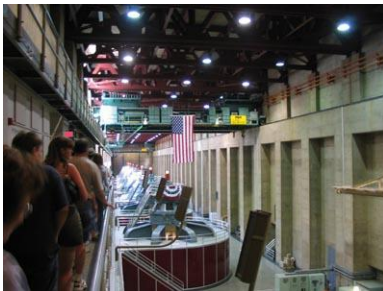


## Midrange Filter

---

The midrange filter is a blurring filter that mimics a median filter by taking the average of a morphological erosion and dilation.

An example of the midrange filter is shown on the color image below. The left image is the original, the middle two images shown the erosion and dilation operations, and the right image shows the midrange filtered result. This image was midrange filtered with a 5x5 square kernel.



Original Image



Modified by 5x5 Erosion Kernel



Modified by a 5x5 Dilation Kernel

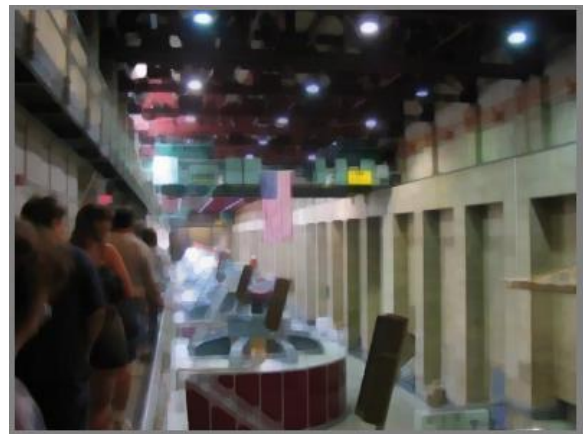


Midrange Filtered Image

The midrange filter performance is shown below against a 5x5 median filtered image. The midrange filter is less destructive to the overall structure of the image while still removing most of the high-frequency noise from the image.



5x5 Median Filter



5x5 Midrange Filtered

