Record Nr. UNINA9910739432903321 Autore Banerji Anierban Titolo Fractal symmetry of protein exterior / / Anierban Banerji Pubbl/distr/stampa Hoboken, N.J., : Springer, 2013 **ISBN** 3-0348-0654-X Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (55 p.) SpringerBriefs in Biochemistry and Molecular Biology, , 2211-9353 Collana Disciplina 572 572.60151 572/.60151 Soggetti Protein-protein interactions Proteins - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Studying protein exterior with fractal dimension -- Characterization of protein-protein interfaces, considering surface-roughness and local shape -- Adhesion on protein (and other rough biomolecular) surfaces. The essential question that fractal dimensions attempt to answer is Sommario/riassunto about the scales in Nature. For a system as non-idealistic and complex as a protein, studying scale-invariance becomes particularly important. Fractal Symmetry of Protein Exterior investigates the diverse facets of the various scales at which we describe protein biophysical and biochemical phenomena. Although these ideas are entirely mathematical, mathematical expositions have been avoided, unless the use of some expressions becomes absolutely obligatory. A first chapter introduce into fractal dimensions, protein exteriors and to methods to study the roughness of surfaces. The main topics covered in the following chapters include: protein-protein interaction interfaces;

protein surface-roughness and local shape as well as adhesion on

protein and other rough biomolecular surfaces.