

Optimizing HEVC In-loop Filters on GPUs

- Objective: implement a high-performance GPU kernel for the HEVC in-loop filters that consist of deblocking filter (DBF) and Sample Adaptive Offset (SAO). The developed kernel is expected to deliver a better performance than state of the art [1].

- General tasks:

- fuse the DBF and SAO kernels into a single kernel
- performance analysis on different GPUs

- Required skills: C/C++, CUDA/OpenCL programming

- Desired skills: image processing and/or video coding background

- Reference [1]: B. Wang, et al. "GPU Parallelization of HEVC In-loop Filters," in *International Journal of Parallel Programming (IJPP)*, pages 1-21, 2017.

- Contact person: Biao Wang (biaowang@win.tu-berlin.de)

