(1) A spatially explicit prediction model:

$$\text{logit}(\pi_i) \sim x_i' B$$

(2) A spatial Logistic regression model:

$$\text{logit}(\pi_i) \sim \lambda(W)\text{logit}(\pi_i) + x_i' B + \varepsilon$$

- Algorithms and Methods for Remote Sensing Imagery Enhancement
  - **a.** *Closest Spectral Fit algorithm for cloud and cloud shadow removal* in remote sensing images**.** Details are in Meng et al. 2009, *PERS***.**

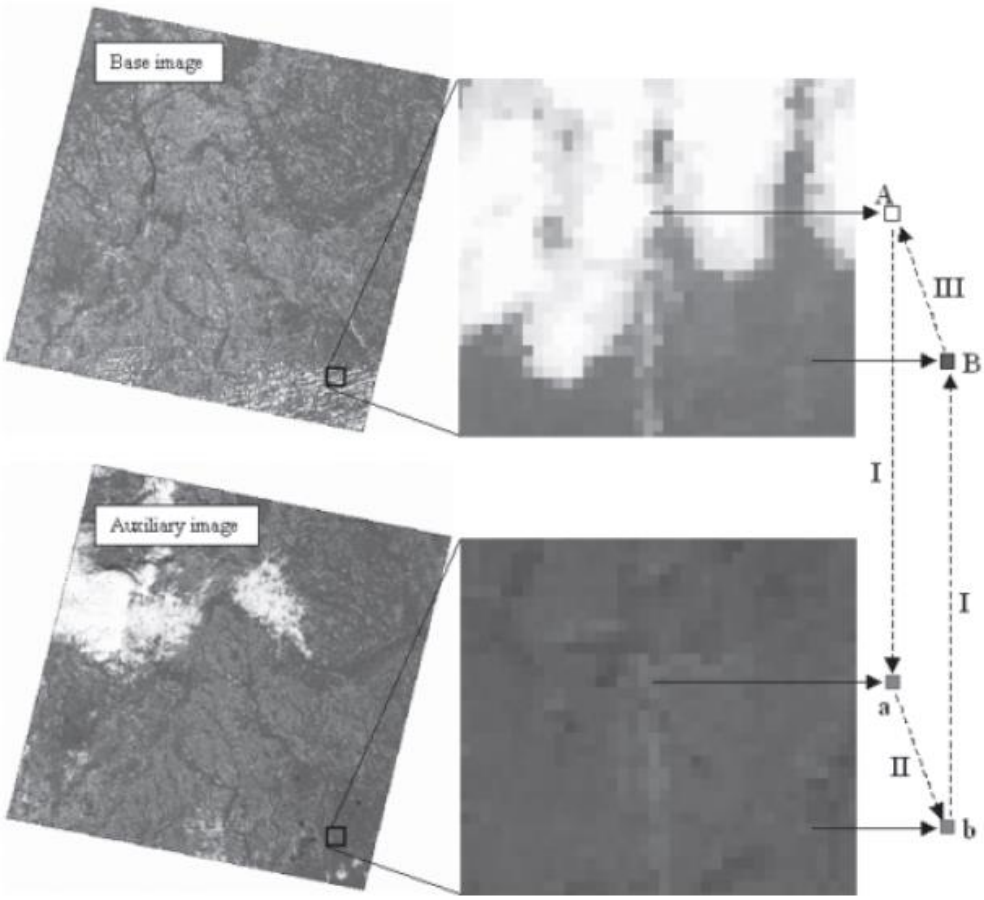

Figure 1. A diagram of cloud and cloud-shadow removal using closest spectral fit: I, location-based one-to-one correspondence, pixels $A \leftrightarrow a$, and pixels $B \leftrightarrow b$; II, closest spectral fit, pixels $a \leftrightarrow b$; III, the replacement of pixel A using its most similar pixel B according to the closest spectral fit of $A \leftrightarrow B$ based on the same relationship of $a \leftrightarrow b$. A color version of this figure is available at the ASPRS website: **www.asprs.org** .

  - **b.** Closest Spectral Fit / Nearest Neighbor Imputation based Data Assimilation Method for *16-day cloud-free Landsat imagery derivation and NDVI generation* for environmental and ecological analysis. Details are in Meng et al. 2007, 2013, *Geosciences and Remote Sensing* and Meng et al. 2009 PERS.
  - **c.** *A Chain Standardization Method* for seamless imagery mosaicing. Details are in Meng (2014).
  - **d.** *Regression Kriging* for imagery data fusion. Details are in Meng et al. 2009.