

Supervising Process

Example:

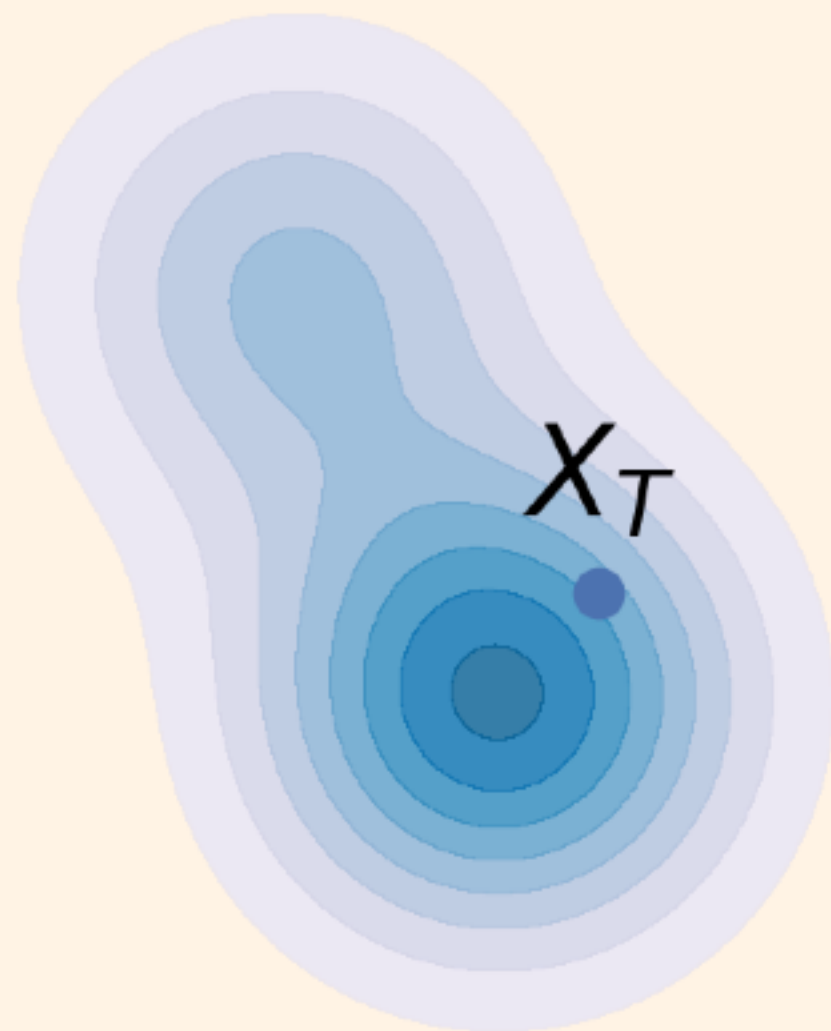
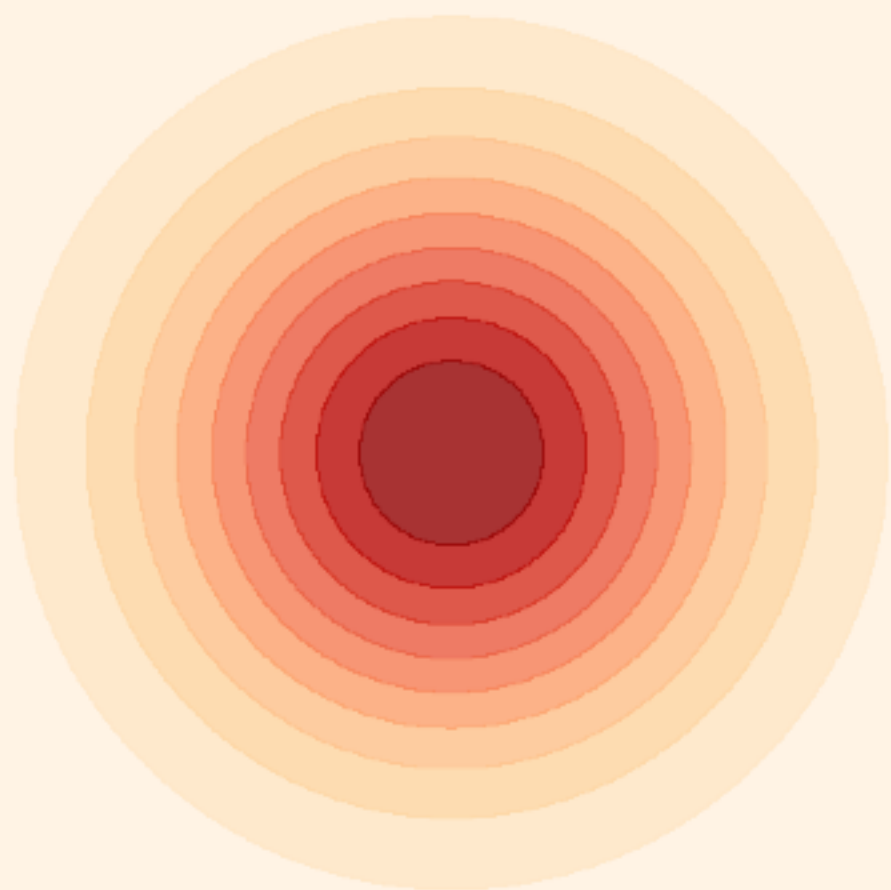
Linear process

