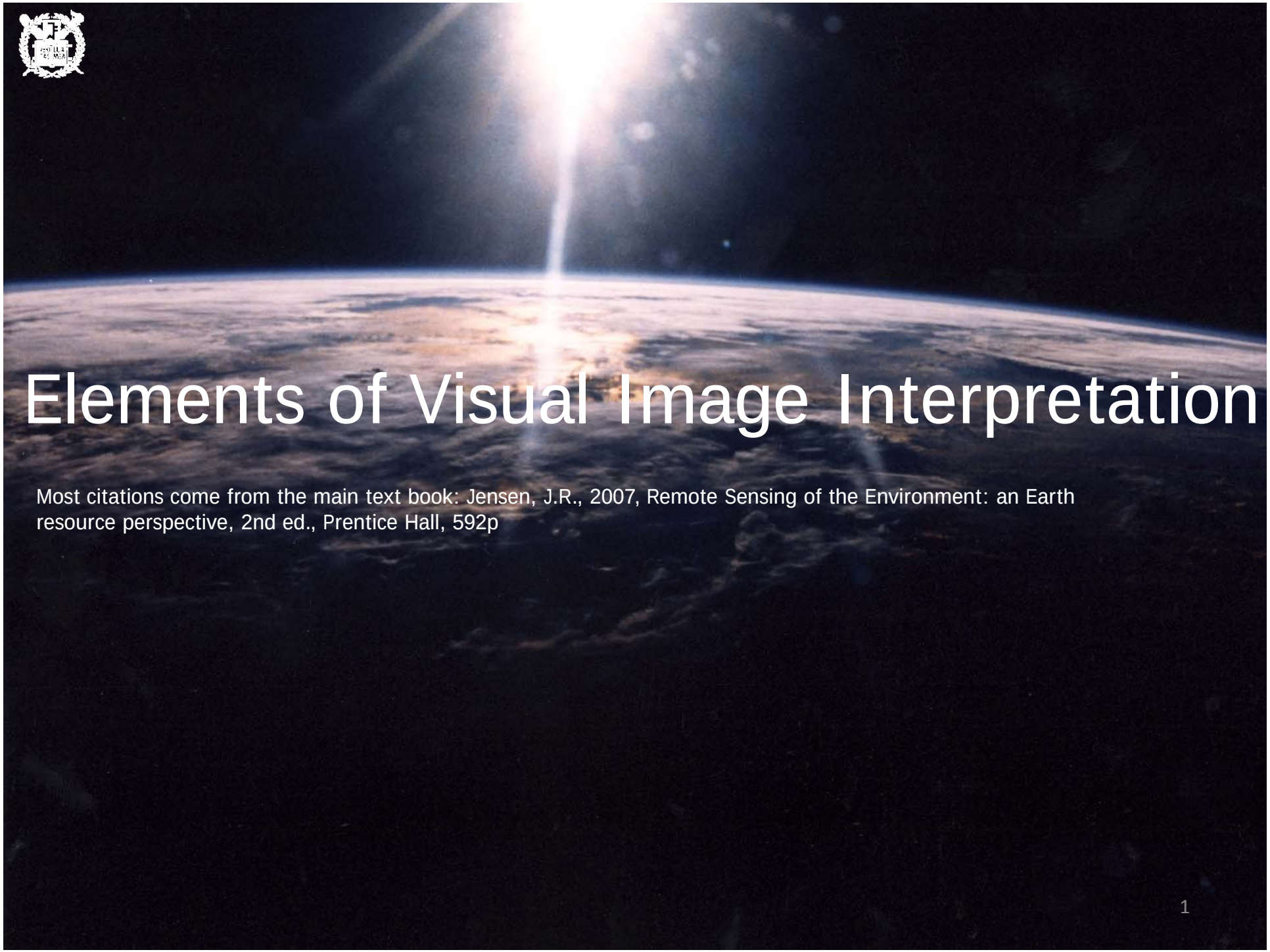

Elements of Visual Image Interpretation

Most citations come from the main text book: Jensen, J.R., 2007, Remote Sensing of the Environment: an Earth resource perspective, 2nd ed., Prentice Hall, 592p

Introduction

- Photo or image interpretation
  - The examination of images for the purpose of identifying objects and judging their significance (Philipson, 1997; McGlone, 2004)

- Important reasons why photo or image interpretation is such a powerful scientific tool
  - the aerial/regional perspective
  - three-dimensional depth perception
  - the ability to obtain knowledge beyond our human visual perception
  - the ability to obtain a historical image record to document change

Introduction

- Important reasons why photo or image interpretation is such a powerful scientific tool
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Elements of Image Interpretation

- x, y Location
  - survey it in the field using traditional surveying techniques or global positioning system (GPS) instruments
  - collect remote sensing data of the object, register (rectify) the image to a basemap, and then extract the x, y coordinate information directly from the rectified image

Elements of Image Interpretation

- Tone and Color
  - tone: shades of grey

Elements of Image Interpretation

- Size – Length, Width, Perimeter, and Area

Elements of Image Interpretation

- Shape

Elements of Image Interpretation

- Texture
  - the characteristic placement and arrangement of repetition of tone or color in an image

Elements of Image Interpretation

- Pattern
  - spatial arrangement of objects in the landscape

Elements of Image Interpretation

- Shadow
  - Most remote sensor data is collected within $\pm$2 hours of solar noon to avoid extensive shadows in the imagery.

Elements of Image Interpretation

- Height and Depth

Elements of Image Interpretation

- Site, Situation, and Association
  - important factors to identify an object or activity

Elements of Visual Image Interpretation

Methods of Search

- Using Collateral Information
- Convergence of Evidence
- The Multi-concept