Tilt-then-blur: $\mathbf{I} = [\mathcal{B} \circ \mathcal{T}] \mathbf{J}$

Tilting: $\mathcal{T}$

Grid Deformers
$\mathcal{G}_\theta$

Deformed Grids
$\mathbf{G}_\mathcal{T}$

Uniform Grid
$\mathbf{G}_U$
(Inputs)

Image Generator
$\mathcal{I}_\phi$

PE FC FC ··· FC

Predicted Tilted Images
$\mathbf{I}_\mathcal{T}$

Blurring: $\mathcal{B}$

Shift-varying Blurring
$\mathcal{P}_\alpha$

Shift-varying Blurring
$\mathcal{P}_\alpha$

Predicted Tilted-then-blurred Images
$\mathbf{I}_{\mathcal{B} \circ \mathcal{T}}$

A Recovered Clean Image
$\mathbf{J}$
(Output)

Tilting: $\mathcal{T}$

Shift-varying Blurring
$\mathcal{P}_\alpha$

Shift-varying Blurring
$\mathcal{P}_\alpha$

Resampled Tilted Images
$\mathbf{I}_\mathcal{T}^G$

Resampled Tilted-then-blurred Images
$\mathbf{I}_{\mathcal{B} \circ \mathcal{T}}^G$

Observed Images
$\mathbf{I}_k$
(Inputs)

→ Generate a recovered clean image
→ Generate tilted-then-blurred distorted image
↔ Losses