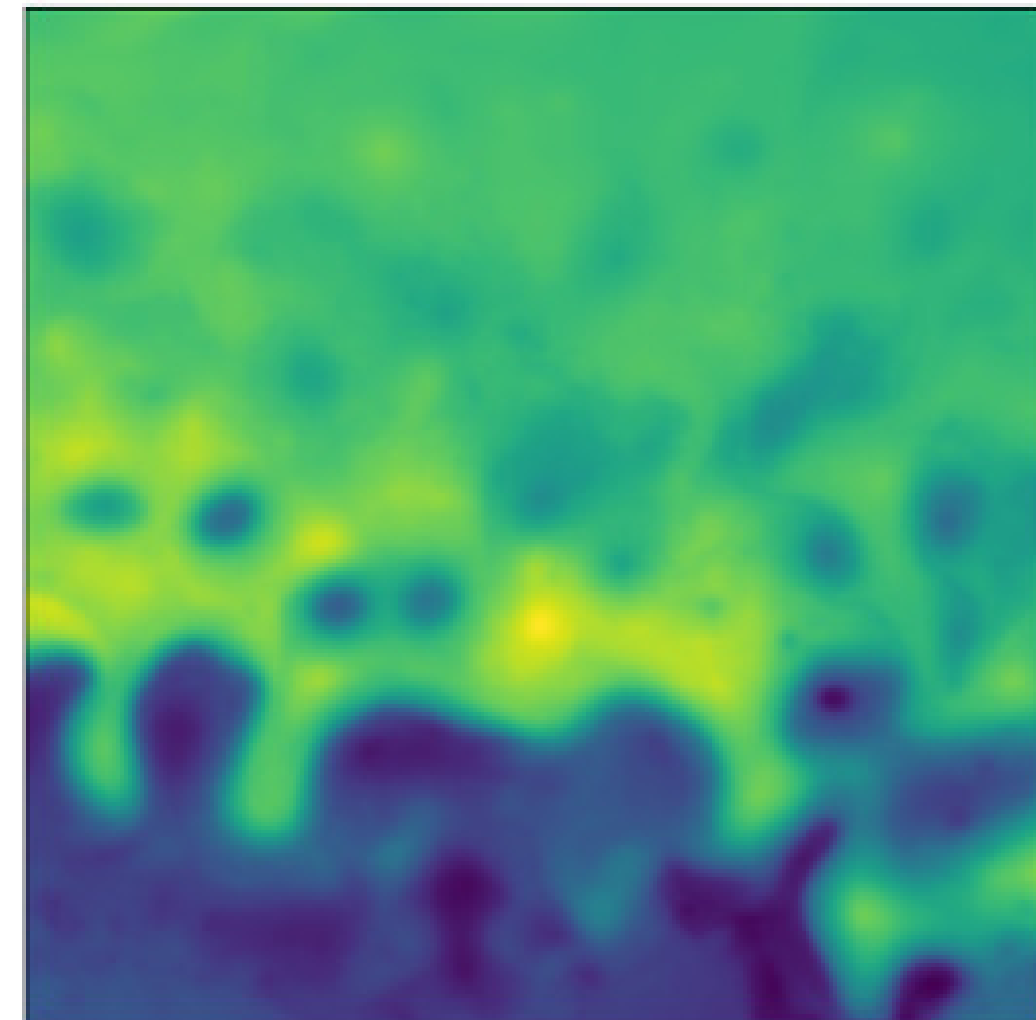# CROSS INPUT DEEP LEARNING SUPER-RESOLUTION APPLIED TO SEA SURFACE