Αθήνα, 15 Ιουνίου 2017

ΠΡΟΣΚΛΗΣΗ

Το Εργαστήριο Βιοϊατρικών Προσομοιώσεων και Απεικονιστικής Τεχνολογίας
(Biomedical Simulations and Imaging Laboratory - BioSim) της Σχολής
Ηλεκτρολόγων Μηχανικών και Μηχανικών Υπολογιστών του Ε. Μ. Πολυτεχνείου
και το Ελληνικό Τμήμα του IEEE σας προσκαλούν στη διάλεξη

**του Δρ. Sameer Antani, της Εθνικής Βιβλιοθήκης Ιατρικής (National Library of
Medicine), Η.Π.Α.**

με θέμα

**Biomedical Imaging and Informatics Research at the U.S. National
Library of Medicine**

την *Δευτέρα 26 Ιουνίου 2017* στις *13:00*

στην **Αίθουσα Συνεδριάσεων της Σχολής Ηλεκτρολόγων Μηχανικών και
Μηχανικών Υπολογιστών Ε.Μ.Π.,
(Νέο Κτήριο Ηλεκτρολόγων, Πολυτεχνειούπολη Ζωγράφου)**

Η παρουσία σας θα μας δώσει μεγάλη χαρά.

Καθ. Κ. Νικήτα   Καθ. Ν. Κοζύρης
Εργ. Βιοϊατρικών Προσομοιώσεων και   Πρόεδρος Ελληνικού Τμήματος IEEE
Απεικονιστικής Τεχνολογίας

Biomedical Imaging and Informatics Research at the U.S. National Library of Medicine

Abstract

A critical need in biomedical research and clinical care is enabling access to high quality information. Also, clinical care solutions developed in the lab need to be successfully adapted to where they can be useful – at the point of care. This talk will highlight two projects that aim to address these needs, and are being investigated by Dr. Antani at the National Library of Medicine (NLM). First, the talk will describe OPEN-i® – a multimodal biomedical image retrieval system that provides text and visual search capability to retrieve over 3.4 million images and bottom-line information from approximately 1.2 million Open Access biomedical research articles from NLM's PubMed Central® repository. The system is a result of R&D in image and information retrieval techniques, machine learning, natural language processing, and high-performance computing research. Next, the talk will highlight two global health initiatives undertaken by NLM – an automatic screening system for detecting presence of Tuberculosis (TB) and other pulmonary abnormalities in digital chest x-ray images, and an erythrocyte cell-analysis based screening system for Malaria. Both are designed for use in resource-constrained regions to serve as a decision aid in clinical care. They use novel advanced algorithms resulting from R&D in image analysis and machine learning at NLM. The talk will also briefly touch upon some other relevant projects and describe opportunities for internships and fellowships, and collaboration.

Short Bio

Dr. Sameer Antani is a versatile researcher and holds the position of Staff Scientist at the U.S. National Library of Medicine (NLM), part of the National Institutes of Health (NIH). He leads and directs several scientific and technical research projects toward advancing the role of computational sciences in biomedical research, education, and clinical care. He applies his expertise in machine learning, biomedical image informatics, brain fMRI informatics, automatic medical image interpretation, multi-modal information retrieval, computer vision, and related topics in computer science and engineering technology. Dr. Antani is a Senior Member of the International Society of Photonics and Optics (SPIE) and Institute of Electrical and Electronics Engineers (IEEE), and serves as Vice Chair for IEEE Technical Committee on Computational Life Sciences, and is a leading member of the IEEE Life Sciences Community. He is an Associate Editor for IEEE Journal of Biomedical and Health Informatics. In addition to several staff achievement awards, he has been honored with two NIH merit awards (2009, 2013) for contributions in geography-independent cancer research tools, and advancing biomedical information retrieval, and an NIH Director's Award in 2016 for his contributions to the science and engineering of a novel TB screening system for under-resourced regions, respectively. Dr. Antani earned his Ph.D. and M.Eng. from the Pennsylvania State University, USA, and his B.Eng. (with Distinction) from the University of Pune, India.