

THE UNIVERSITY OF ALABAMA

DEPARTMENT OF COMPUTER SCIENCE

Colloquium Talk

Computational Forest Modeling using Airborne Remote Sensing LiDAR

3:00 - 4:00PM

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SEC 3437

ABSTRACT

Traditional forest management activities rely on a small field sample that not only is costly to acquire but also yields inaccurate estimates of the entire forest in question. Airborne light detection and ranging (LiDAR) is a remote sensing technology that can effectively record point clouds representing the 3D structure of a forest canopy and the terrain underneath. My dissertation was concerned with developing algorithms for (i) segmenting individual trees of a dense, multistory canopy of a natural forest, (ii) efficiently processing an entire forest data in a distributed manner, and (iii) using deep learning to predict attributes of trees given point cloud segments representing their crowns. My research work is transferable to other applied remote sensing domains such as agricultural, land irrigation, and urban modeling, as well as other remote sensing modalities and platforms such as RGB/hyperspectral imagery captured from space.



HAMID HAMRAZ

Mr. Hamid Hamraz is a Ph.D. candidate in the Department of Computer Science at the University of Kentucky. He completed his M.S. of computer science and a graduate certificate in applied statistics at the University of Kentucky and acquired his B.S. in computer engineering from the Iran University of Science and Technology. His expertise is in algorithmic remote sensing and spatial analysis, data mining, machine learning, computer vision, and distributed computing and his research interest is in the applied computing and interdisciplinary research projects.