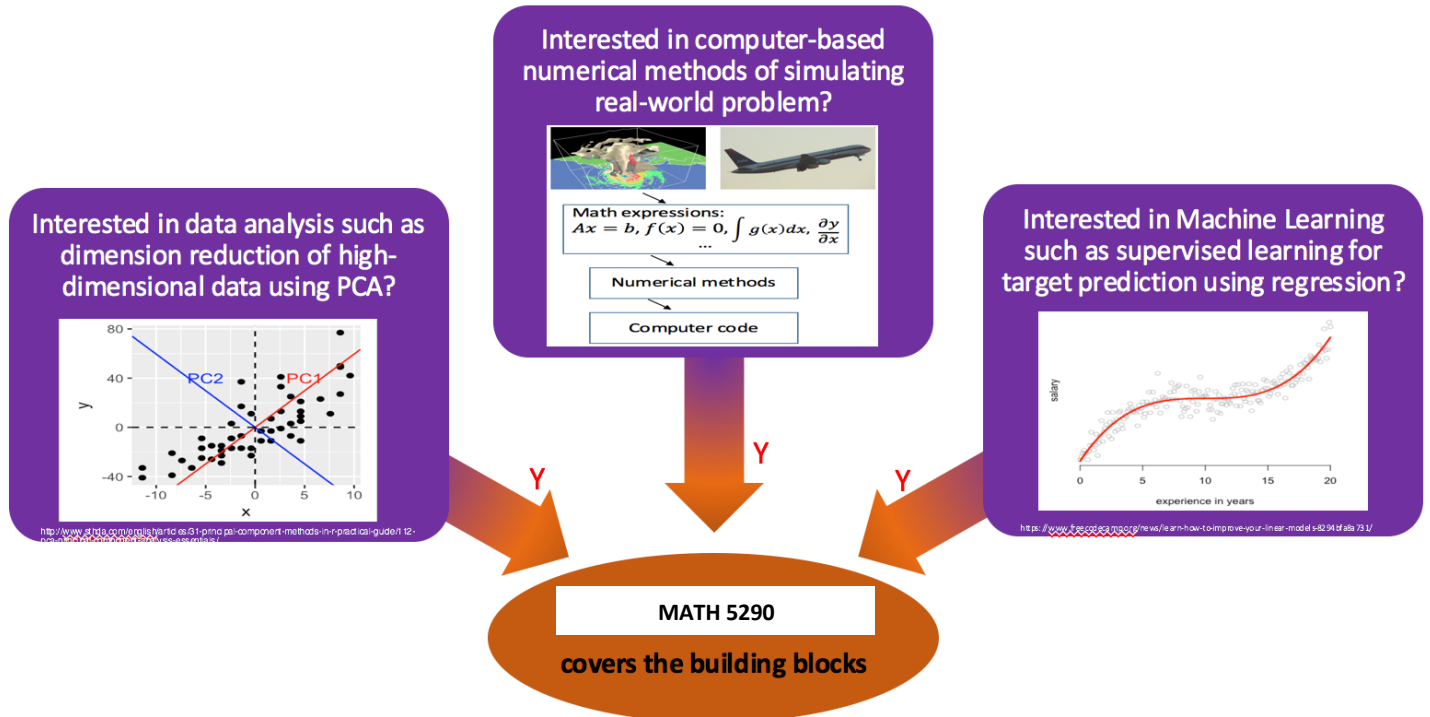


# MATH 5290 Numerical Methods

by Dr. Yanyan He (Spring 2024)



## Course details:

### Instructor:

Dr. Yanyan He, Assistant Professor  
Dep. of Math, Dep. of CSE  
University of North Texas  
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### Research interests:

uncertainty quantification,  
uncertain data analysis

### Time & location:

MW 9:30-10:50am NTDP F285

### Course score composition:

Homework/project: 100%  
(No Final)

### Content:

- System of equations and matrix decomposition
- Singular value decomposition and principal component analysis
- Least squares problem
- Numerical integration
- Monte Carlo methods
- Nonlinear equations
- Polynomial and spline interpolation

**Textbook:** none

### Prerequisite:

Calculus, Linear Algebra, and Programming