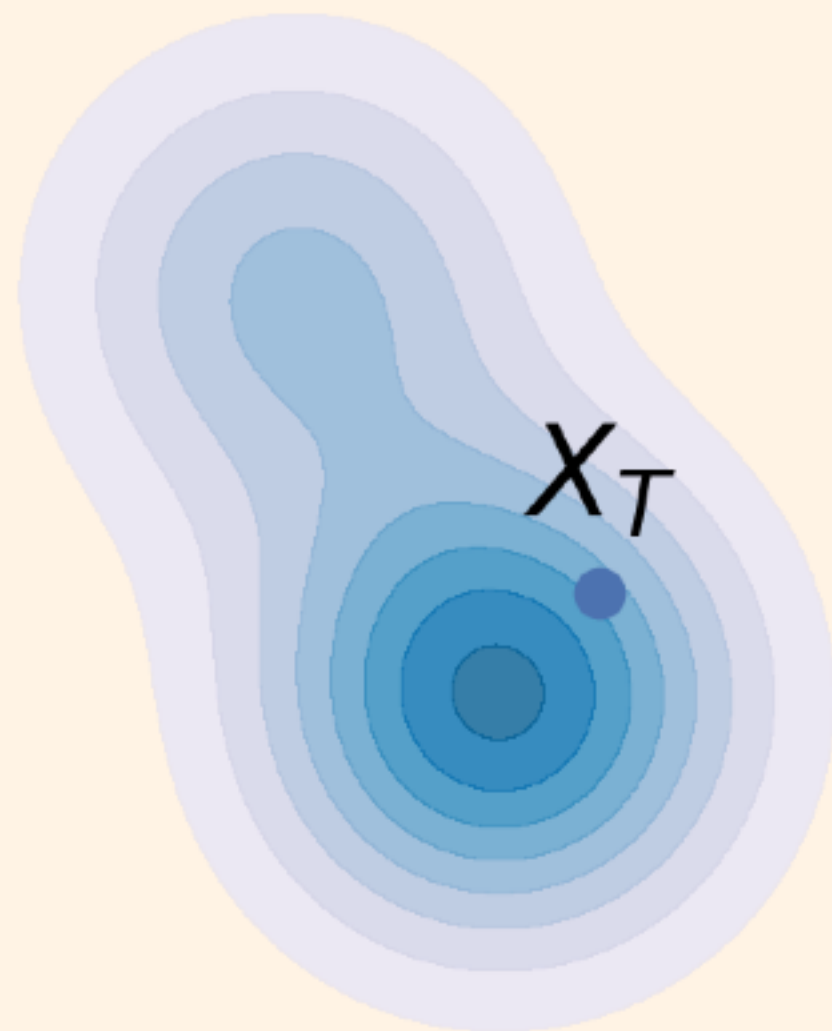
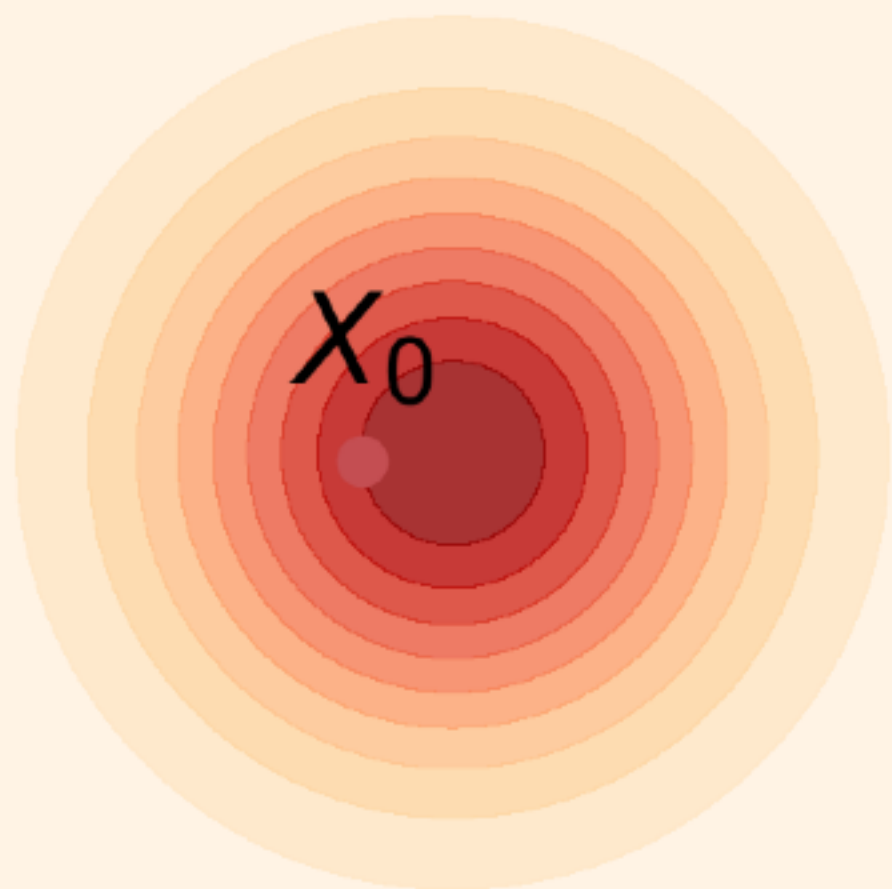
$$X_t = \left(1 - \frac{t}{T}\right) X_0 + \frac{t}{T} X_T,$$