HEIGHT DOWNSCALING
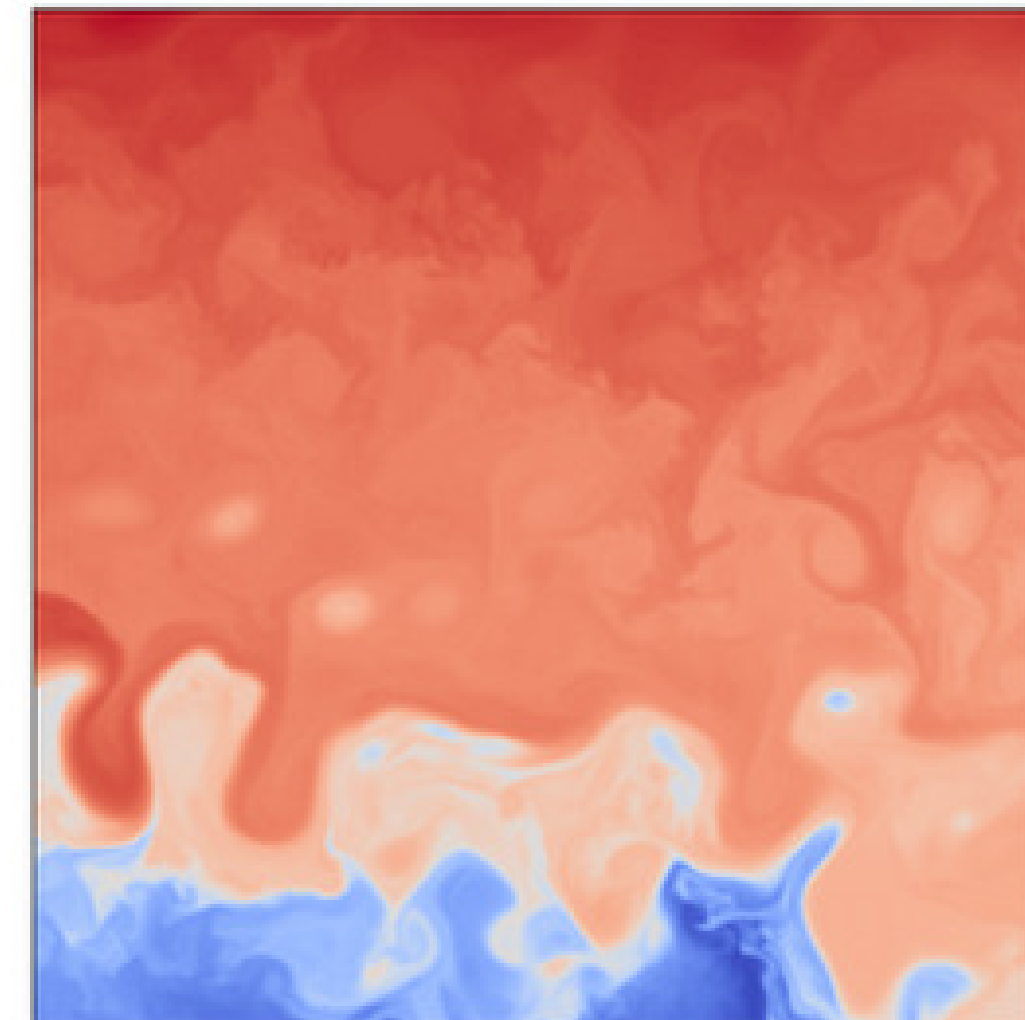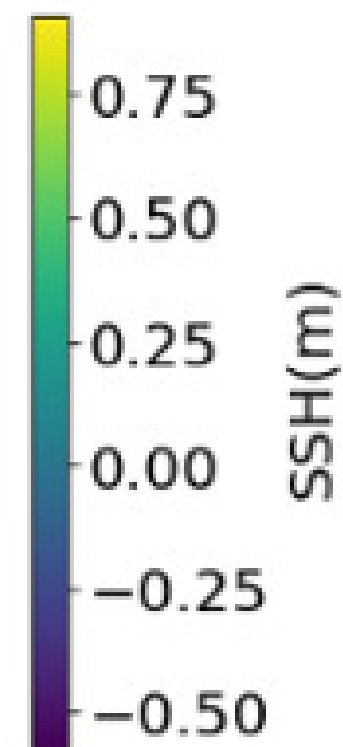