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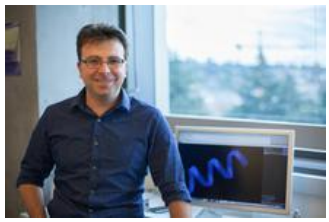

A modular approach to protein design

I work on developing new hybrid computational and experimental methods for protein design. The focus is on modular systems based on designed repeat proteins for spatial control of protein structures and their applications as tools to study and influence cell behaviour. Proteins are one of the prominent classes of biological molecules and perform a variety of functions. Catalytic activities and molecular recognition depend on the structures that proteins assume and their amino acid sequence. Protein design is an area of biochemistry that aims at engineering proteins for new functions and building novel proteins from scratch. Solving a protein design problem means defining a three-dimensional target structure and identify the protein sequence that will fold into it. In this seminar The goal is to develop computational and experimental methods for high throughput design and production of custom protein structures for applications in nano-materials and biosensors.