

Genetically Tailored Bio/Nano Interfaces in Technology & Medicine - Fundamentals & Applications

27 July 2017

Milnor-Roberts Room, MSE, University of Washington, Seattle, WA 98195
Supported by NSF-MGI Program

Program:

9:30 Networking

10:00 *Opening Remarks and Impact of GEPI on Tech & Medicine*

Mehmet Sarikaya, GEMSEC, MSE, ChemE, OHS, U. Washington, Seattle, WA, USA

10:30 *Combinatorial Mutagenesis – Genetic Design of Solid Binding Peptides –*

Deniz Yucesoy & Carolyn Gresswell, GEMSEC & MSE, Univ of Washington, Seattle, WA, USA

11:00 *Self-Assembled Peptides on Single Layer Atomic Materials SAP/SLAM*

Ty Jorgenson and David Starkebaum, GEMSEC & Mole Eng & Sci, U Washington, Seattle, WA, USA

12:00 *Peptide-Guided Cancer Bionanosensors*

Richard Lee, GEMSEC & MSE, Univ of Washington, Seattle, WA, USA

12:30-1:30 Working Lunch

12:30 *Surface Phenomena with SAPs on SLAMs*

Yuhei Hayamizu, MSE, Tokyo Institute of Technology, Oookahama, Japan

1:30 *Electronically-Controlled, Peptide-Guided, Hydrogels for Wound Healing*

Sid Rath, GEMSEC & MSE, Univ of Washington, Seattle, WA, USA

2:00 Functional Materials at Hard-Soft Biomimetic Interfaces

Candan Tamerler, Univ of Kansas, Lawrenceville, KA, USA

2:30 Coffee Break

3:00 Surface Properties of Biomolecules by SPM

Rene Overney, Chem Eng., Univ of Washington, Seattle, WA, USA

3:30 Peptide-Guided Remineralization towards Novel Dental Health Care

Hanson Fong, Deniz Yuceso, and Sami Dogan, GEMSEC, MSE, Restorative Dentistry,
Univ of Washington, Seattle, WA, USA

4:00 Self-Organized Nanostructures by short Alzheimers Peptides on Graphite

Carolyn Gresswell, Univ of Washington, Seattle, WA, USA

4:15 Kinetically-Matched Fusion Enzymes on Membranes,

Deniz Yucesoy U. Washington, Seattle, WA, USA

4:30 MD & Bioinformatics Design of Self-Assembling Peptides on Atomically Flat Surfaces

Swapil Paliwal & Sefa Dag, Univ of Washington, Seattle, WA, USA

5:00 Biology-Inspired Intelligence that Emulates Cognitive Functions of Brain *in silico*.

Berk Burak Ustundag, Visiting Prof at GEMSEC & MSE, U. Washington, Seattle, WA, USA,
& Computer & Information Science, Istanbul Technical Univ, Istanbul, Turkey

6:00 Closing Remarks, Mehmet Sarikaya