

Title: Deciphering the “Thousand Words” of an Image: The Biomedical Imaging Perspective

Abstract: Imaging has become an indispensable tool in biology and medicine for basic research and clinical practice. Biomedical image processing and analysis provide powerful methods and systems to uncover valuable information from the imagery data. The specific image characteristics and problems in these fields have motivated researchers to develop novel concepts and algorithms. This talk emphasizes the fundamental research view of biomedical imaging and discusses a number of challenges and related concepts and algorithms. Specific problems to be discussed include the small sample-size problem, scalable algorithms for large volumetric datasets, and guided deep learning using domain knowledge.