Zhenzhang YE

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Research Interest

- Numerical optimization
- Differential programming
- Variational method
- Machine learning

Education

04.2018–now **Ph.D.** *Technical University of Munich*, Munich, Germany.
Computer Vision Group, advised by Prof. Daniel Cremers

10.2015–03.2018 **Master** *Technical University of Munich*, Munich, Germany.
Computer Science

09.2010–06.2014 **Bachelor** *Nanjing University of Posts and Telecommunications*, Nanjing, China.
Computer Science and Technology

09.2010–06.2014 **Bachelor** *New York Institute of Technology (Nanjing Campus)*, Nanjing, China.
Computer Science

Publications

- **A Cutting-Plane Method for Sublabel-Accurate Relaxation of Problems with Product Label Spaces**(**Z. YE**, B. Haefner, Y. Quéau, T. Möllenhoff, D. Cremers), *In International Journal of Computer Vision (IJCV)*, 2022.
- **Joint Deep Multi-Graph Matching and 3D Geometry Learning from Inhomogeneous 2D Image Collections** (**Z. Ye**, T. Yenamandra, F. Bernard, D. Cremers), *AAAI Conference on Artificial Intelligence*, 2022.
- **Sublabel-Accurate Multilabeling Meets Product Label Spaces** (**Z. Ye**, B. Haefner, Y. Quéau, T. Möllenhoff, D. Cremers), *In German Conference on Pattern Recognition (GCPR)*, 2021.
- **Optimization of Graph Total Variation via Active-Set-based Combinatorial Reconditioning** (**Z. Ye**, T. Möllenhoff, T. Wu, D. Cremers), *In International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2020.
- **Variational Uncalibrated Photometric Stereo under General Lighting.** (B. Haefner*, **Z. Ye***, M. Gao, T. Wu, Y. Quéau, D. Cremers), *In International Conference on Computer Vision (ICCV)*, 2019.
- **Combinatorial Preconditioners for Proximal Algorithms on Graphs.** (T. Möllenhoff, **Z. Ye**, T. Wu, D. Cremers), *In International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2018.

- **Determining the Maximum Time Horizon for Vehicles to Safely Follow a Trajectory.** (S. Magdici, **Z. Ye**, M. Althoff), *Proc. of the 20th IEEE International Conference on Intelligent Transportation Systems*, 2017.

Internship

09.2022–05.2023 **Visiting Ph.D.** *Supervisor: Prof. Gabriel Peyré, in DMA, École Normale Supérieure.*

09.2021–12.2021 **Research Intern** *4-month internship in Oculus, Meta.*

Master thesis

Title *Combinatorial Preconditioners for First-Order Primal-Dual Algorithms*

Supervisors T. Möllenhoff, T. Wu, Prof. Dr. Daniel Cremers

Description This thesis focuses on accelerating the primal-dual hybrid gradient (PDHG) when optimizing convex problems modeled on a graph. By partitioning the original graph into several independent forests, the original proximal evaluation in PDHG can be tackled by applying a fast total variation solver on each forests.

Languages

Chinese **Native speaker**

English **Fluent**

German **B1**