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Dear Editor,

We are pleased to submit our paper entitled “Fast GPU-based denoising filter using isoline levels” to your journal.

This paper proposes a fast and new denoising algorithm. The key point of our design is to start from the specificities of the processor which is going to process algorithms, in order to fully exploit its capabilities and to obtain fast execution times.

We aim at providing some easily-useable GPU pieces of code where the parallelization of CPU-designed algorithm could be tricky and non efficient.

This paper details how we succeeded in designing such a code. We made and analyzed many experimental measurements to identify which constraints could be relaxed in a denoising CPU-oriented algorithm, published a few years ago.

We then proposed specific structure and optimization heuristic which closely fit GPU capabilities.

Quality has been kept and execution time makes it possible to process HD images below 25 frames per second.

We hope that you will find our work interesting.

Best regards,

The authors.