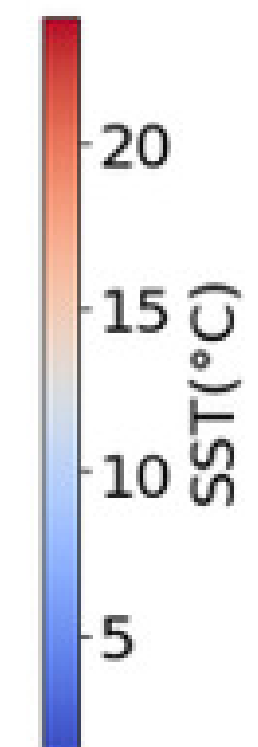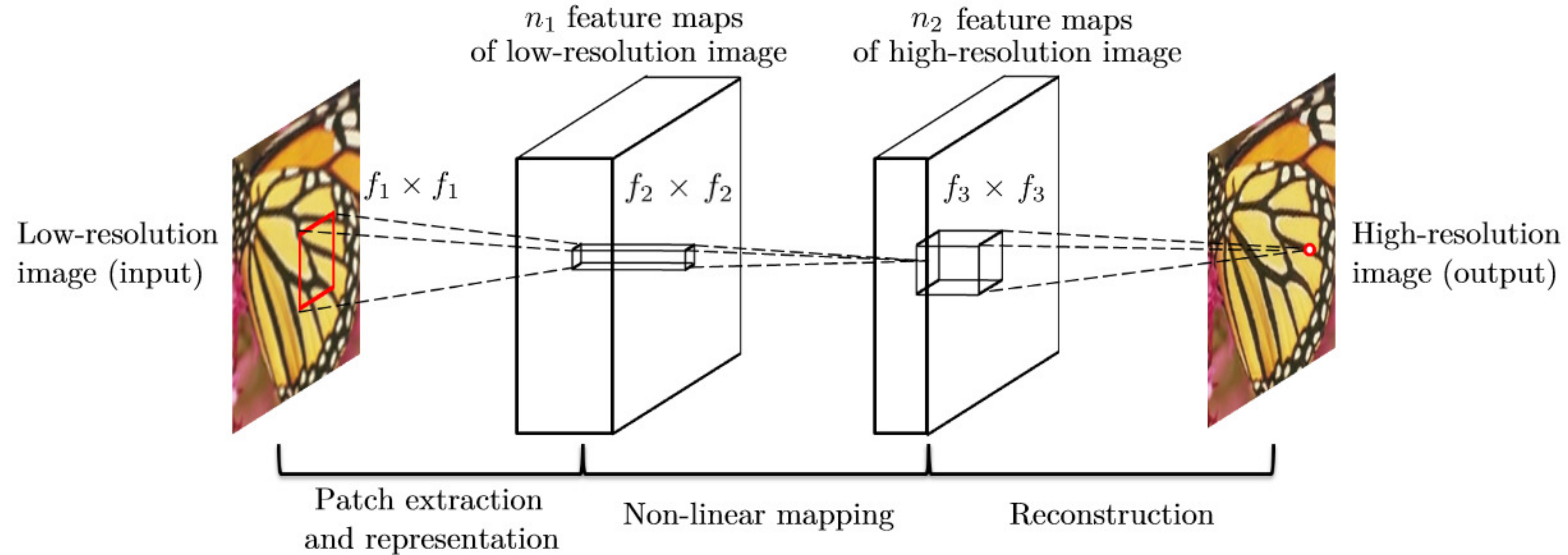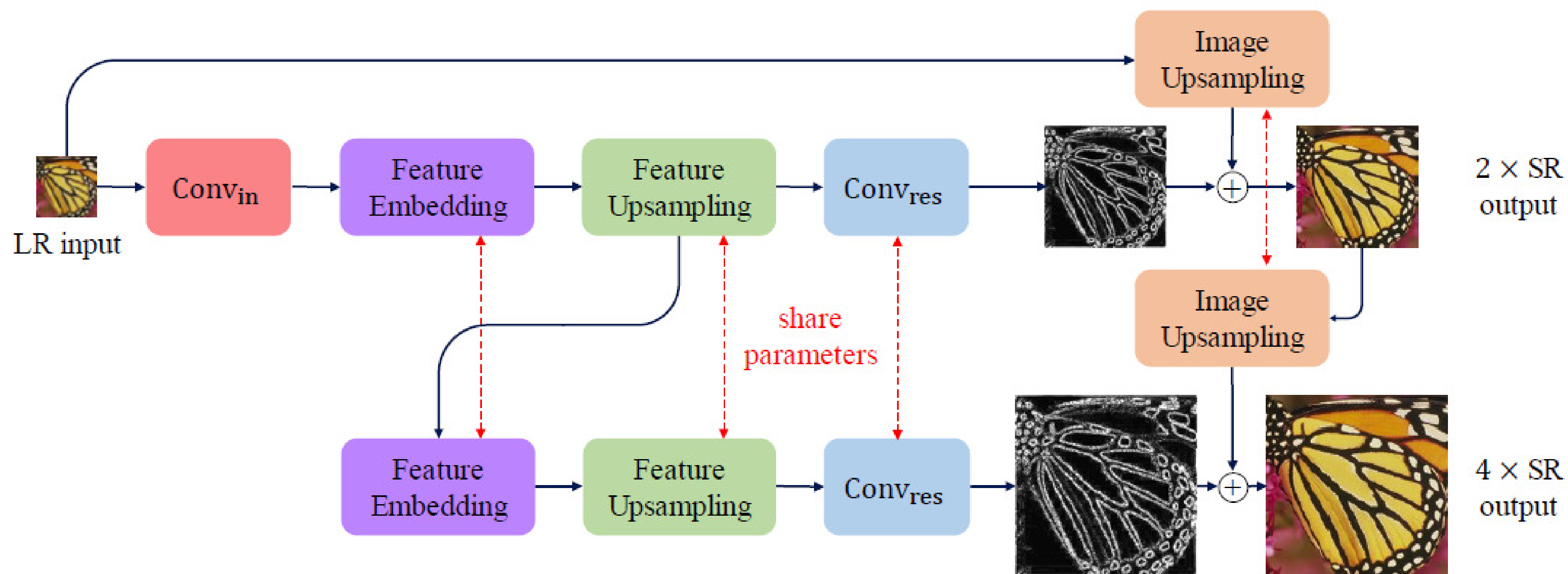

