



BREN SEMINAR

GIS DATA FOR SPATIAL ANALYSIS: WHAT TO AVOID AT ALL COSTS



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Monday, March 5, 2018 11:00 – 12:00
Bren Hall 1414

Watch live at <https://ucsb.zoom.us/j/965989281>

“Antonio’s experience with geospatial algorithm engineering makes him uniquely suited to share best practices in GIS. Come hear this interesting and useful talk if you’re interested in improving your GIS skills!”

— Jessica Perkins, PhD Candidate, Bren School

ABSTRACT Geographic information systems (GIS) extract meaning and insights from spatially referenced data, but the results are highly dependent on the quality of data used and the manipulations on the data when preparing it for analysis. Users should understand the impacts that data preparations may have on results in order to avoid artificial distortions. This talk focuses specifically on the GIS-related issues encountered when locating new transmission line and pipeline infrastructure over terrain, where the designer must consider numerous stakeholder interests but may also have incentive to nudge the design to fit their own agenda. Data tricks that can be used to drive results toward a desired outcome are highlighted, and guidelines for GIS data preparations are presented that will help to ensure spatial analysis results are accurate and unbiased.

BIO Antonio Medrano is a research specialist at the Bren School of Environmental Science & Management, working on GIS analysis of emissions sources that affect human health. His main research interests are spatial optimization, geospatial algorithm engineering, and high-performance computing. He earned his PhD in Geography and MS in Media Arts and Technology at UC Santa Barbara, and BS in Engineering at Harvey Mudd College. He recently accepted an assistant professor of Geographic Information Science position in the Department of Computing Sciences at Texas A&M University Corpus Christi, where he will begin later this year.

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