

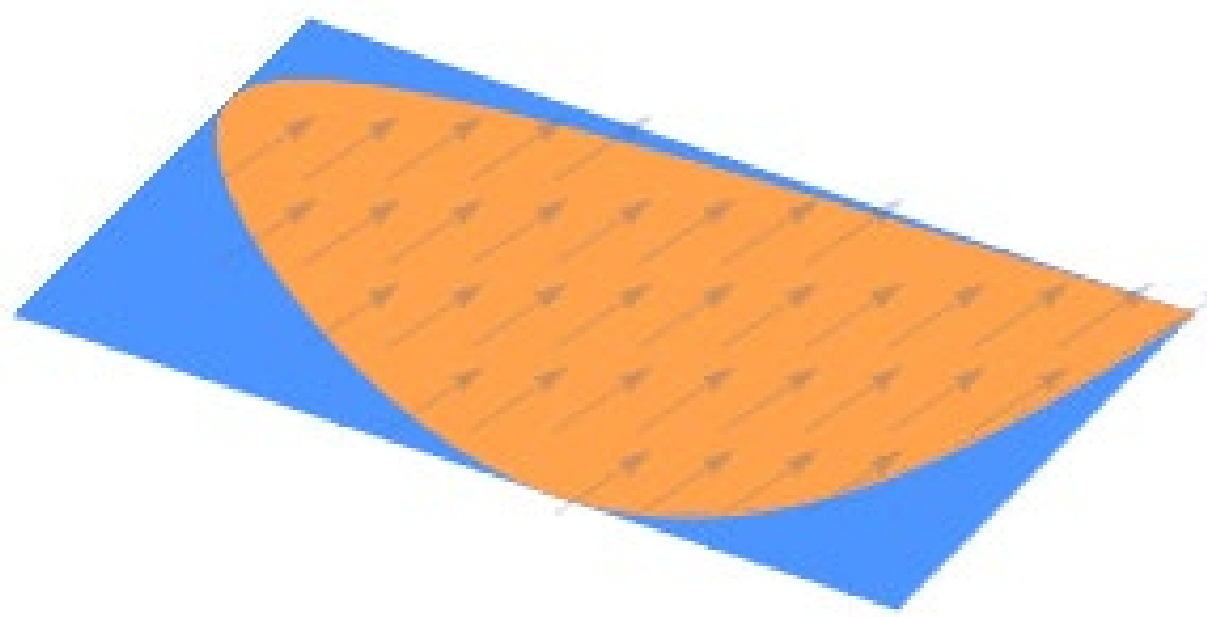
## Kevin Shu

Ph.D. Student, Algorithms, Combinatorics  
and Optimization  
Second Year ARCS Scholar  
Hardin/ARCS Award