SSH

SST

Convolutional Neural Networks for Super-Resolution
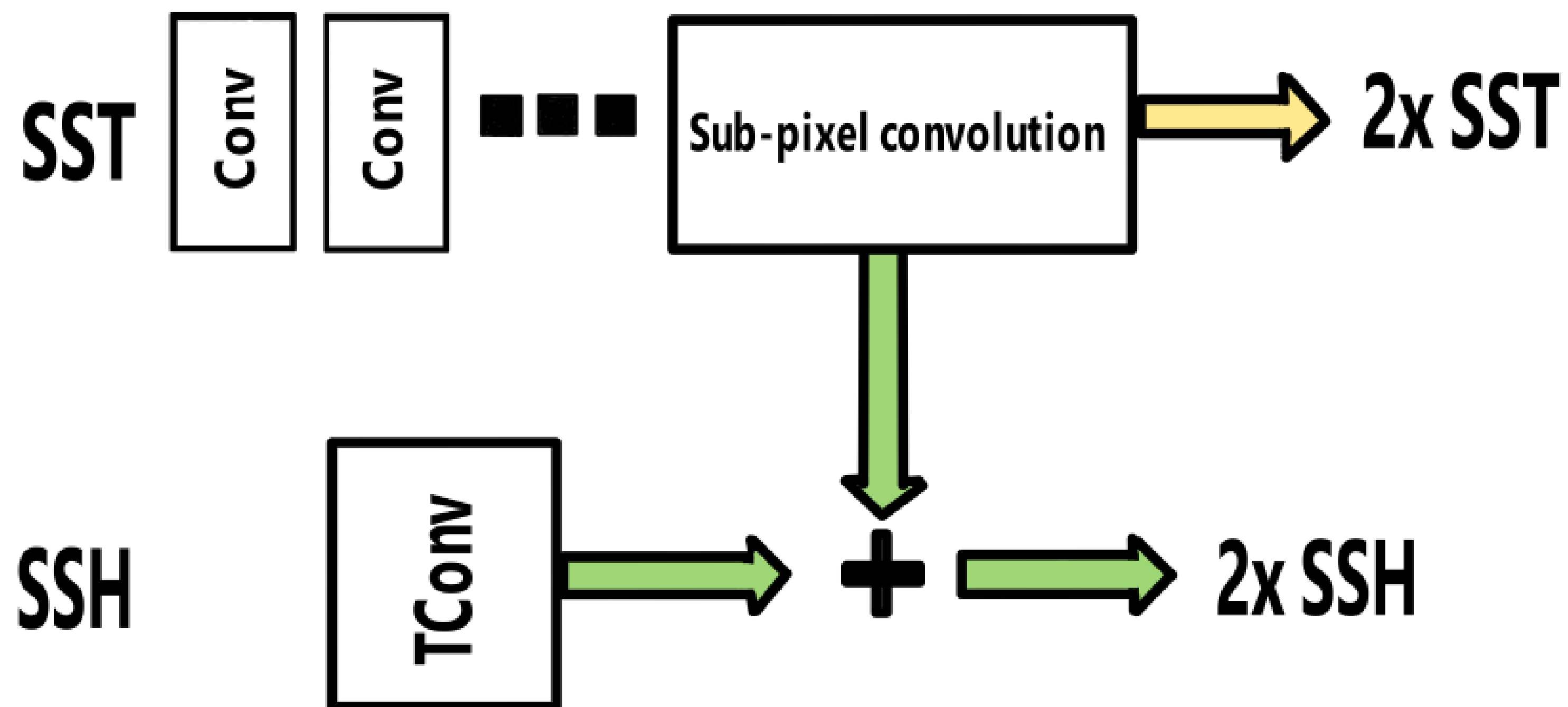

