Nynke Dekker has a dream career, which started with a broad run-up and training at top institutions. She did her BSc at Yale and her MSc at Leiden University. After obtaining her PhD at Harvard in the field of atomic physics, Dekker went to the Ecole Normale Supérieure Paris as a postdoc. There she embarked on the path of biophysics, which she subsequently developed so successfully in the Netherlands. She plays an internationally leading role in this field and is one of the well-known Dutch faces in the international arena. As a member of the KNAW and with a multitude of administrative functions and tasks, Nynke Dekker contributes to the development not only of biophysics, but of physics in general and its visibility in our society. All in all, the Physica Prize is very well deserved.

Annually, the Physica Prize is awarded to an eminent physicist, who is active in the Netherlands. A jury awards the prize after consultation of several representatives of the Dutch physics community. The jury comprises of the president of the [Netherlands Physical Society](#), the president of [Foundation Physica](#) and a former laureate.

Dekker receives the prize at the conference [FYSICA 2023](#) on Friday May 26th, when she will give the Physica Lecture. The [Nederlands Tijdschrift voor Natuurkunde](#) pays attention to Nynke Dekker's research in the editions of April and August 2023.