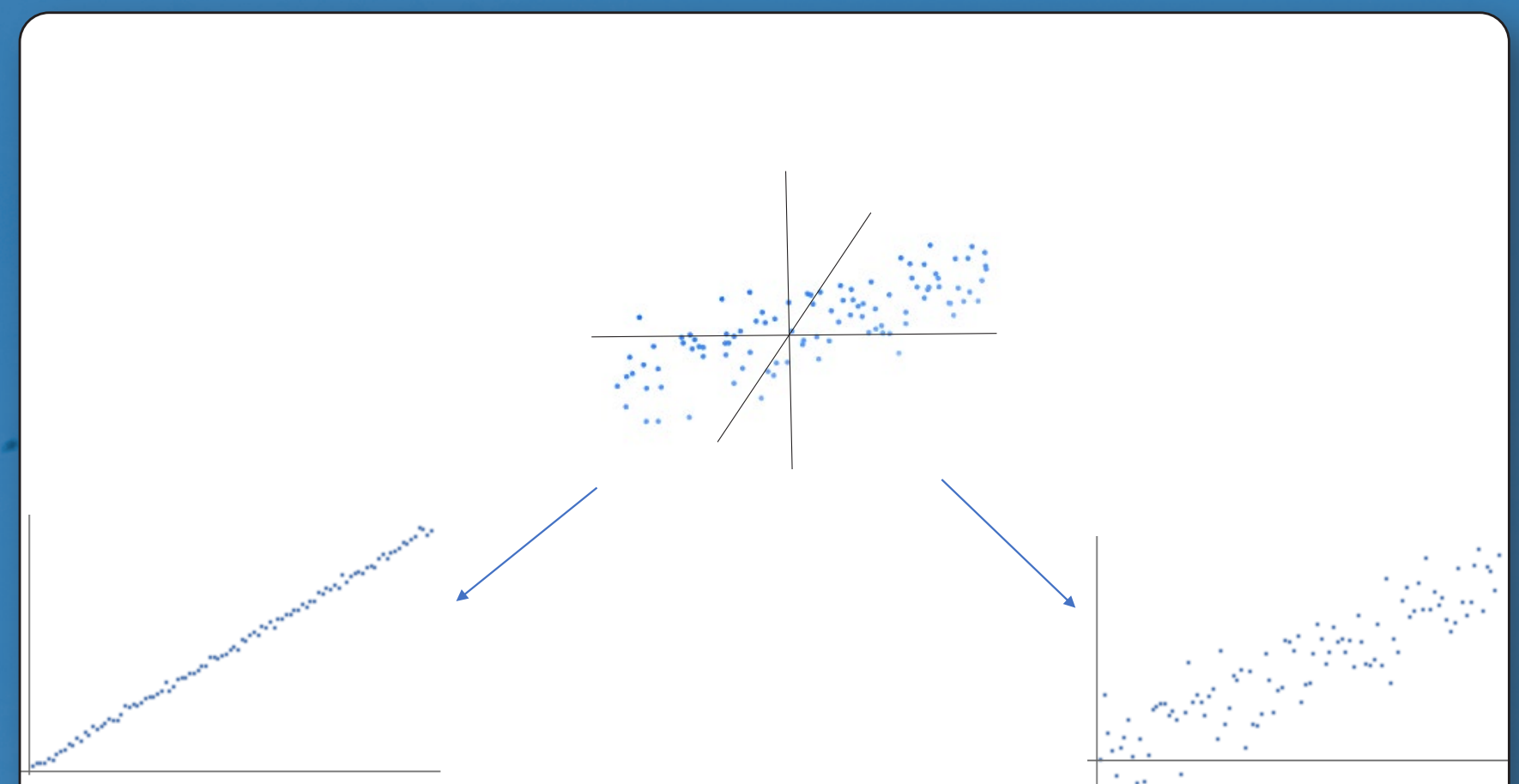


# Algebra and Optimization

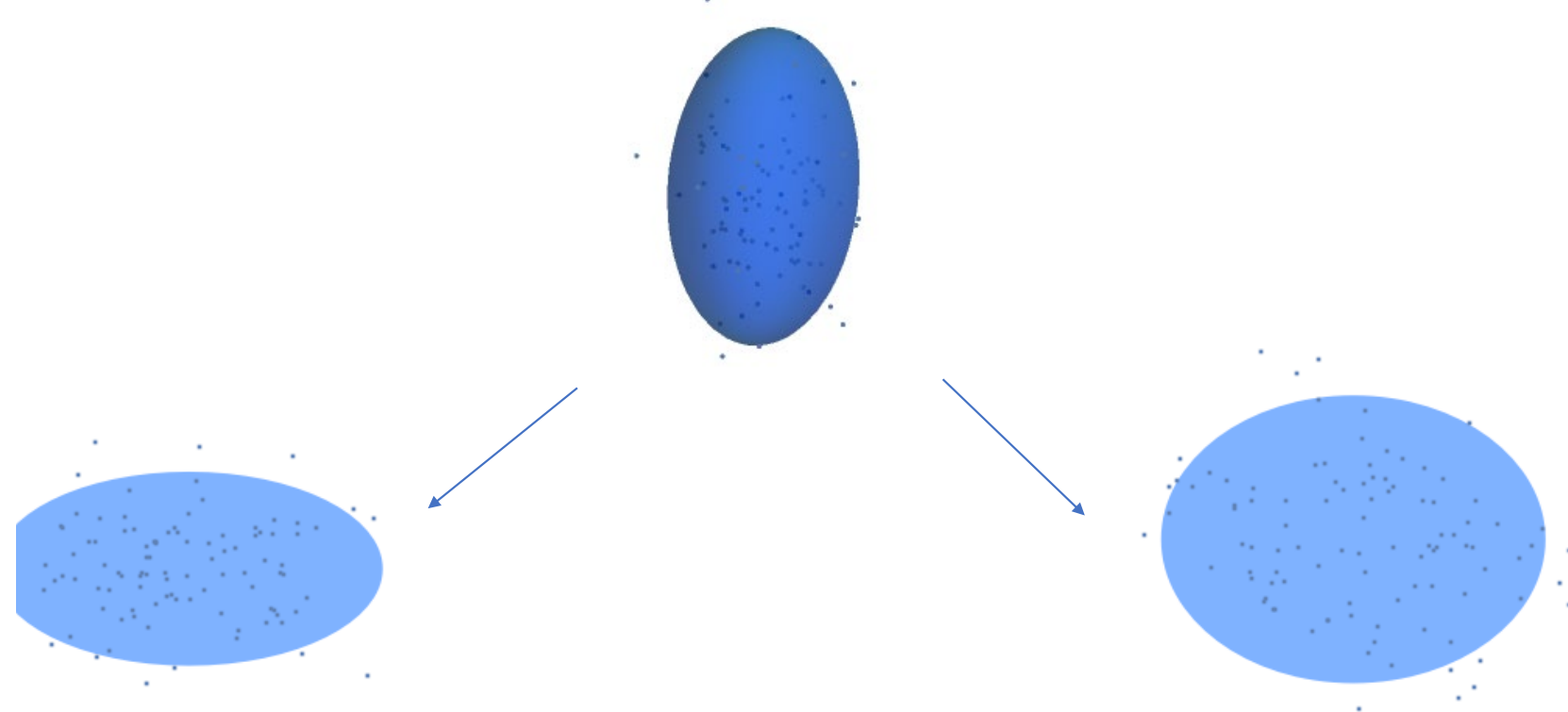
We're studying methods involving polynomials and algebra with applications to optimization and data science. Of recent note is our work on sparse versions of optimization using polynomials.