SRCNN (*Dong & al., 2014*)

Single Input LapSRN
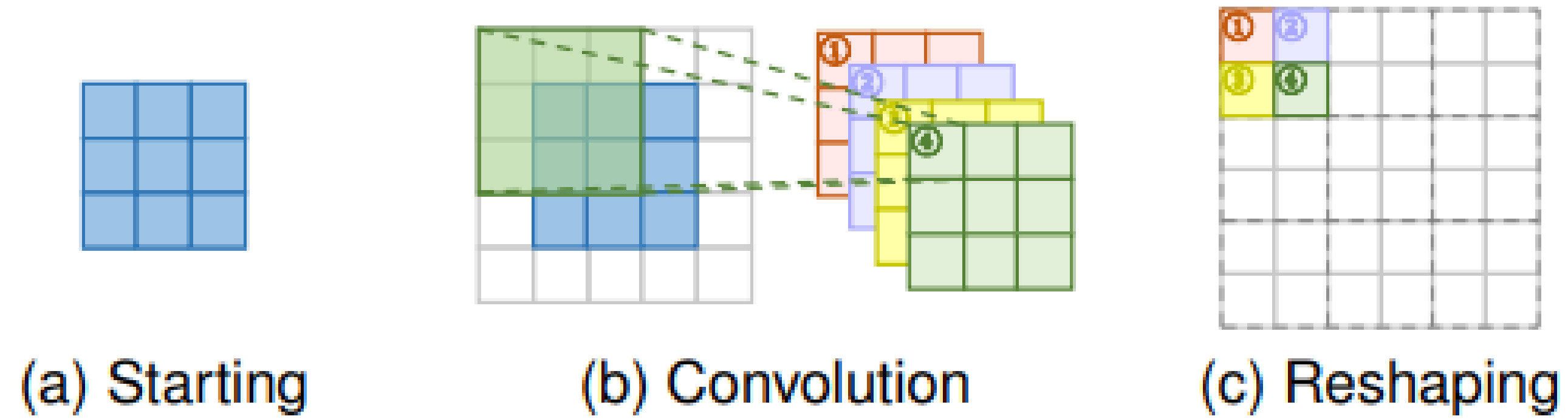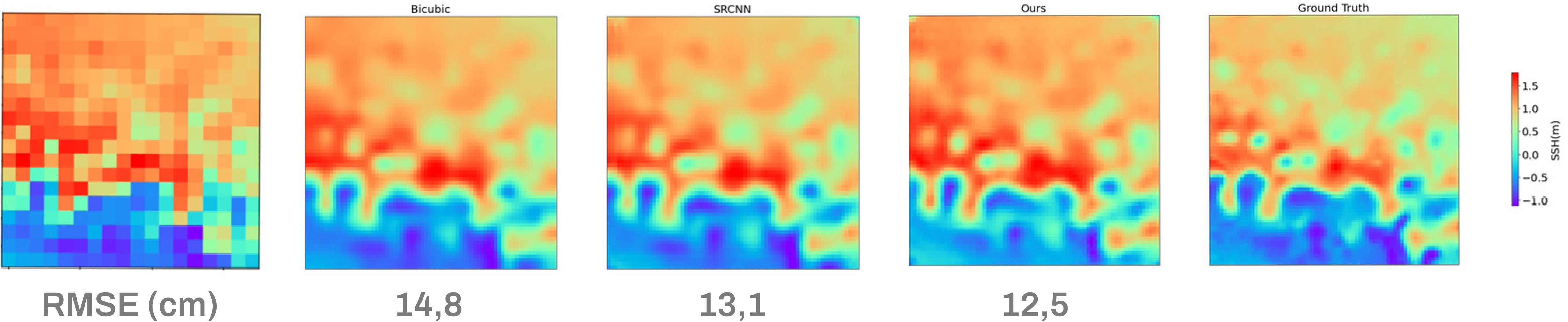