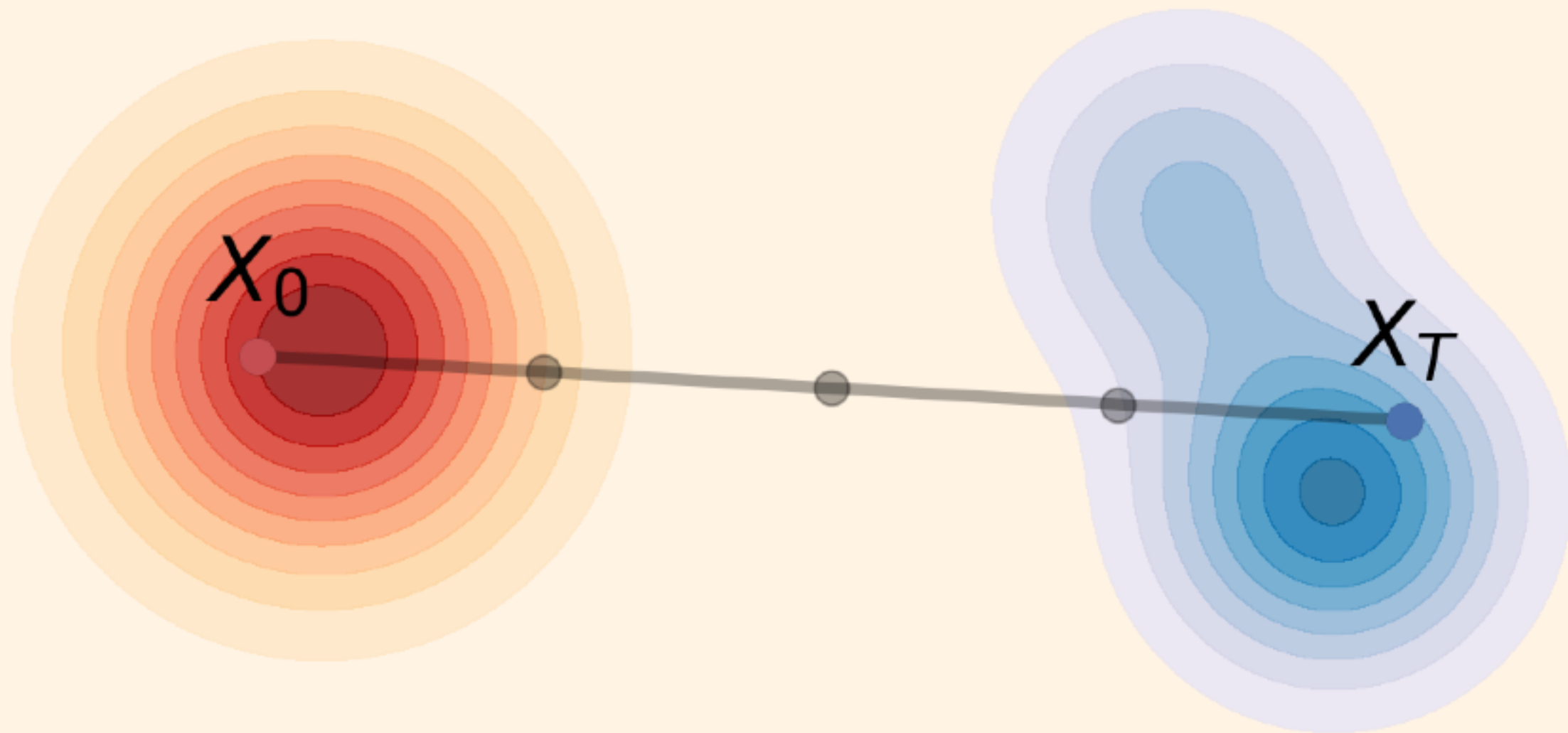
Where $X_0 \sim \mathcal{N}(0, I)$ and $X_T \sim p_T$.

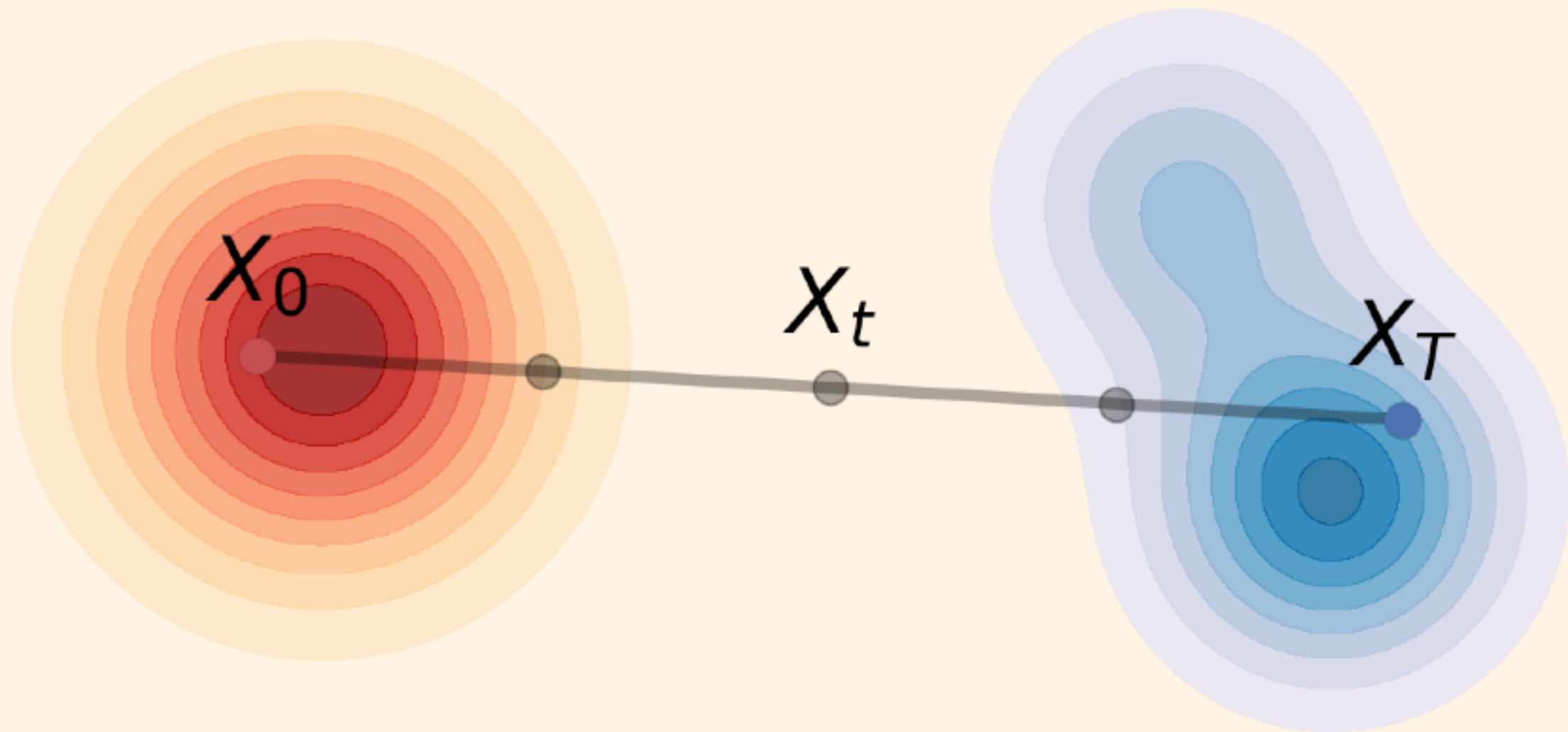
Requirements:

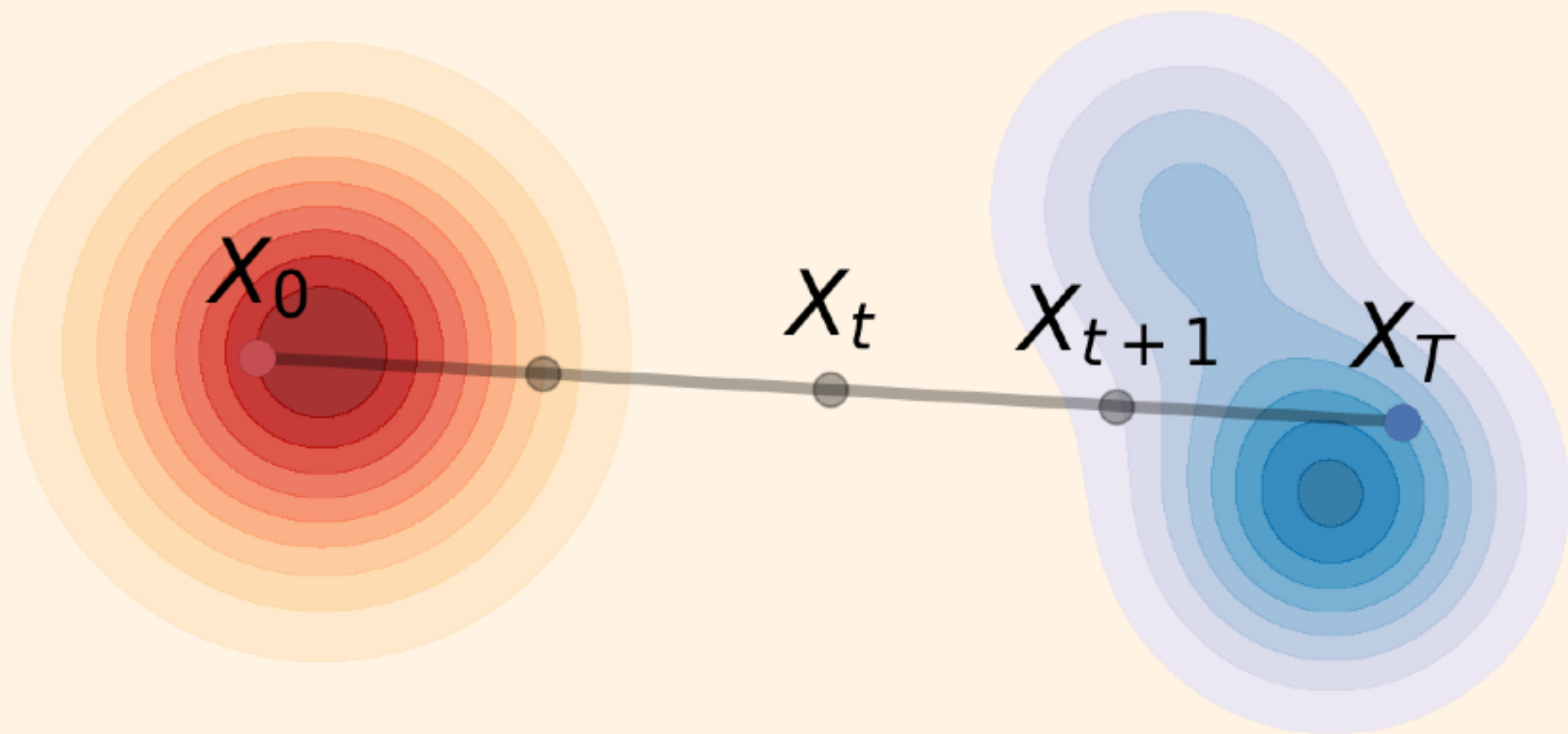
X_t interpolate source (noise) and target (data).