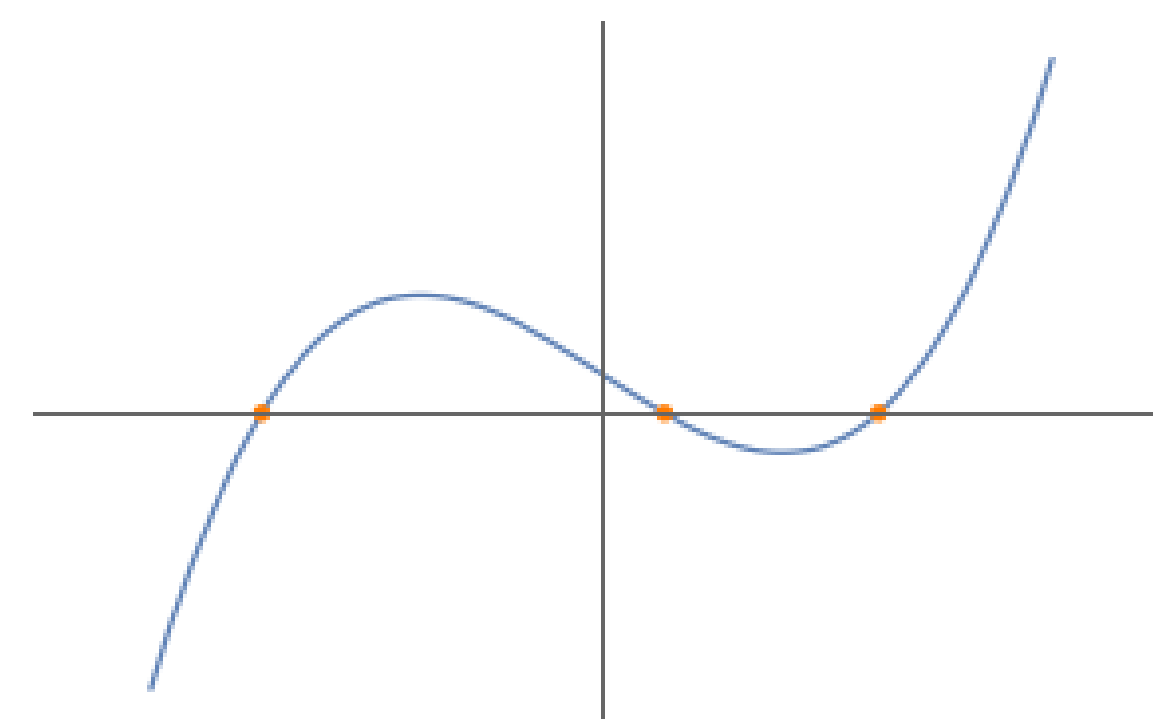
Convex Optimization



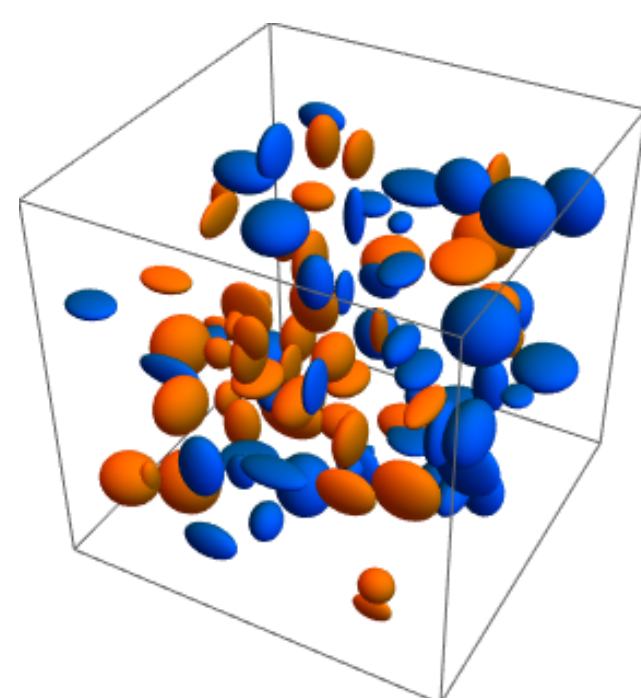
Sparse Regression



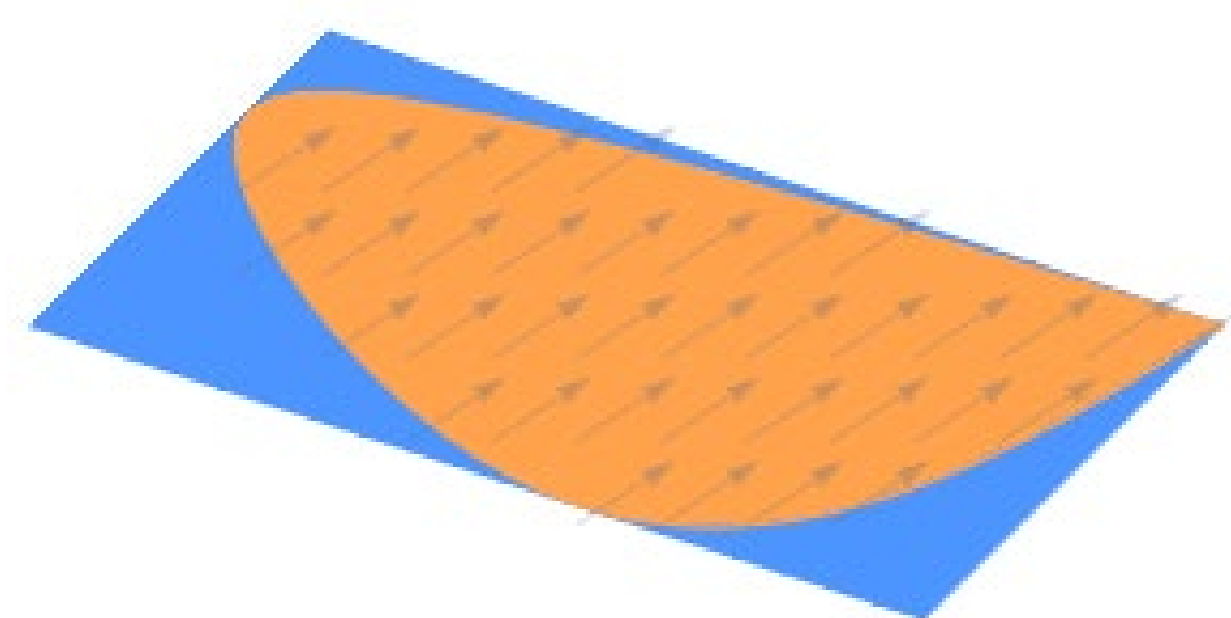
Sparse PCA



Polynomials



Geometry



Convex Optimization

Footnote: Images were generated using Mathematica.