LapSRN (Lai *& al., 2018*)

Our Method

Sub-Pixel Convolution

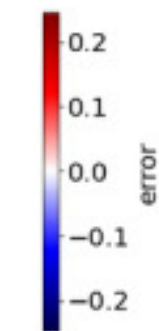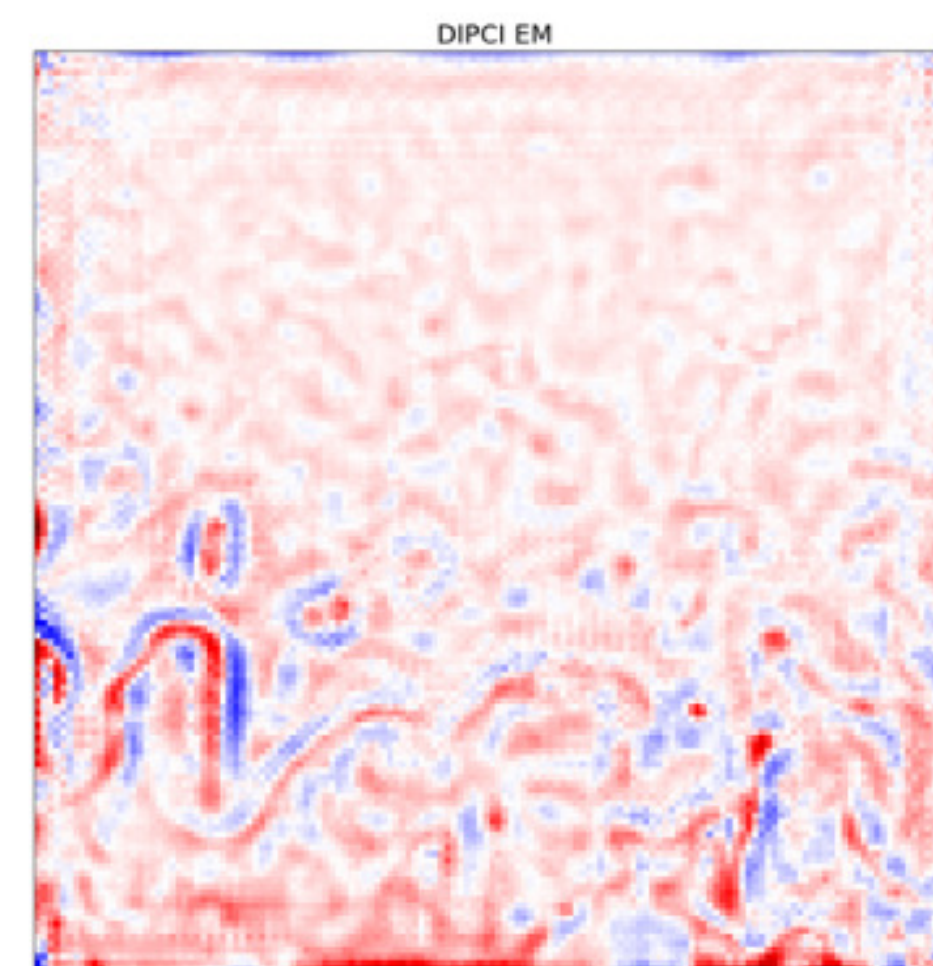(a) Starting   (b) Convolution   (c) Reshaping

