KEYNOTE TALK

TBD

Have we solved image correspondences?

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Abstract: Finding correspondence across images is a fundamental task in computer vision, which recently, as in many areas of computer vision, have been revolutionized by deep learning. In this talk, I will talk about the state of research in finding correspondence across images, and whether this long-standing problem is actually solved. I will follow the historical trend in how the correspondence problem was tackled in our community, focusing on its application to camera pose estimation with sparse correspondences. Specifically, I will discuss how point cloud networks and deep networks with specific architectural considerations have played a key role in initial breakthroughs, and how they have now become "transformer-ized". I will finally talk about the potential of using large-scale pre-trained models for the correspondence problem, and end with some thoughts on the future of correspondence research.

Speaker Bio-Sketch: Kwang Moo Yi is an assistant professor in the Department of Computer Science at the University of British Columbia (UBC), and a member of the Computer Vision Lab, CAIDA, and ICICS at UBC. Before, he was at the University of Victoria as an assistant professor. Prior to being a professor, he worked as a post-doctoral researcher at the Computer Vision Lab in École Polytechnique Fédérale de Lausanne (EPFL, Switzerland), working with Prof. Pascal Fua and Prof. Vincent Lepetit. He received his Ph.D. from Seoul National University under the supervision of Prof. Jin Young Choi. He also received his B.Sc. from the same University. He serves as area chair for top Computer Vision conferences (CVPR, ICCV, and ECCV), as well as Machine Learning (NeurIPS and AAAI). He is part of the organizing committee for CVPR 2023.