Colloqui della Classe di Scienze Anno Accademico 2018/2019

Sala Stemmi | Palazzo della Carovana Scuola Normale Superiore Piazza dei Cavalieri, 7 - PISA

> 8 MAGGIO 2019 ore 15.00

ARTHUR MALLAY LESK

Penn State University

The architecture of proteins

ABSTRACT:

Proteins present us with a great variety of three-dimensional structures, selected to adopt unique folding patterns dictated by the aminoacid sequences that support their biological functions. What are the architectural principles that underlie the different protein structures, and how can we try to determine them? Evolution gives important clues: comparing related proteins one can observe which structural features are preserved and which are variable. Several web sites provide structural classifications of proteins, at the domain level. To dig deeper, one can ask for a set of building blocks - below the domain level - from which all known protein structures can be assembled. A long-range goal of such investigations is a 'periodic table' of all possible protein folding patterns.

