

invites to a seminar by

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***Unfolding a Molecular Chaperone***

**8th of March 2018 at 12 p.m.**

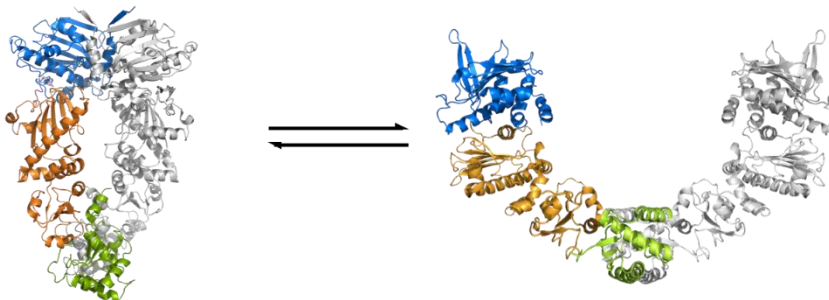
**Venue:** Centre of New Technologies, Banacha 2C,  
Lecture Hall 0142 (Ground floor)

**Host:** dr hab. Joanna Sułkowska

Proteins are fundamentally important to life, since they perform all of functions within living organisms. It is the protein's structure that defines its biological function within a cell, however, protein function is a dynamical process. Therefore, to understand completely how a protein functions, we must also understand how it moves.

Using single molecule measurements of proteins, it is possible to directly observe and manipulate protein motions, and to study how they are influenced by interactions with other molecules. From such experiments, the rates of folding, unfolding, association and dissociation as well as stabilities of the proteins under different conditions can also be found.

Heat shock protein 90 (Hsp90) is a molecular chaperone which is one of the most abundant proteins found in eukaryotic cells. Its abundance underlines its importance, as it is known to be involved in the assembly and regulation of cellular signalling systems which in turn ensure that cell growth is regulated. I will present what we have learnt so far about this fascinating molecular machine.



Schematic of the N-terminal opening and closing of the Hsp90 dimer, based on the crystal structures with PDB accession codes 2CG9 and 2IOP.