
MagicLeap, Switzerland (Aug. 2022 – Present)

Senior Researcher & Engineer, Scene Understanding, working with David Ferstl

- Merge the best practice of object reconstruction and pose estimation into the product
- Lead teams to solve practical problems in dense matching, object reconstruction and pose estimation [1, 2, 3, 4, 5, 6]
- Led teams to attend [BOP Challenge](#) 2022 and 2023, and ranked 1st in the single-model track [7]

ClearSpace, Switzerland (May 2022 – July 2022)

Engineer, 3D Computer Vision, working with Pascal Fua and Mathieu Salzmann

- Proposed a refinement strategy for 6D object pose estimation with limited data [7]

EPFL, Switzerland (Jan. 2018 – May 2022)

Postdoc, 3D Computer Vision, working with Pascal Fua and Mathieu Salzmann

- Proposed a hierarchical 6D pose framework that is more robust to scale variations for [ClearSpace-1 project](#) [8]
- Introduced a single-stage 6D pose framework that makes 6D pose network first end-to-end trainable [9]
- Led a team to attend [Kelvins challenge](#) on satellite 6D pose estimation and ranked 2nd in the final [10]
- Developed a segmentation-driven 6D pose framework that is more robust to occlusions [10]

Xidian University, China (Sep. 2014 – Jan. 2018)

Ph.D., Computer Science, advised by Yunsong Li and Rui Song

- Introduced a robust interpolation method for motion analysis. Merged into OpenCV: [RIC Interpolator](#) [11]
- Proposed an efficient method for large displacement optical flow estimation. Spotlight in CVPR 2016 [12]

Zienon, LLC, China (Mar. 2011 – Sep. 2014)

Algorithm Engineer and Technical Leader

- Led a team to develop gesture recognition algorithms on embedded hardware for the application of SmartTV

Xidian University, China (Sep. 2004 – Mar. 2011)

Bachelor and Master, Telecommunication Engineering

Selected PublicationsFull list at [Google Scholar](#)

1. Yang Hai, Rui Song, Jiaojiao Li, David Ferstl, **Yinlin Hu**. Pseudo Flow Consistency for Self-Supervised 6D Object Pose Estimation. *International Conference on Computer Vision (ICCV)*, **2023**. [\[Code\]](#)
2. Fulin Liu, **Yinlin Hu**, Mathieu Salzmann. Linear-Covariance Loss for End-to-End Learning of 6D Pose Estimation. *International Conference on Computer Vision (ICCV)*, **2023**. [\[Code\]](#)
3. Yang Hai, Rui Song, Jiaojiao Li, **Yinlin Hu**. Shape-Constraint Recurrent Flow for 6D Object Pose Estimation. *Computer Vision and Pattern Recognition (CVPR)*, **2023**. [\[Code\]](#)
4. Shuxuan Guo, **Yinlin Hu**, Jose M Alvarez, Mathieu Salzmann. Knowledge Distillation for 6D Pose Estimation by Aligning Distributions of Local Predictions. *Computer Vision and Pattern Recognition (CVPR)*, **2023**. [\[Code\]](#)
5. Van Nguyen Nguyen, **Yinlin Hu**, Yang Xiao, Mathieu Salzmann, Vincent Lepetit. Templates for 3D Object Pose Estimation Revisited: Generalization to New Objects and Robustness to Occlusions. *Computer Vision and Pattern Recognition (CVPR)*, **2022**. [\[Code\]](#)
6. Chen Zhao, **Yinlin Hu**, Mathieu Salzmann. Fusing Local Similarities for Retrieval-based 3D Orientation Estimation of Unseen Objects. *European Conference on Computer Vision (ECCV)*, **2022**. [\[Code\]](#)
7. **Yinlin Hu**, Pascal Fua, Mathieu Salzmann. Perspective Flow Aggregation for Data-Limited 6D Object Pose Estimation. *European Conference on Computer Vision (ECCV)*, **2022**. [\[Code\]](#)
8. **Yinlin Hu**, Sébastien Speierer, Wenzel Jakob, Pascal Fua, Mathieu Salzmann. Wide-Depth-Range 6D Object Pose Estimation in Space. *Computer Vision and Pattern Recognition (CVPR)*, **2021**. [\[Code\]](#)
9. **Yinlin Hu**, Pascal Fua, Wei Wang, Mathieu Salzmann. Single-Stage 6D Object Pose Estimation. *Computer Vision and Pattern Recognition (CVPR)*, **2020**. [\[Code\]](#)
10. **Yinlin Hu**, Joachim Hugonot, Pascal Fua, Mathieu Salzmann. Segmentation-Driven 6D Object Pose Estimation. *Computer Vision and Pattern Recognition (CVPR)*, **2019**. [\[Code\]](#)
11. **Yinlin Hu**, Yunsong Li, Rui Song. Robust Interpolation of Correspondences for Large Displacement Optical Flow. *Computer Vision and Pattern Recognition (CVPR)*, **2017**. [\[Code\]](#)
12. **Yinlin Hu**, Rui Song, Yunsong Li. Efficient Coarse-to-Fine PatchMatch for Large Displacement Optical Flow. *Computer Vision and Pattern Recognition (CVPR)*, **2016**. [\[Code\]](#)