



Special Seminar

Department of Chemistry

Monday, August 8th, 2022

Time 14:00

Bldg. 43 Room 015

Prof. Meni Wanunu

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Inching closer to translation: The evolution of nanopores from genomics to proteomics

Nanopores have gained a lot of attention recently for their ability to sequence nucleic acids. Recently, however, a surge of interest in the use of nanopores for analyzing proteins has been witnessed. I will talk about two approaches that our lab has taken in order to characterize proteins. First, I will describe a method for full-length single-file protein translocation and discrimination using a biological pore. Second, I will describe a method for probing conformational states of a protein and its electrical unfolding. Time permitting, I will also discuss other ongoing nanopore-related projects currently pursued in my lab.



Biography:

Prof. Wanunu's laboratory at Northeastern University develops single-molecule methods powered by nanotechnology that address a range of challenges in biophysics and biomedical engineering. His group develops novel single-molecule methods for quantifying various biomolecules and sequencing DNA and RNA molecules. He is a prominent member of the single-molecule community, and has demonstrated commitment to training dozens of individuals with diverse gender, ethnic, and research backgrounds of all levels (from high school to postdoctoral associates). He is a regular panelist for the NIH and NSF and is an academic editor of PLoS One and Journal of Nanobiotechnology. He became an affiliated faculty of Bioengineering in 2014 at Northeastern, and is currently training several bioengineering PhD students who are funded by NSF and NIH grants, as well as students and postdocs from physics, chemistry, and mechanical engineering. Prof. Wanunu serves as graduate program director at the Physics Department, and Co-Director at Northeastern's Kostas Advanced Nano-Characterization Facility (KANCF) at Burlington MA, which specializes at atomic-resolution imaging.