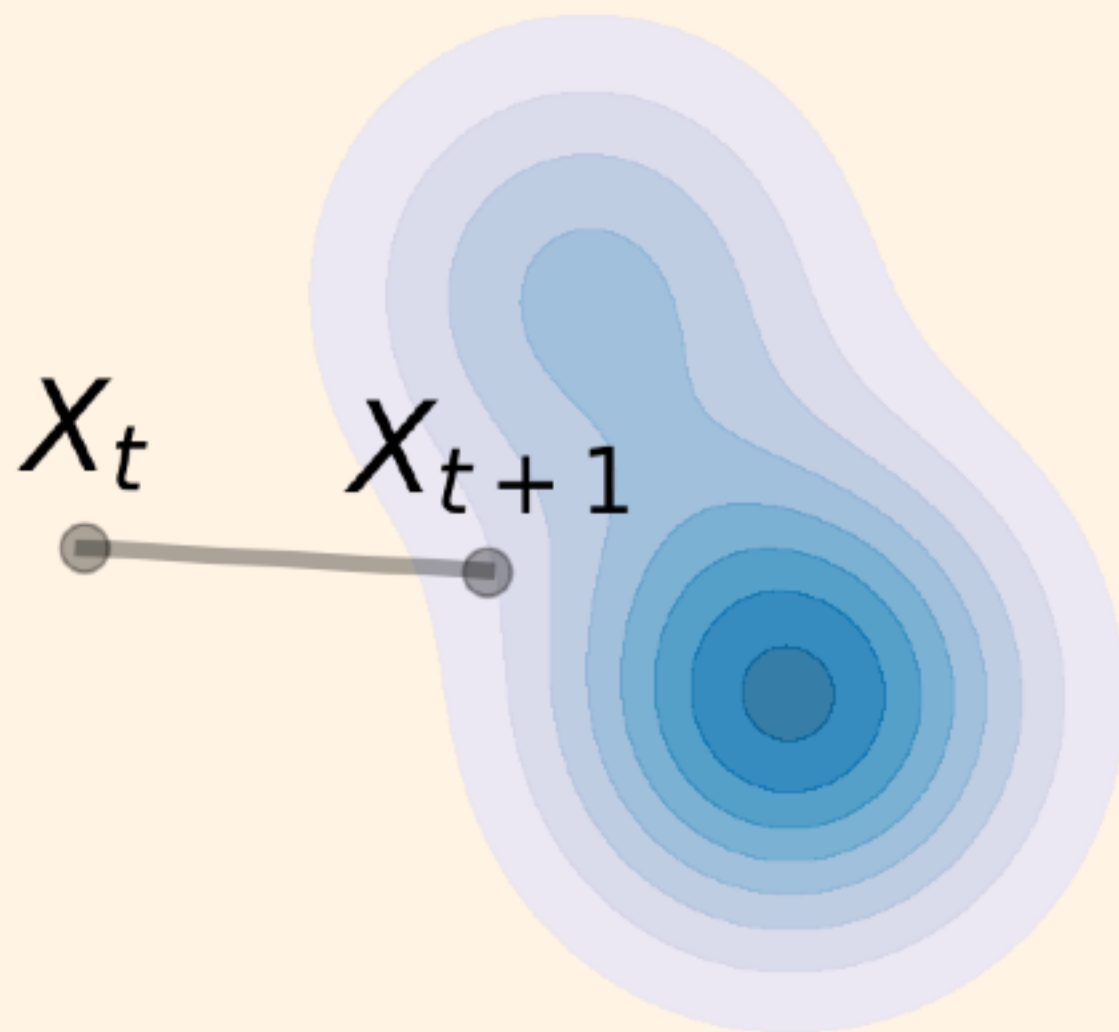
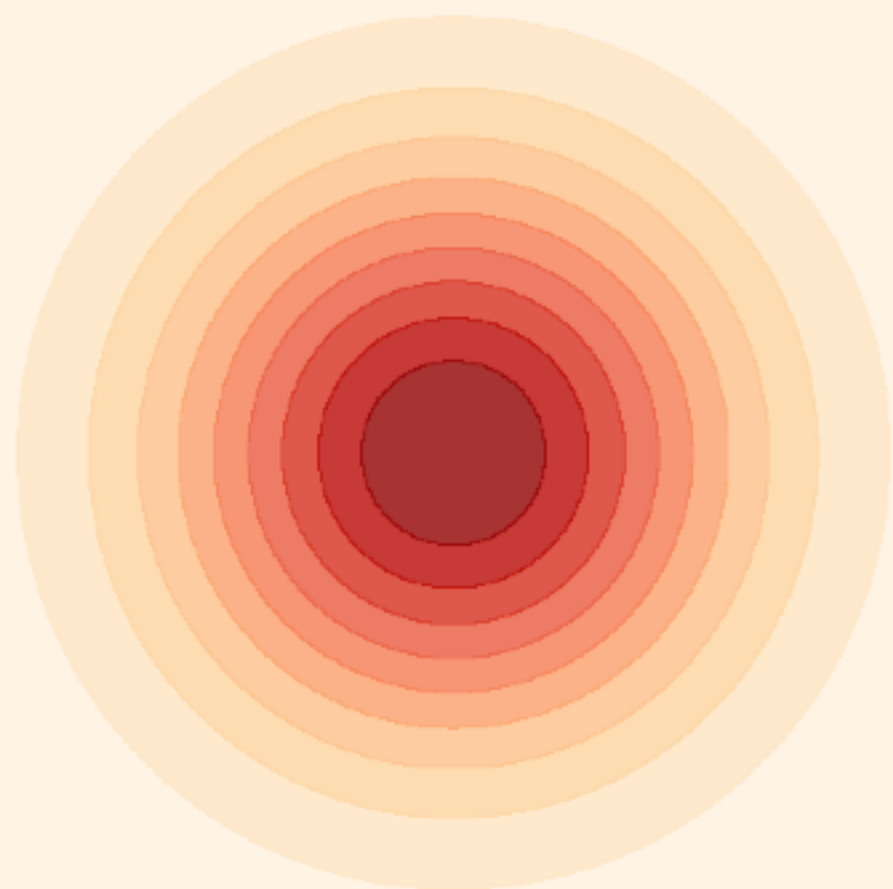


