

Lecture by Professor Emre Celebi

Date and place: Thursday, October 3 at 12:30 in the Manuel Medina Room located next to the Paraninfo of the Rabanales Campus.

Title: Deep Learning Revolution in Dermoscopy Image Analysis

Abstract:

Dermoscopy is a non-invasive skin imaging technique that permits visualization of features of pigmented melanocytic neoplasms that are not discernable by examination with the naked eye. While studies on the automated analysis of dermoscopy images date back to the mid-1990s, due to various factors (lack of publicly available datasets, open-source software, computational power, etc.), the field progressed slowly in its first two decades. With the release of a large public dataset by the International Skin Imaging Collaboration in 2016, the development of open-source software for convolutional neural networks, and the availability of inexpensive graphics processing units, dermoscopy image analysis has recently become a very active research field. In this talk, I will first present a historical overview of dermoscopy image analysis and then discuss the latest developments in this field that were prompted by the deep learning revolution.

Biography:



M. Emre Celebi received his Ph.D. degree in Computer Science & Engineering from the University of Texas at Arlington (USA) in 2006. He is currently a Professor and the Chair of the Department of Computer Science and Engineering at the University of Central Arkansas.

Dr. Celebi has actively pursued research in image processing/analysis and data mining with an emphasis on medical image analysis, color image processing, and partitional clustering. He has worked on several projects funded by the US National Science Foundation and the US National Institutes of Health and published over 170 articles in reputable journals and conference proceedings. As of September 2024, his work has received over 18,000 citations with an h-index of 61 (Google Scholar). According to a 2023 study from Stanford University, based on the composite citation index (an indicator of career-long citation impact), Dr. Celebi ranked 941 out of 356,955 researchers in Artificial Intelligence and Image Processing, placing him in the top 0.26% of his field.

Dr. Celebi has served as an editorial board member of several international peer-reviewed journals (including the IEEE Journal of Biomedical and Health Informatics, Expert Systems with Applications, Computers in Biology and Medicine, and Journal of Electronic Imaging), reviews for over 120 international journals, and served on the program committee of more than 130 international conferences. He has been invited as a speaker to several colloquia, workshops, and conferences, is the organizer of several workshops, and the editor of several journal special issues, books, and book series. He is a senior member of the IEEE (since 2011) and a fellow of the SPIE (since 2021).