

# Interpolation and Extrapolation of Subsequent Weather Radar Images

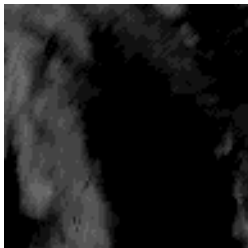
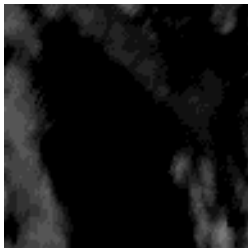
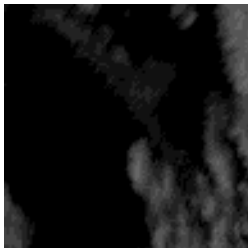
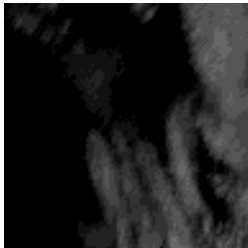
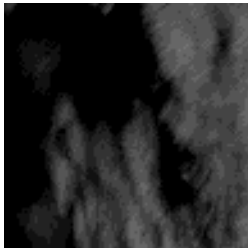
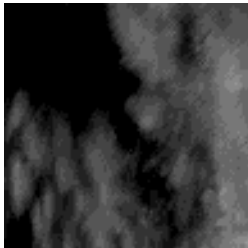
Bachelor's Thesis

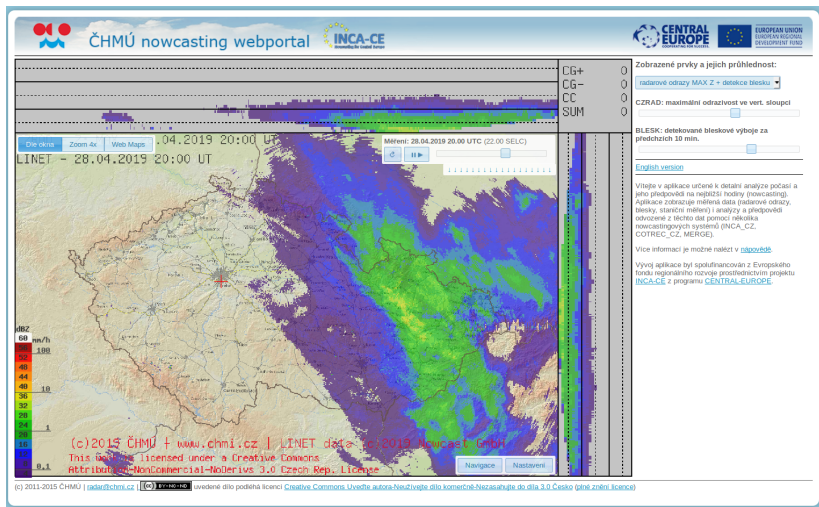
Matej Choma

Department of Applied Mathematics

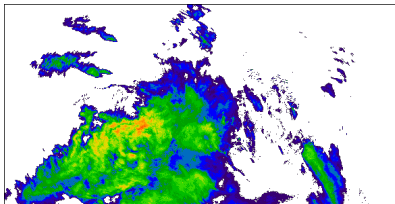
May 7, 2019

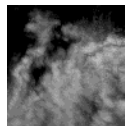
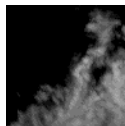
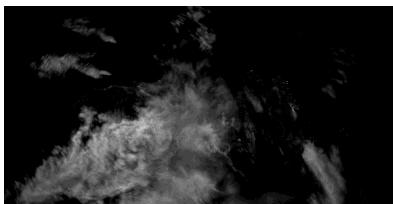
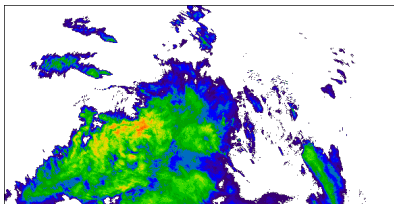
# Introduction

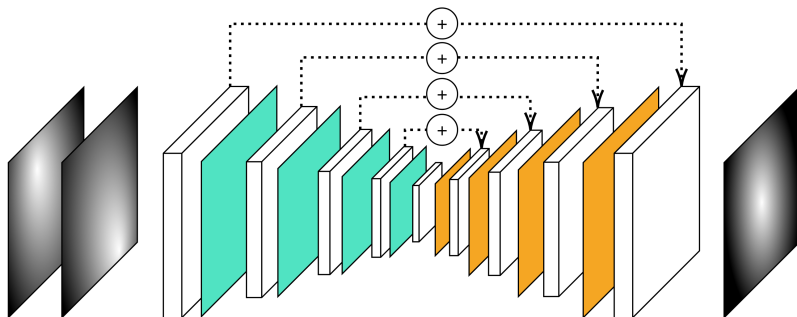






Screenshot of the CHMI radar images from the nowcasting webportal at [portal.chmi.cz/files/portal/docs/meteo/rad/inca-cz/short.html](https://portal.chmi.cz/files/portal/docs/meteo/rad/inca-cz/short.html)