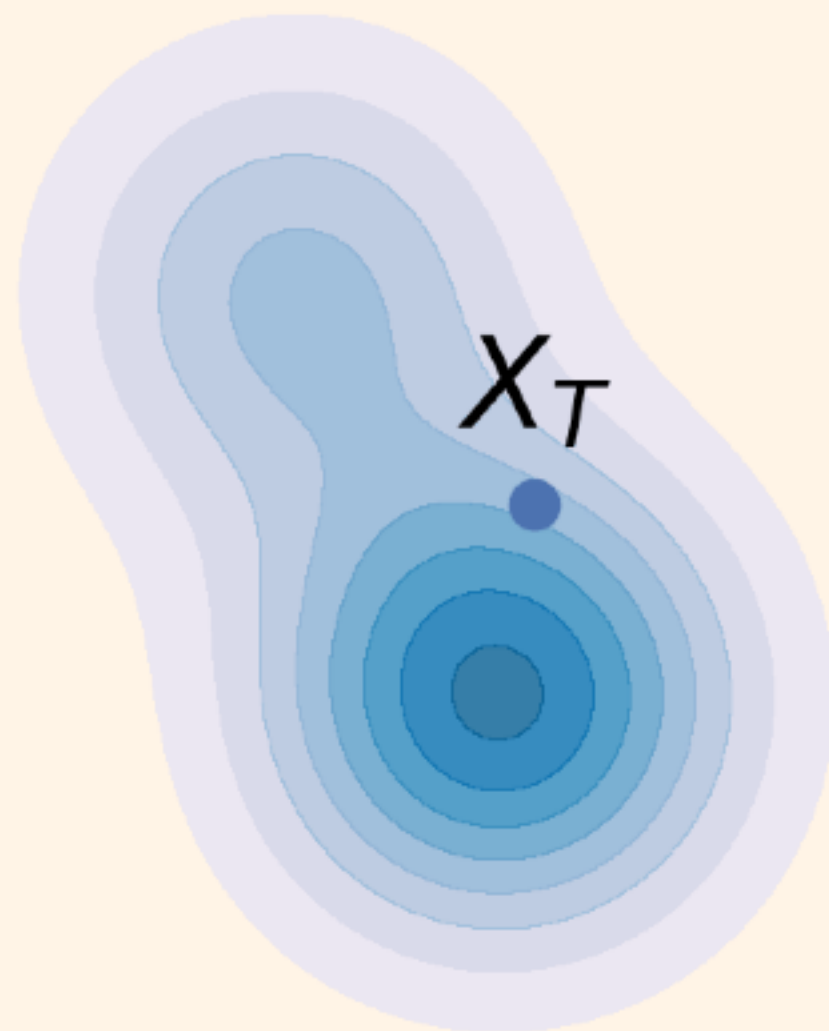
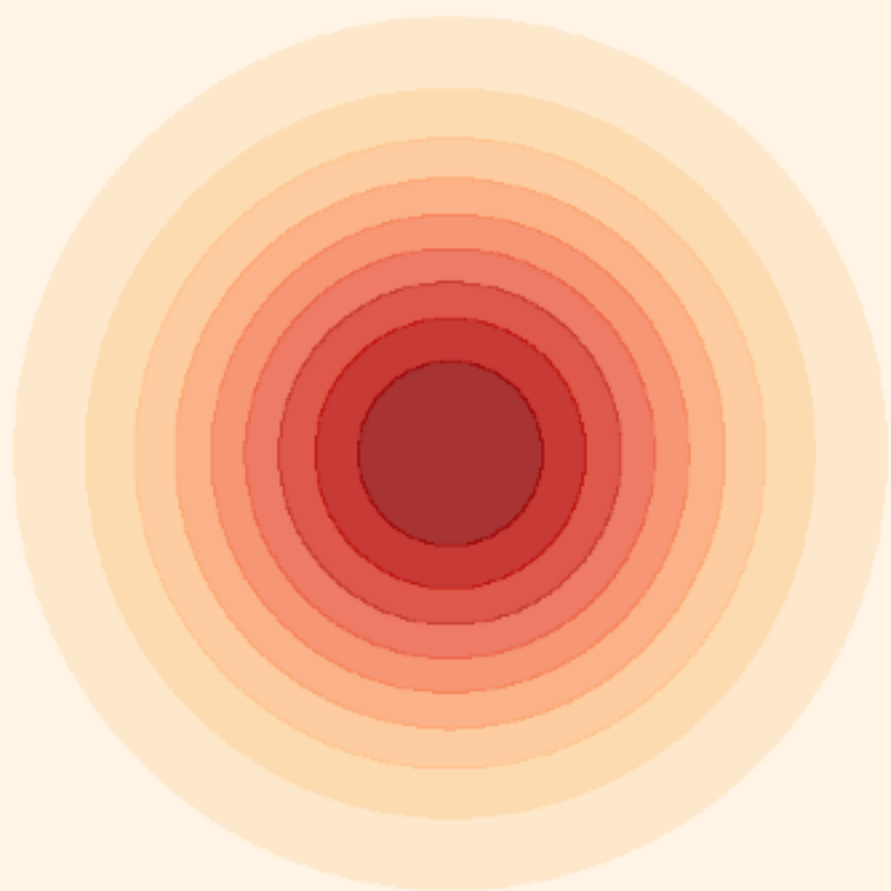


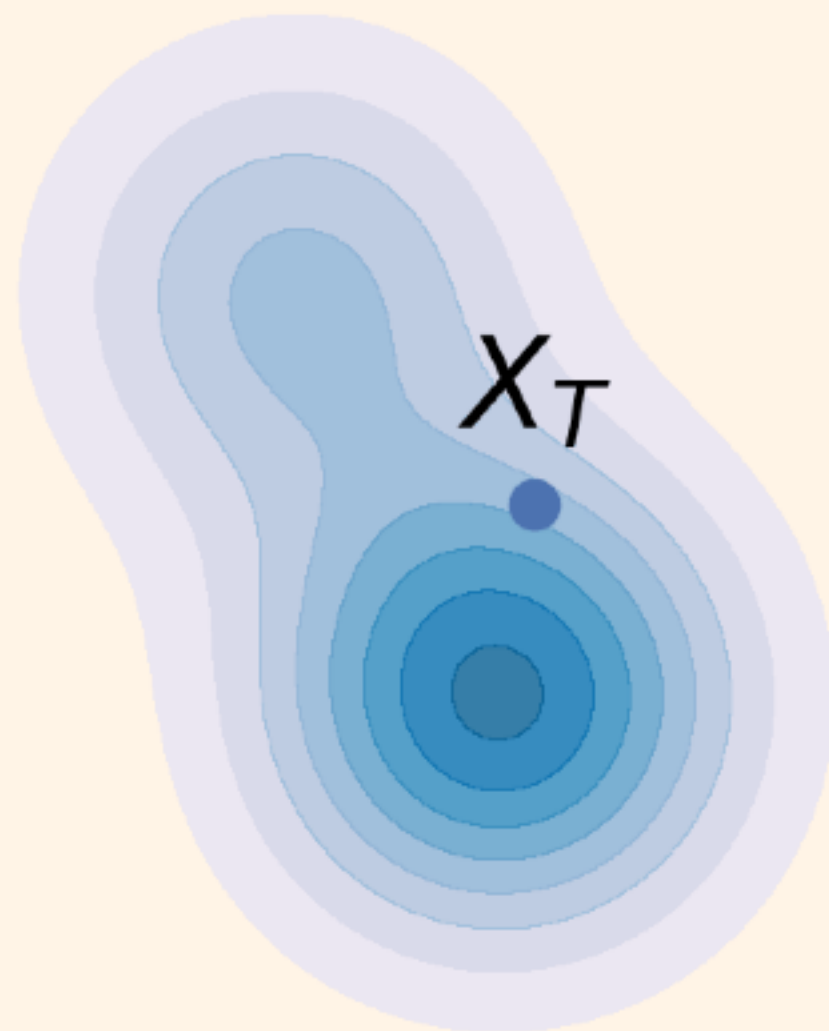
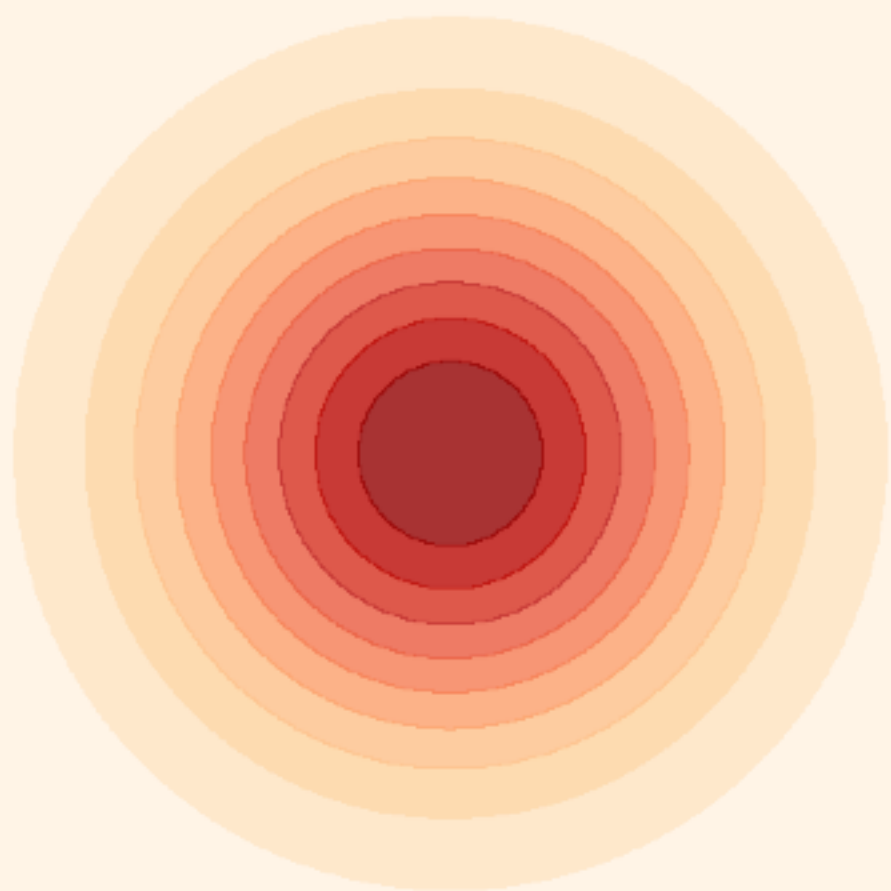


