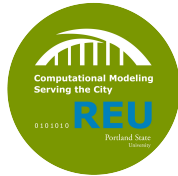


# Management of Urban Forests

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## Research Experiences for Undergraduates (REU)

Computational Modeling Serving the City



# Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice

- National Center for Environmental Analysis and Synthesis (NCEAS) working group project
  - Analyze the equity of distribution of urban tree canopy (UTC) cover
  - High spatial resolution imagery
    - QuickBird satellite imagery, National Agriculture Imagery Program (NAIP) near-infrared imagery, natural color aerial imagery, LiDAR data
  - US Census TIGER dataset - Census Block Groups for each city



# Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice (Continued)

- Analysis
  - Spearman's correlation, ordinary least squares (OLS) regression, spatial autoregressive (SAR) model
- Results
  - All cities had income correlation
  - Some cities had race correlation
    - Arid climates - Water as a limiting factor
    - Los Angeles and Sacramento



# Relationship to Project

- Working with Professor Vivek Shandas
- Management of Urban Forests
  - US Geological Survey remote sensing data and demographics data
  - How does proximity to trees (and abundance of trees) relate to socioeconomic demographics?
  - Is there a correlation between trees and those demographics?
- Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice
  - Not focused on environmental justice part of it, but could be after
  - Basically same premise
    - Different data
    - Different methodology
    - Different scope



# References

- Schwarz, Kirsten, et al. “Trees Grow on Money: Urban Tree Canopy Cover and Environmental Justice.” PLoS ONE, vol. 10, no. 4, 2015, pp. 1–17, doi:10.1371/journal.pone.0122051.

