

## Weekly Report

Week 15: 25/05/2015 - 29/05/2015

### Work Developed

This week, the final corrections to the algorithm core were done. The denoising pipeline fixed point implementation was increased to 32 bit, in order to avoid over/underflow, but still there were some problems with the result image. This was due to the fact that when corrupted by noise, after filtering and inverting the transform, a certain image patch can have values larger than 255 and smaller than 0. This fact was not being accounted for in the rounding module, which means that values smaller than 0 were being converted to large values, close to 255. This was fixed by correcting the rounding module in order that if a value smaller than 0 is detected, it is set to 0, and if a value bigger than 255 is produced, it is truncated to 255. As can be seen in the image above, now the denoising results are as expected, and initial measures show that the PSNR is the same of the MATLAB implementation.

### Challenges

The main challenge this week was figuring out if the problem was underflow or overflow, or a rounding issue, as was eventually discovered.

### Next Tasks

Next week, work will be focused on extracting results for different image sizes and noise powers.