

“Toward bioengineering translation”

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Αγαπητά μέλη της Πολυτεχνειακής Κοινότητας του ΕΜΠ,

Την ερχόμενη ΠΑΡΑΣΚΕΥΗ 6 ΜΑΡΤΙΟΥ, ΩΡΑ 1μμ, στο ΑΜΦΙΘΕΑΤΡΟ ΠΟΛΥΜΕΣΩΝ (Κτίριο Κεντρικής Βιβλιοθήκης, είσοδος από υπόγειο parking) θα πραγματοποιηθεί ομιλία από τον Κο Κυριάκο Αθανασίου, διακεκριμένο καθηγητή Βιοϊατρικής Μηχανικής στο UC Davis. Παρατίθενται σύντομο βιογραφικό σημείωμα και περιεχόμενο ομιλίας.

Με εκτίμηση,
Λεωνίδας Αλεξόπουλος
Επίκουρος Καθηγητής Σχολής ΜΜ



[Kyriacos A. Athanasiou](#), is a Distinguished Professor of Biomedical Engineering and Orthopaedic Surgery, the Child Family Professor of Engineering, and the Chair of Biomedical Engineering at the University of California Davis. He obtained his PhD in Bioengineering (Mechanical Engineering) from Columbia University in 1989. He has published over 300 peer-reviewed papers, 300 conference proceedings or abstracts, five authored books, 12 edited books or journal special issues, and 30 patents. He has also served as president of the Biomedical Engineering Society. Additionally, he is the Editor-in-Chief of the Annals of Biomedical Engineering, the flagship journal of BMES. His list of awards includes the Nemitsas

Prize (Cyprus' largest award presented by the President of Cyprus), HR Lissner Medal from the American Society of Mechanical Engineers, Distinguished Service Award from BMES, Wall Street Journal's 2008 Innovation Award, Thomas A. Edison Patent Award from ASME, Hershel Rich Outstanding Invention Award, Marshal Urist Award for Excellence in Tissue Regeneration Research from the Orthopaedic Research Society, and the Van Mow Medal from ASME. He is a Fellow of BMES, AAAS, AIMBE, and ASME; recently he was elected to the National Academy of Inventors. In addition to his academic interests, he has been involved with effecting the translation of devices and instruments into clinical use and commercialization.

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Abstract:

This presentation will cover two different areas: Articular cartilage healing and technology translation. Articular cartilage is arguably the tissue most pivotal for motion and overall function. This soft, white tissue that covers the ends of our long bones cannot heal by itself often progressing to osteoarthritis following injury. The demanding biomechanical milieu of a joint, plus cartilage's relative lack of cells and blood supply, renders this tissue almost unique in its inability to repair adequately. This presentation will describe our group's efforts toward helping joint cartilages, such as hyaline tissue, knee meniscus, and the TMJ disc, repair themselves via tissue engineering approaches. Central to our efforts is the understanding the biomechanical relationships at multiple dimensional levels. Also shown will be some of our latest results using various stem cell sources that indicate that cartilage regeneration is inexorably becoming a tractable problem. The second part of the presentation will be allocated on efforts to commercialize outcomes of our academe-based research. Specific examples and results will be presented to illustrate a specific pathway of commercializing research outcomes.