

Thesis Proposal

Jordan Hall

Department of Mathematical and Statistical Sciences
University of Colorado Denver

Tuesday, December 4, 2018



Department of Mathematical
& Statistical Sciences

UNIVERSITY OF COLORADO **DENVER**

Literature Review and Framework

Data-Consistent Inversion

Research Questions

Preliminary Results and Research Plan

Timeline

References



Notation

- » We define a parameter space Λ with dimension N and a data space \mathcal{D} with dimension M . Generally $M \leq N$.
- » We define a parameter-to-data map f , which is noisy and ∇f may be inaccessible.
- » We consider additive noise in f , which is modeled by draws $f(\lambda) = f(\lambda) + \epsilon(\lambda)$ for additive noise and $f(\lambda) = f(\lambda)(1 + \epsilon(\lambda))$ for multiplicative noise.



» We will follow



x 

\mathcal{X}

x

\mathcal{X} 