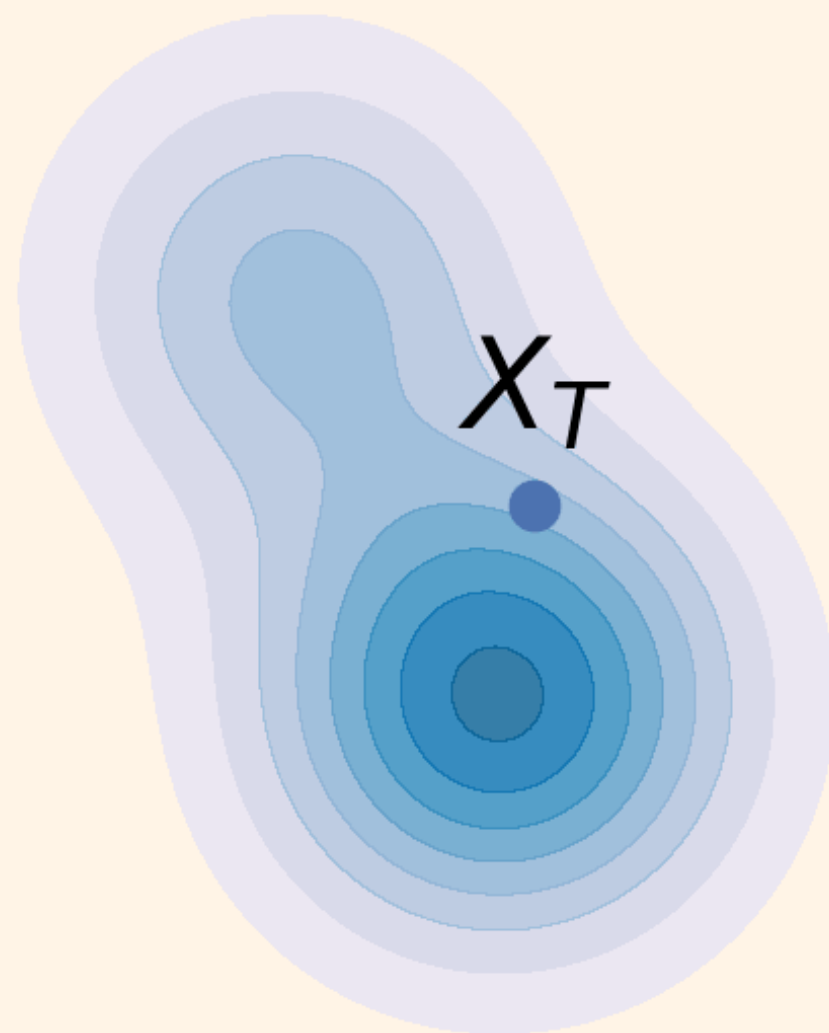
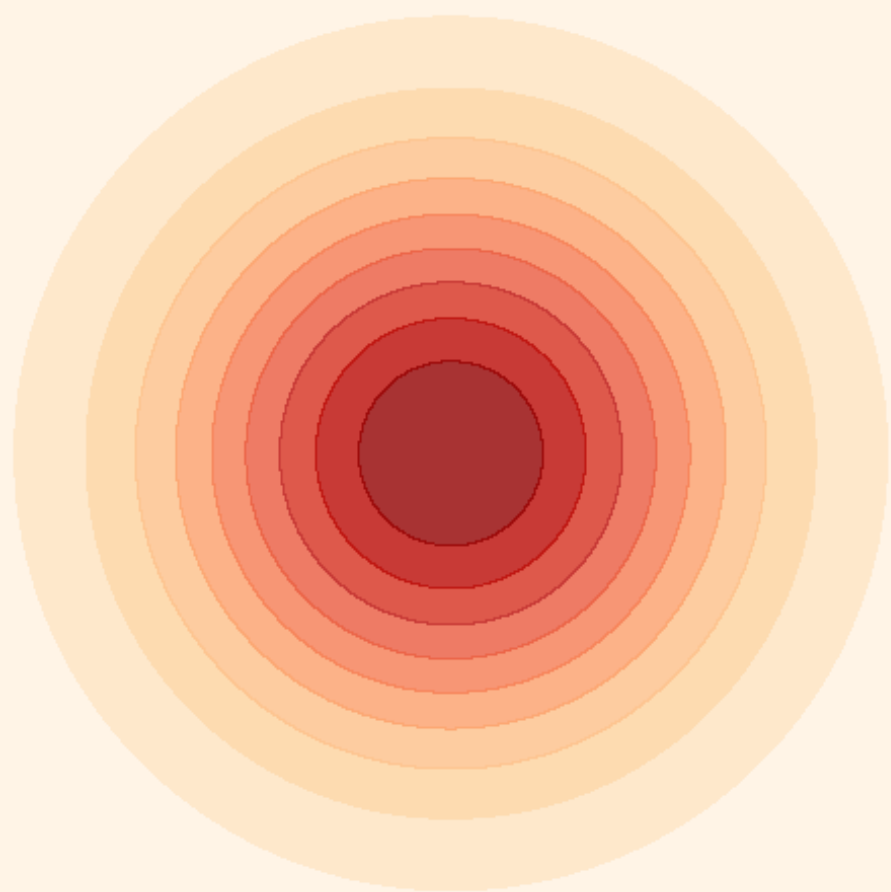












