Optimization for Road Data

Least Squares Optimization

With

Where

* Road Curvature Model k
* Road Sampled Curvature Data (GPS Data and Google Earth Data)

Linear Models to be investigated:

* Ideal Model as per AAHSTO Regulations
* Testing Model

Non-Linear Models to be investigated:

Where

Constraints to be investigated (for both Linear and Non-linear Models)

* Non-Constrained Case
* Ackerman Angle Constraint

Where L = Vehicle Length

Speed Velocity

Understeer Gradient

Curvature Model

Note: The Ackerman Angle is stable for understeer behavior at different speeds when degrees.