



O-I-M Seminar Series

Organic–Inorganic–Materials • <https://chemistry.uoregon.edu/>

Talks begin at
4 pm, WIL 110.
Reception at 3:30
in WIL Atrium.

Friday, November 15, 2019:
KNIGHT CAMPUS Faculty

Robert Guldberg: *Musculoskeletal Bioengineering Lab*

The focus of the Guldberg lab is musculoskeletal tissue regeneration. Our primary research areas include development, pre-clinical evaluation and translation of medical devices and treatments for traumatic musculoskeletal injury and osteoarthritis. We also explore the dependence of musculoskeletal regeneration on local mechanical and immune environments.



Marian Hettiaratchi: *Affinity-Based Biomaterials for Protein Delivery*

The Hettiaratchi lab designs biomaterials that provide sustained protein and cell delivery to the body by leveraging affinity interactions between proteins and materials. Students in my lab can expect to develop skills in polymer chemistry, protein engineering, bio-transport modeling, and animal models of musculoskeletal injury.



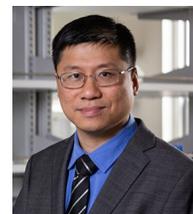
Calin Plesa: *Multiplexed Characterization and Engineering of Protein Families*

The Plesa lab focuses on accelerating the pace at which we engineer biological systems, particularly proteins. Towards this end, we develop new technologies for gene synthesis, multiplex functional assays, in-vivo mutagenesis, and genotype-phenotype linkages. I will discuss biological questions and applications around this core theme.



Keat Ghee Ong: *Embedded Wireless Sensors*

Embedded wireless sensors reside inside or around an area of interest for real-time, localized information gathering. This talk will describe the design and application of three sensor technologies for medical applications such as measurement of glucose concentration, detection of *E. coli*, etc. The use of these sensors for environmental pollutant detection will also be presented.



Tim Gardner: *Multi-photon laser writing for 3D fabrication of biomedical devices*

Multi-photon polymerization is an emerging fabrication method with applications ranging from optics to microrobots or scaffolds for cell culture. We discuss opportunities for fabrication of biomedical implants and speculate about opportunities for chemists in the development of new photoresists, polymerizable hydrogels, or high surface area fractal substrates for chemical sensing or electrodes.

