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Engineering in Medicine and Biology Society  
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Invite you to a Seminar on:

## IMAGE PROCESSING TECHNIQUES FOR ANALYSIS OF PIGMENTED LESIONS

BY

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**AT 3:00 PM, WEDNESDAY, 8 JUNE 2016**

**ICT 516, INFORMATION AND COMMUNICATION TECHNOLOGY BUILDING**

**ABSTRACT:** A noninvasive technique to assist dermatologists in the diagnosis of melanoma is dermoscopy, which is an epiluminescence light microscopy technique that magnifies lesions and enables examination down to the dermoepidermal junction. There are four main diagnostic methods for dermoscopic images: the ABCD rule, pattern analysis, Menzies method, and the 7-point checklist. These methods were evaluated at the 2000 Consensus Net Meeting on Dermoscopy by experts from all over the world. Pattern analysis, considered as the classic approach for diagnosis with dermoscopic images, was deemed to be superior to the other methods. Pattern analysis seeks to identify specific patterns that may be local or global. Melanocytic lesions are identified by their general dermoscopic features, defining their global pattern, or by specific dermoscopic criteria that determine their local patterns. A lesion is categorized by its global pattern, although it can present more than one local pattern. In this seminar, image processing techniques to help physicians to determine different pattern features presented by lesions will be described.

**Carmen Serrano** received her first degree in Telecommunication Engineering from the University of Seville, Spain, in 1996. She received the Ph.D. degree in 2002. Since 1996, she is an associate professor in the Signal Processing and Communication Department at the University of Seville; since 2009, she is a tenured professor. Her research is focused on the field of image processing, mostly with biomedical applications. She has authored many publications in international journals and conference proceedings. She is a coauthor of the book "Color Image Processing with Biomedical Applications," SPIE Press, 2011. She has advised several students on their Ph.D. and Master's theses.

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