(Wang & al., 2021)

Easy Task Result

RMSE (cm)	14,8	13,1	12,5	

Hard Task Result

| RMSE (cm) | 2,7 | 2,2 | 4,4 |
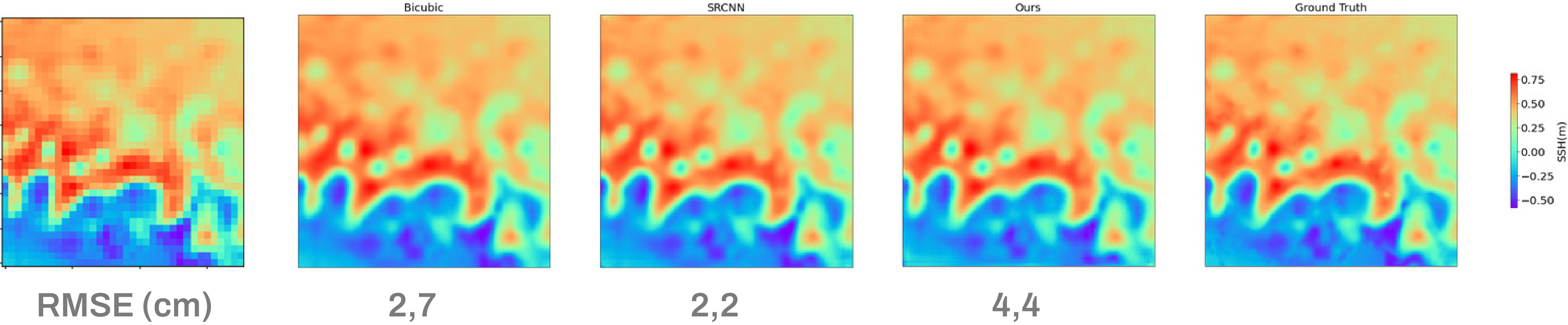
Error maps
