A

model: 2D LDS

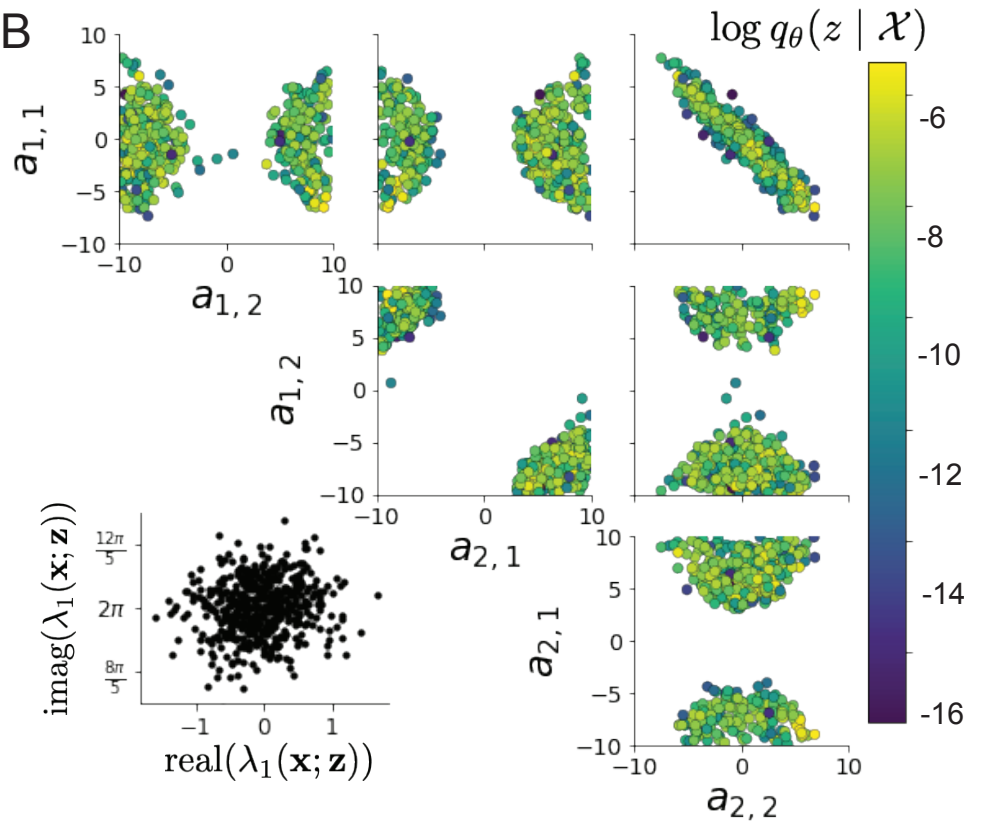
$$\tau \frac{d\mathbf{x}}{dt} = A\mathbf{x}$$

$$A = \begin{bmatrix} a_{1,1} & a_{1,2} \\ a_{2,1} & a_{2,2} \end{bmatrix}$$

emergent property:
1Hz oscillations

$$\mathbb{E}_{\mathbf{z},\mathbf{x}} \begin{bmatrix} \text{real}(\lambda_1)(\mathbf{x};\mathbf{z}) \\ \text{imag}(\lambda_1)(\mathbf{x};\mathbf{z}) \\ (\text{real}(\lambda_1)(\mathbf{x};\mathbf{z}))^2 \\ (\text{imag}(\lambda_1)(\mathbf{x};\mathbf{z}) - 2\pi\omega)^2 \end{bmatrix} = \begin{bmatrix} 0.0 \\ 2\pi \\ 0.25^2 \\ (2\pi 0.1)^2 \end{bmatrix}$$

B



C