STEREO 360 IMAGE PROCESSING

Let’s consider a stereo 360° image/video.

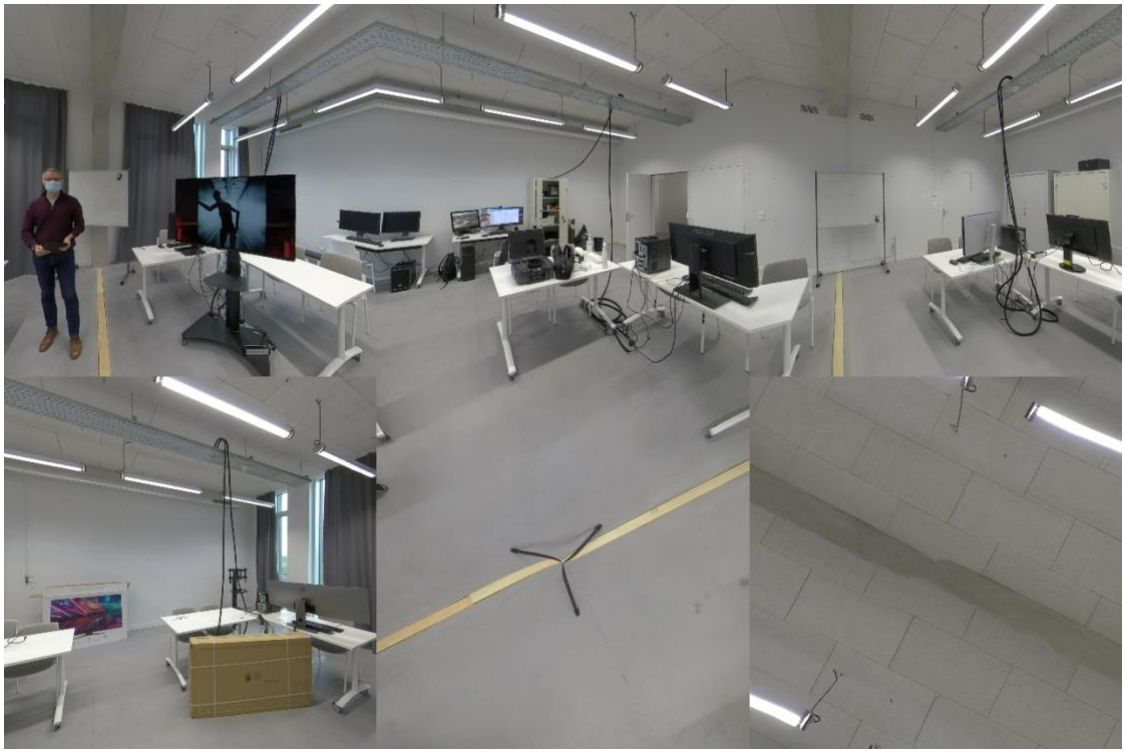
See https://www.couleur.org/JS-Web/Sprint2023/image-stereo-360.html

and https://www.couleur.org/JS-Web/Sprint2023/video-stereo-360.html

Equirectangular vs cube map

See: http://www.paul-reed.co.uk/programming.html

Code: https://github.com/PaulMakesStuff/Cubemaps-Equirectangular-DualFishEye



Implement the following image transformations with OpenCV and CUDA:

- Equirectangular => Cube map
- Cube map => Equirectangular

on a stereo 360° (on the left or the right image from a static image or a video).

Equirectangular image filtering

What is happening when you apply the denoising method you developed for PW2 on an equirectangular image?

Display it with: https://www.couleur.org/JS-Web/Sprint2023/image-360.html

Cube map image filtering

Now apply the same filtering methods on each face of the corresponding cube map and transform the resulting images in its equirectangular representation.

Display it with: https://www.couleur.org/JS-Web/ Sprint2023/image-360.html

Video processing

Apply this cube map based method on videos and stereo videos.