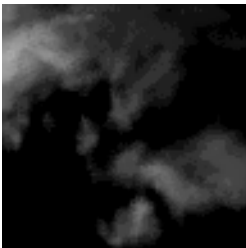
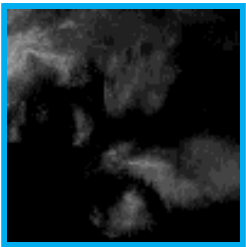
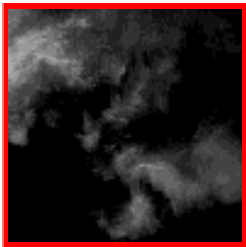
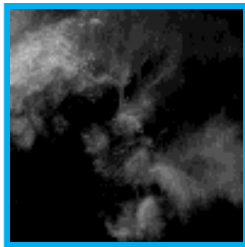
 : convolutional block

 : max-pooling layer

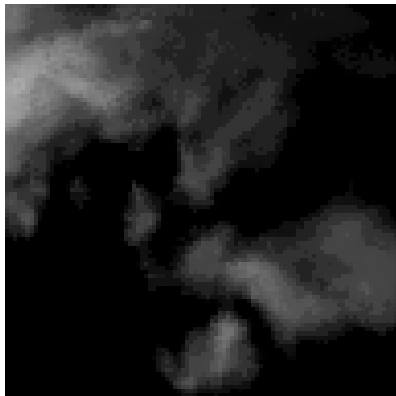
 : residual connections

 : upsampling block

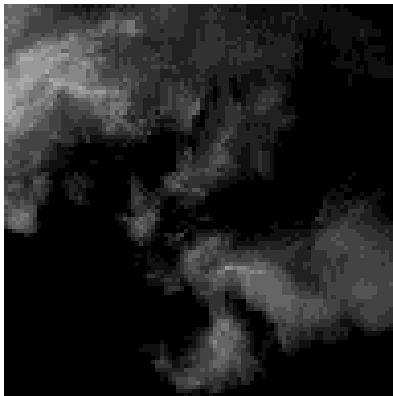
## Interpolation Results



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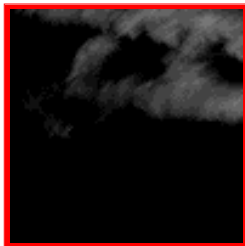
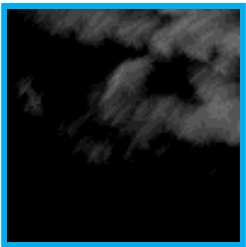
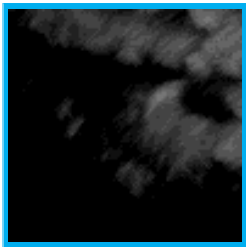
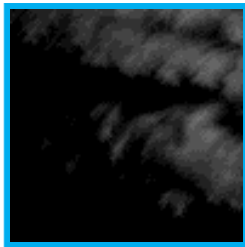
(a) Predicted.



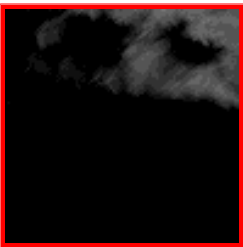
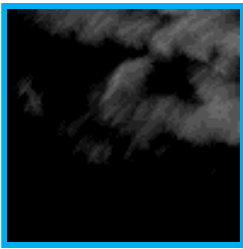
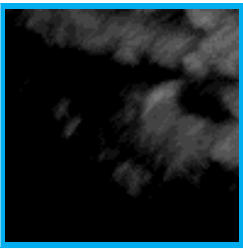
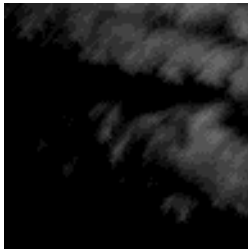
(b) Ground truth.



# Extrapolation



# Extrapolation



## Extrapolation - Results

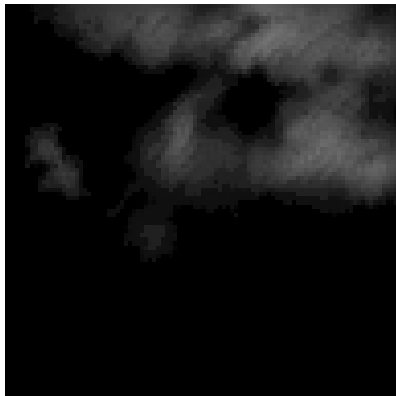


Figure 11: Predicted sequence.

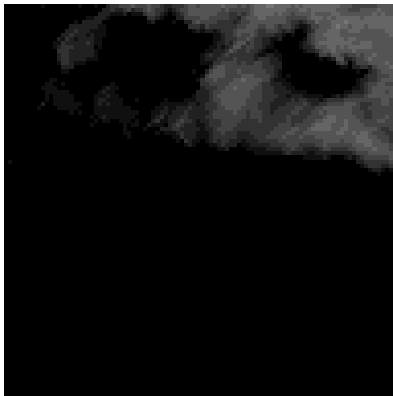


Figure 12: Ground truth sequence.

## Extrapolation - Results



(a) Predicted.



(b) Ground truth.

Thank you for your attention!