



SPATIOTEMPORAL DATA ANALYSIS

GEOG696C Autumn 2019

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and Development &
Laboratory of Tree-Ring
Research

Department of
Geosciences

W/F 12:15 to 1:30

**Methods for analyzing
your data in space and
time**

Offered again in Autumn 2019, this course gives graduate students hands-on, practical experience -- including programming -- and knowledge for analyzing spatiotemporal datasets. The class is conducted in a workshop format, where instruction is paired with

practical coding exercises, tutorials, and critique. Topics will include basic matrix algebra, the dangers of false discovery, autocorrelation and its consequences in time and space, parametric and non-parametric significance testing and error analysis in the presence of autocorrelation and noise, field correlation and

regression analysis, empirical orthogonal functions including rotation, singular spectrum analysis, maximum covariance and multitaper spectral analysis.

The course will include practical instruction and training in MATLAB and using large multi-dimensional datasets. Users of R and Python are welcome!