## $oldsymbol{v_k'} = oldsymbol{\Gamma^{\pm}(v_k; \zeta_{v_k})}$

Invertible NN

2. Full-step **half** x update:  $\langle x_k' 
angle = m^k \odot x_k + \overline{m}^k \odot rac{\Lambda^\pm(x_k; \zeta_{x_k})}{\Lambda^\pm}$ 

1. Half-step full v update:

3. Full-step **half** 
$$x$$
 update:  $x_k'' = \bar{m}^k \odot x_k' + m^k \odot \Lambda^{\pm}(x_k'; \zeta_{x_k'})$ 

4. Half-step full 
$$v$$
 update:  $\Gamma^{\pm}(v_k;\zeta_{v_k})$