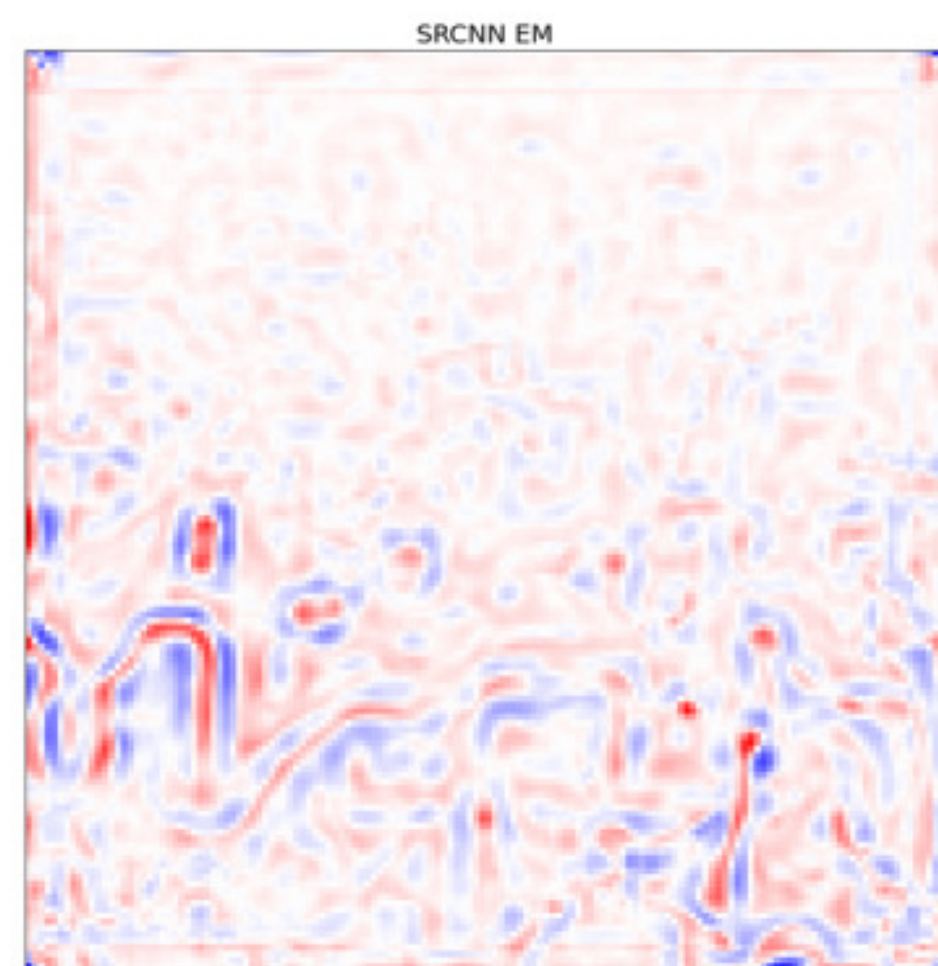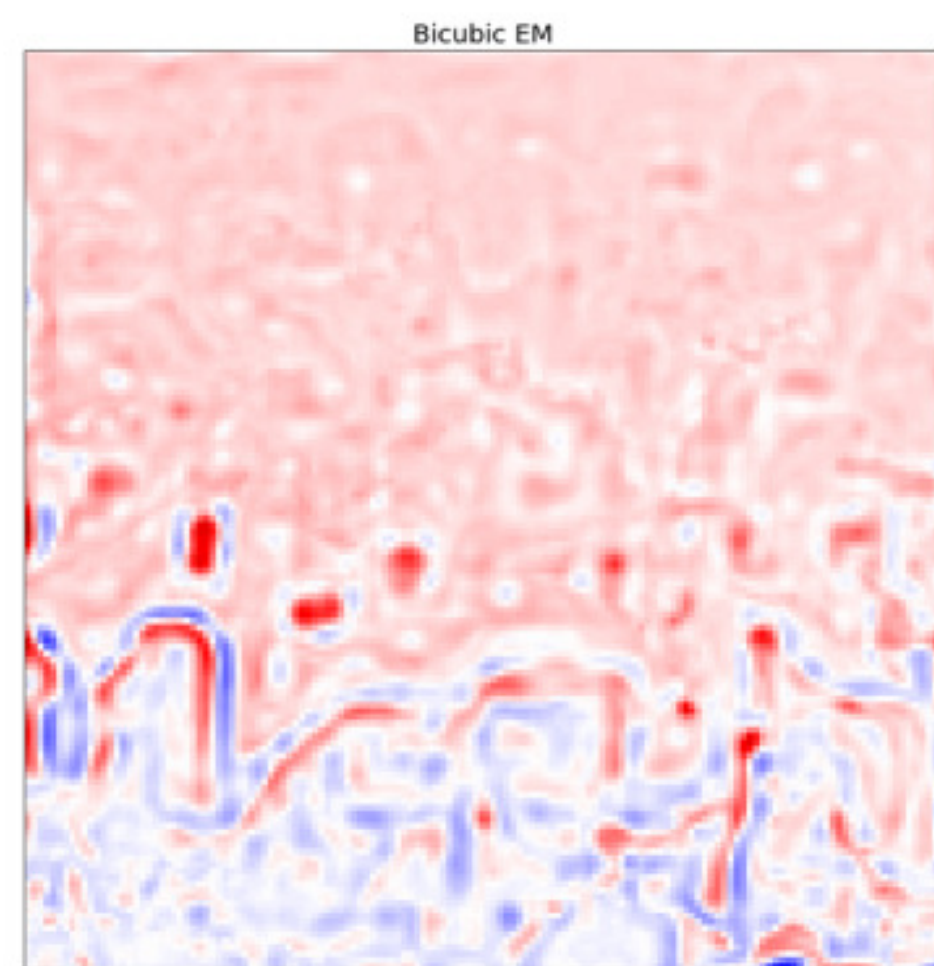
top-right corner

Moving further…

1. Weight initialization *(Aitken & al., 2017)*

2. Loss Function

3. Network Depth