



UNC  
GREENSBORO

Department of  
Computer Science

## Department of Computer Science

### Colloquium Series

#### Informatics and Artificial Intelligence in Medical Imaging



#### **Metin N. Gurcan, Ph.D.**

**Director, Center for Biomedical Informatics**  
**Professor, Department of Internal Medicine**  
**Wake Forest University of School of Medicine**

**Date:** Tuesday, September 20<sup>th</sup>, 2022

**Time:** 12:45pm-2:00pm

**Location:** Petty Science Building 219

#### **Abstract:**

Artificial intelligence (AI) is considered a “game-changer” for medicine. Increased interest in medical imaging has resulted in the development of various AI applications in medical image analysis. Many of these applications follow the ‘computer-aided diagnosis’ paradigm. In this paradigm, the primary function of the image analysis application is to help medical professionals (e.g., radiologists, pathologists, dermatologists) in their decision-making instead of making decisions on their behalf. If an application is designed to help medical professionals, its logic, development methodology, and evaluation should make sense to the medical professionals who use them.

In this talk, we will describe how to develop artificial intelligence-based image analysis systems and evaluate them with carefully designed reader studies in which medical professionals with varying experience levels participate.

## Biography:

Dr. Metin Gurcan is the founding Director of the Center for Biomedical Informatics, Professor of Internal Medicine, Pathology, and Biomedical Engineering at Wake Forest University School of Medicine, and Director of the Clinical Image Analysis Lab (<https://school.wakehealth.edu/research/labs/clinical-image-analysis-lab/>). Previously, he was a Professor of Biomedical Informatics and Pathology, Director of the Division of Clinical and Translational Informatics at The Ohio State University. Dr. Gurcan is an internationally recognized researcher and educator in the fields of medical image analysis, artificial intelligence, and biomedical informatics. His research has been supported by NIH NCATS, NCI, NIDCD, NHLBI, NLM, NBIB, NIAID, and DOD, as well as awards from several nonprofit organizations. He is the author of over 200 peer-reviewed publications and book chapters and was awarded six patents for his inventions in medical artificial intelligence. Dr. Gurcan received his BSc. and Ph.D. degrees in Electrical and Electronics Engineering from Bilkent University, Turkey, and his MSc. Degree in Digital Systems Engineering from the University of Manchester Institute of Science and Technology, England.

Dr. Gurcan is the recipient of several awards, including the British Foreign and Commonwealth Organization Award, NCI caBIG Embodying the Vision Award, NIH Exceptional, Unconventional Research Enabling Knowledge Acceleration (EUREKA) Award, Children's Neuroblastoma Cancer Foundation Young Investigator Award, The OSU Cancer Center REAP Award, and Pelotonia Idea Award. He is a Fellow of SPIE and a senior member of IEEE and AMIA. He currently serves on the editorial boards of the Journal of Pathology Informatics and Journal of Medical Imaging; he organizes the Pathology Informatics Histopathological Image Analysis (HIMA) workshop.