Instructor: S. Lakshmivarahan  Office: DEH Room 230

Class Time: T-Th 9.00 to 10.15 am

Class Room: Devon Energy Hall, Room 420

Office hours: T-TH- 1.00 to 2.00 pm in Room DEH 203

Reference Books: Will distribute scanned copies of the slides and handwritten class notes

Topics to be covered:

1) A classification of Data: Spatial and/or temporal, cross sectional, time series, data matrix and others
2) Dimensionality reduction-PCA: Population based theory and sample based applications
3) Dimensionality reduction: Random projections
4) Singular spectrum analysis: using delayed data matrix, change point detection
5) Spatial data analysis: spatial statistics
6) Expectation Maximization (EM) algorithm and its applications
7) Anomaly detection - theory and applications

This course will be a combination of theory and experimentation using MATLAB and/or R

Home works: There will be about eight to ten home works; one take home class exam and one take home final exam.

Final exam: Wednesday, May 8th, 2019, 8.00 to 10.00 am

Grading: Home works will count for 50% of the grades, class exam 25% and finals 25%
Scale: 90 and above is A, 80 to 89 is B, 70 to 79 is C, 60 to 69 is D and F is below 60.

For more information contact the instructor: varahan@ou.edu