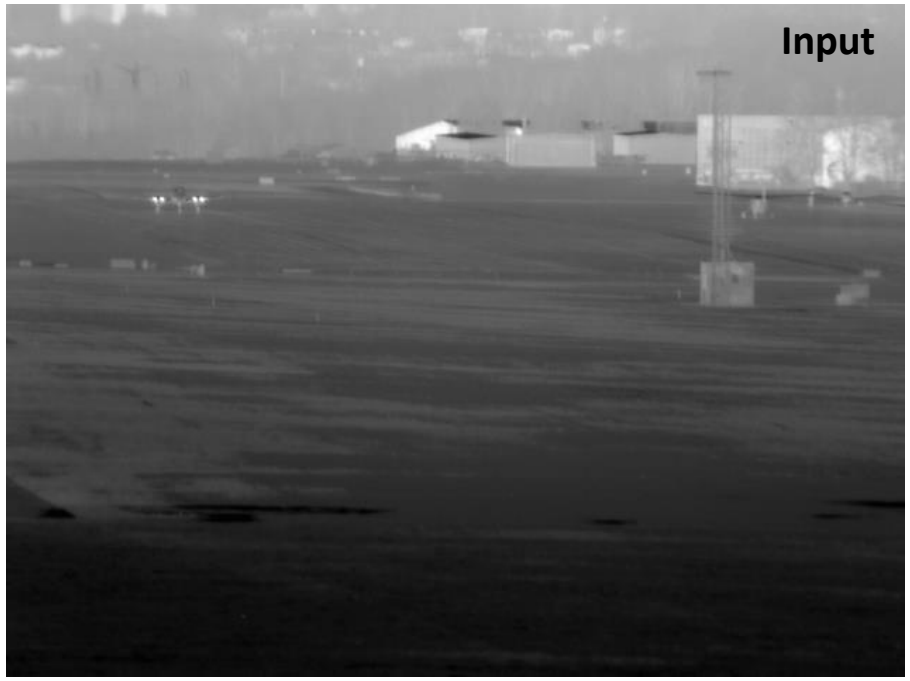
Local Laplacian filtering

- S.Paris (2011) *Local Laplacian filters: Edgeaware image processing with a Laplacian pyramid*.
- The Laplacian pyramid is the difference between the input and the blurred version. It saves the edge information.
- In this paper, the author used 5 layers of the pyramids: 512x512, 256x256, 128x128, 64x64, and 32x32.
- A remapping function was used to make an edge enhanced image and the edge enhanced image is used to make a pyramid.
- Replace one of the pyramids with the image pyramid from edge enhanced image.
- Reconstruct image from the image pyramids.
- The result shows better quality than the sharpening filter or unsharp masking filter.
- It takes 4 minutes to generate a result.
- Plan to work on a paper that is trying to make the algorithm faster.


Input


Local Laplacian filter


Sharpening filter


Unsharpening masking


Input


Local Laplacian filter


Sharpening filter


Unsharpening masking

Local Laplacian Filtering

Input

Result

Local Laplacian Filtering

Input

Result

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