Supervising Process

Requirements:

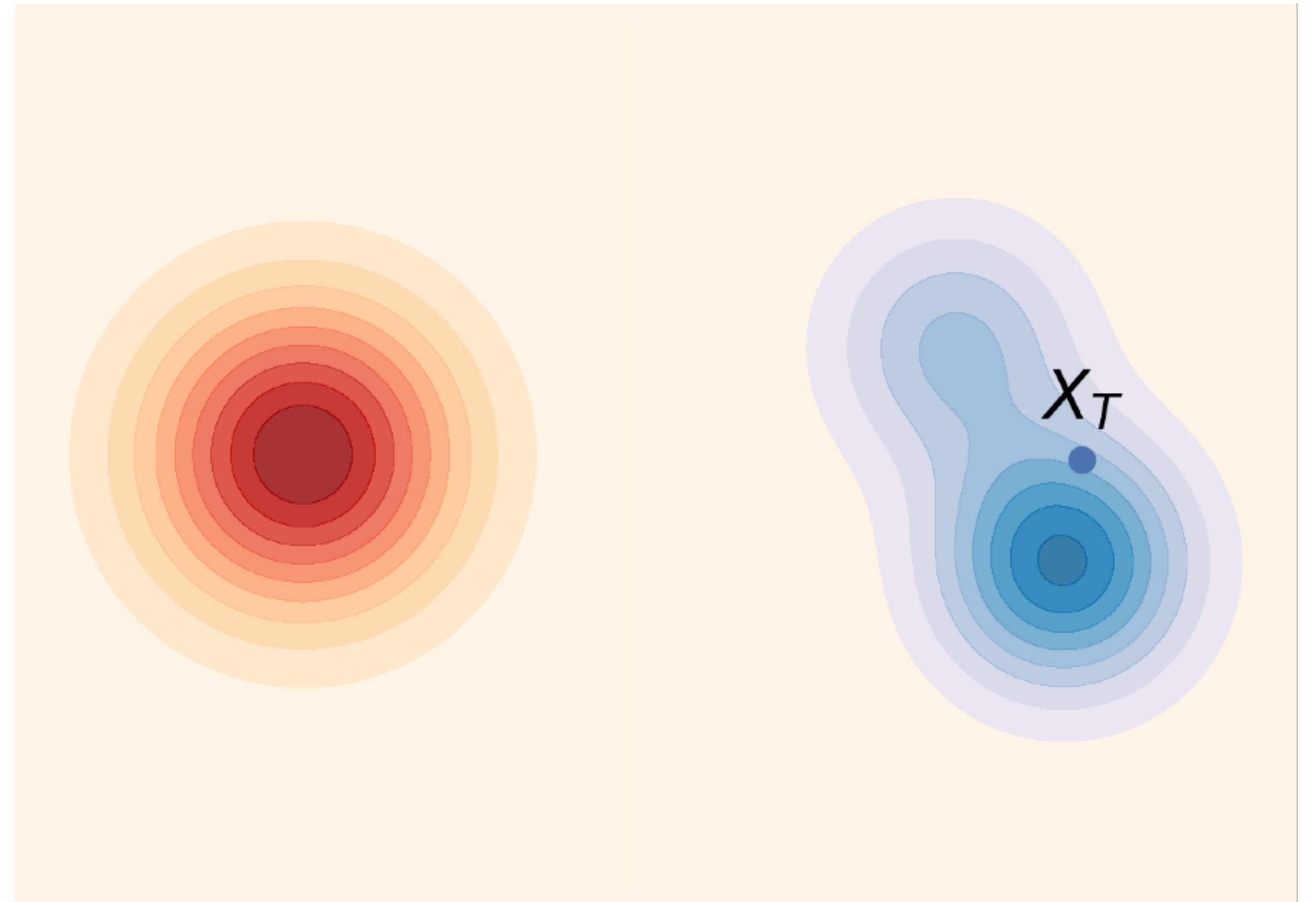
X_t interpolate source (noise) and target (data).

Example:

Linear process

$$X_t = \left(1 - \frac{t}{T}\right) X_0 + \frac{t}{T} X_T,$$

Where $X_0 \sim \mathcal{N}(0, I)$ and $X_T \sim p_T$.



Parametrization

We find a map $Y, X_t \mapsto X_{t+1}$ and train a model $p_{Y|t}^\theta(Y|X_t)$:

Noise prediction: $Y = X_0$.

