Title: Remote Sensing Applications in Urban Studies

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Abstract:

Airborne and satellite remote sensors can collect earth observation image data over large areas frequently and repetitively. Lower spatial resolution satellite images have been available for a long time, but are not sufficient to extract detailed urban features. Recently, many new sensors have been developed with very high spatial resolution, which allows us to better extract detailed physical and spatial information over urban areas. However because of the complexity of the 3D structure of urban landscape, it is difficult to automatically map urban features from the high resolution images. In this presentation, we illustrate our newly developed remote sensing applications on the extraction of the urban features, such as urban land use and land cover types, road networks, buildings and trees. These remote sensing products are potentially useful for urban GIS updating, climate modeling, hazard study and environmental planning.

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   She is currently a Full Professor at the Department of Geography, the University of Western Ontario, Canada. Her research interests include remote sensing image analysis, methods for object based information extraction from high resolution remotely sensed imagery, and land use/cover change detection in urban and wetland environments using multispectral, hyperspectral, Lidar and radar data.