1. Training Design Training Dimension Model Reduction Fitting Generation Runs $\{y_i^{\text{train}}\}_{i=1}^{n_{train}}$ x_2 d_2 TRACE $\overline{x_1}$ x_1 2. Validation and Selection Validation Dimension Validation Met-Model Prediction ric Calculation Reduction Selection Runs $Q_2(\hat{f}(\mathbf{x}_i^{\text{valid}}), y_i^{\text{valid}})$ $\{y_i^{\text{valid}}\}_{i=1}^{n_{valid}}$ $\hat{f}(\mathbf{x}_i^{\text{valid}}) \approx y_i^{\text{valid}}$ 3. Testing Testing Dimension ► Prediction Reduction Runs $\hat{f}(\mathbf{x}_i^{\text{test}}) \approx y_i^{\text{test}}$ $\{y_i^{\text{test}}\}_{i=1}^{n_{test}}$ Final Error

Assessment