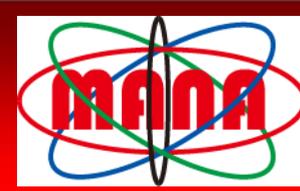


The 194<sup>th</sup>

# MANA Seminar



## Genetically Designed Peptide-based Molecular Materials for Technology and Medicine

Chair: Prof. Kenji Kitamura (MANA PI)

### Prof. Mehmet Sarikaya

*(Director, GEMSEC, University of Washington, USA)*

Proteins enable biology to be viable through molecular interactions. Using biology as a guide at the molecular dimensions, we biocombinatorially select, bioinformatically enhance and genetically tailor solid binding peptides and utilize them as molecular building blocks in carrying out molecular and nanomaterials science and engineering. In this emerging field of molecular biomimetics, genetically engineered peptides for inorganic materials (GEPI) are used as bionanosynthesizers in biomaterialization, heterofunctional linkers to create thermodynamically stable interfaces between dissimilar materials, and as molecular assemblers for the targeted and directed assembly of nanomaterials towards addressable ordered architectures with genetically designed functions. Here, we will give an update of the utility of GEPIs in nanoparticle formation for hybrid probe design and for bionanosensors; biomineral formation in regenerative and restorative medicine, and in peptide-enabled nano-electronics and -photonics to demonstrate the new paradigm in technology and medicine. Primary funding is by NSF-MRSEC Program.

**Venue: Seminar Room #431, MANA Bldg.**

**Date: January 28<sup>th</sup> (Fri)**

**Time: 15:00-16:00**

**NAMIKI  
Site**

Contact: International Center for Materials Nanoarchitectonics (MANA), Nakata (ex. 8806)