

ENGINEERING INNOVATIONS

2005-06 Breakfast Lecture Series

RSVP TODAY FOR TUESDAY, APRIL 4, 2006

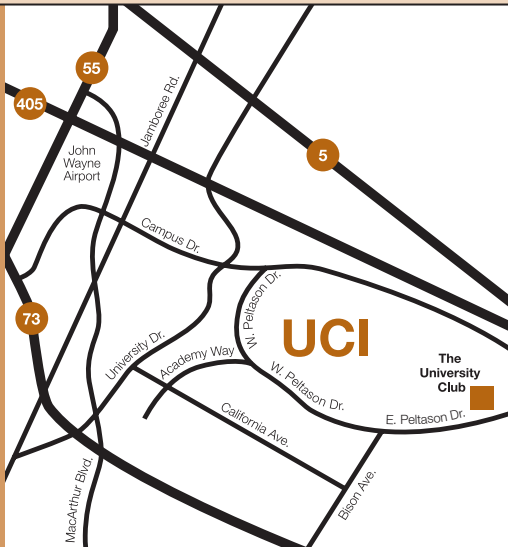
Please email engineerRSVP@uci.edu or call 949.824.3923 to attend. Seating is limited, so please register early.

LOCATION

The University Club 801 E. Peltason Drive
University of California, Irvine Irvine, CA 92697-5625

TIME: 7:45 – 9:00 a.m.

PARKING: Complimentary parking is available at the University Club



UPCOMING LECTURE

Engineering New Materials That 'Talk' To Cells

Join Andrew J. Putnam, assistant professor of Biomedical Engineering and Chemical Engineering and Materials Science, as he highlights his research in biomaterials for tissue engineering and regenerative medicine applications. He will discuss the process of engineering new materials that "talk" to cells, and the potential benefit in translating stem cell-based therapies from bench to bedside.

RSVP Today!
Tuesday, April 4, 2006
"Engineering New Materials that 'Talk' To Cells"

114 Rockwell Engineering Center
Irvine, CA 92697-2720
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SCHOOL OF ENGINEERING

ENGINEERING INNOVATIONS

Breakfast Lecture Series 2005-06

Biomedical Engineering

Chemical Engineering and Materials Science

Civil and Environmental Engineering

Electrical Engineering and Computer Science

Mechanical and Aerospace Engineering

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Dear Friends,

Welcome to the third lecture in our "Engineering Innovations" 2005-06 Breakfast Lecture Series. This January, we joined Chancellor's Professor Marc Madou as he addressed the fabrication of various new C-MEMS structures, and presented his belief that the versatility of the carbon manufacturing process and the many forms of carbon, could in fact, give silicon a run for its money.

This spring you are invited to hear Andrew J. Putnam, assistant professor of Biomedical Engineering and Chemical Engineering and Materials Science, highlight his research in biomaterials for tissue engineering and regenerative medicine applications. He will discuss the process of engineering new materials that "talk" to cells, and the potential benefit in translating stem cell-based therapies from bench to bedside.

Join us for breakfast as Putnam discusses his biomaterials research at the University Club on campus Tuesday, April 4, 2006. There is no charge to attend this event, so please feel free to invite a friend. We look forward to seeing you.

Sincerely,

Nicolaos G. Alexopoulos
Dean, The Henry Samueli School of Engineering
University of California, Irvine

TUESDAY, APRIL 4, 2006

"Engineering New Materials That 'Talk' To Cells"

Featuring Andrew J. Putnam, Ph.D.

Research in the field of biomaterials has experienced a renaissance in the past two decades. No longer are researchers focused on creating smooth titanium implants for hip repair or ceramic materials for dental implants. Instead, research in this area seeks to design materials that interact with biological macromolecules, cells, and tissues in a specific fashion.

These new biomaterials are largely inspired by the native extracellular matrix (ECM), a complex 3-D network of polysaccharides and proteins that surround cells in the majority of tissues in the human body. Once thought to provide only structural support to tissues, it is now widely recognized that both ECM chemistry and mechanics are critical determinants of cell behavior and tissue development. We are currently focused on developing materials with tunable chemical and mechanical properties in an effort to mimic native ECM, effectively trying to engineer new materials that "talk" to cells. The application of these materials in tissue engineering and regenerative medicine will be discussed, as well as their potential utility in translating stem cell-based therapies from bench to bedside.

ABOUT THE LECTURER



Andrew J. Putnam, assistant professor of the Department of Chemical Engineering and Materials Science and the Department of Biomedical Engineering, received his B.S. in chemical engineering from UCLA in 1994, and earned his M.S.E. and Ph.D. in the same field from the University of Michigan in 1996 and 2001, respectively. As a student at Michigan, he was awarded pre-doctoral NIH-sponsored training grant fellowships in 1996 and 1999, and an Outstanding Graduate Student Research Award from the Biomedical Engineering Society in 1998.

Putnam joined UC Irvine in 2003, and is the principal investigator of the Laboratory of Cell Signaling in Engineered Tissues. His research interests include the area of biomaterials for tissue engineering and regenerative medicine applications. Specifically, his lab seeks to define a quantitative and predictive understanding of the informational cues received by cells from their surrounding extracellular matrix (ECM), and to subsequently apply this basic science knowledge to engineer novel biomaterials that serve as synthetic ECM analogs.

In addition to his research activities, Putnam was honored with the Fariborz Maseeh Best Faculty Teacher Award in The Henry Samueli School of Engineering in 2005.

MARK YOUR CALENDAR!

TUESDAY, APRIL 4, 2006

"ENGINEERING NEW MATERIALS THAT 'TALK' TO CELLS"

Andrew J. Putnam, Ph.D.

Assistant Professor, Chemical Engineering and Materials Science,
Biomedical Engineering

TUESDAY, JUNE 20, 2006

"VISUALIZATION ON MULTIPLE SCALES – FROM SMALL TO LARGE"

Falko Kuester, Ph.D.

Assistant Professor, Electrical Engineering and Computer Science,
Biomedical Engineering

and

Joerg Meyer, Ph.D.

Assistant Professor, Electrical Engineering and Computer Science,
Biomedical Engineering

All presentations will be held at the University Club from 7:45 to 9:00 a.m. Breakfast will be served and parking is complimentary. Please see the map for directions.