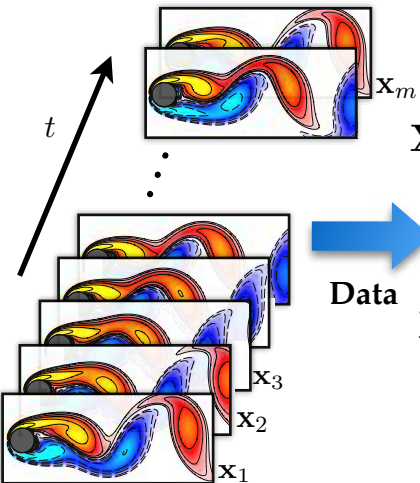


Experiment



Collect Data

$$\mathbf{X} = \begin{bmatrix} | & | & & | \\ \mathbf{x}_1 & \mathbf{x}_2 & \cdots & \mathbf{x}_{m-1} \\ | & | & & | \end{bmatrix}$$

Data

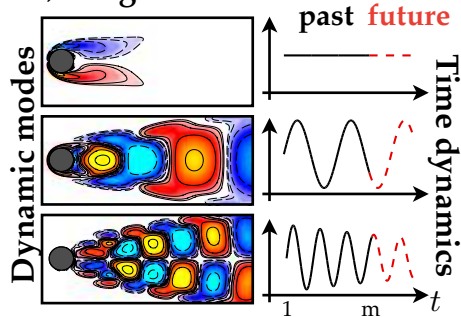
$$\mathbf{X}' = \begin{bmatrix} | & | & & | \\ \mathbf{x}_2 & \mathbf{x}_3 & \cdots & \mathbf{x}_m \\ | & | & & | \end{bmatrix}$$

$$\mathbf{A} = \mathbf{X}' \mathbf{X}^\dagger$$


Regression

DMD

a) Diagnostics



b) Future state prediction


$$\mathbf{x}_{k+1} = \mathbf{A} \mathbf{x}_k$$