GEOG 4530/5530
Digital Image Processing and Analysis

Credits: 3 hours

Who should take? If you are interested in:
- Landscape mapping
- Environmental change detection
- Ecosystem monitoring

What can I achieve? Some examples demonstrating what you can achieve after the completion of this course:
- Map vegetation types for habitat conservation
- Track the growth of a city and changes in farmland over several years
- Are water bodies shrinking over decades?

What will be covered: This course introduces the principles and practices of photo interpretation and remote sensing primarily for use in environmental monitoring. Prerequisite is Intro GIS or equivalent courses. The course will emphasize on hands-on practices. Topics will include: backgrounds of image acquisition and photo interpretation, introduction to airborne and common satellite systems, image enhancement, land cover type classification, post-classification accuracy assessment and landscape change detection will be covered. This course can be counted as a required Special Topics course towards the GIS certificate.

Instructor: Lu Liang is an assistant professor at the Geography Dept. She received her bachelor degree in GIS and master degree in Cartography and GIS from Chinese Academy of Sciences. She then finished her PhD in Ecosystem Sciences from the Department of Environmental Science Policy and Management, UC Berkeley. Her research expertise extends to geospatial science, environmental health, ecosystem science, natural resources, and landscape ecology.