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“IMAGE SEQUENCE ANALYSIS AND VIDEOGRAMMETRY IN 2020: WHERE ARE WE GOING?”

“Alper, what happened in the last decade?”

Last decade has seen an increased use of image sequence analysis in photogrammetry. Especially, the adoption of the structure from motion (SfM) approaches that are adopted from the computer vision field played an important role in the popularity of using image sequences. The improvements observed in 3D scene recovery can be attributed to the redundancy, high overlap and the dense image-match graphs in the collected sequence data.

“Alper, what do we expect in the next years?”

Moving forward to 2020, with the proliferation of the sensing technology, the use of image sequences will see even more increasing trend. One of the drivers for this will be the processing performed on powerful and affordable GPUs, availability of fast access memory and high-resolution cameras. Combining these with the new algorithmic trends will improve the 3D scene analysis and understanding.

“and what about deep learning methods?”

Especially the adoption of the deep learning strategies since 2012 on both single image metrology, semantic scene labeling and sensor fusion make these tasks exciting. The joining of artificial intelligence with photogrammetry tasks have made a long-sought join of the computer vision, photogrammetry and the remote sensing societies a reality. Moving forward, I expect to see more of the intersociety collaboration and advancements in the field by using artificial intelligence applied on image sequences to solve photogrammetry problems which we deem to name as the videogrammetry.