Zhihang Zhong

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Education

- **The University of Tokyo** — Tokyo, JP
  Ph.D. – Computer Science (GPA: 4.00/4.00) — Sep. 2020 - Dec. 2023 (expected)
  Supervisor: Imari Sato; Collaborator: Yoichi Sato, and Yinqiang Zheng
- **The University of Tokyo – IME Program** — Tokyo, JP
  M.E. – Precision Engineering (GPA: 3.93/4.00) — Oct. 2018 - Sep. 2020
  Supervisor: Jun Ota
- **Zhejiang University – Chu Kochen Honors College (top 5%)** — Hangzhou, CN
  B.E. – Mixed Class, Mechatronics Engineering (GPA: 3.84/4.00) — Sep. 2014 - Aug. 2018

Relevant courses: computer vision, computational photography, machine/deep learning, HCI, robotics

Skills

- **Programming:** Python, C/C++, Matlab, LaTeX
- **Tools:** PyTorch, OpenCV, Qt/PyQt, Arduino, STM32

Work Experiences

- **Visual Computing Group, Microsoft Research Asia** — New York, US
  Intern, supervised by Shree K. Nayar, Jian Wang and Sizhuo Ma — Mar. 2023 - July 2023
- **Visual Computing Group, Microsoft Research Asia** — Beijing, CN
  JEM intern, supervised by Han Hu, Yuhui Yuan and Ji Li — Apr. 2022 - Dec. 2022
  Project: multimedia conditioned smart image cropping
- **Visual Computing Group, Microsoft Research Asia** — Beijing, CN
  D-CORE intern, supervised by Stephen Lin, Zhirong Wu and Xiao Sun — Sep. 2021 - Mar. 2022
  Project: animation from motion artifacts (motion blur/rolling shutter distortion)
- **Image Research Lab, Tokyo Research Center, Huawei** — Tokyo, JP
  Intern, supervised by Bo Zheng and Ye Gao — Aug. 2019 - Aug. 2020
  Project: efficient video deblurring and real-world dataset collection

Publications

Conferences

- **[CVPR 2023] Zhihang Zhong**, Mingdeng Cao, Xiang Ji, Yinqiang Zheng, Imari Sato: "Blur Interpolation Transformer for Real-World Motion from Blur." *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition.*
- **[CVPR 2023]** Muyao Niu, Zhuoxiao Li, **Zhihang Zhong**, Yinqiang Zheng: "Visibility Constrained Wide-band Illumination Spectrum Design for Seeing-in-the-Dark." *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition.*
- **[ECCV 2022] Zhihang Zhong**, Xiao Sun, Zhirong Wu, Yinqiang Zheng, Stephen Lin, Imari Sato: "Animation from Blur: Multi-modal Blur Decomposition with Motion Guidance." *Proceedings of the European Conference on Computer Vision.*
- **[ECCV 2022] Zhihang Zhong**, Mingdeng Cao, Xiao Sun, Zhirong Wu, Zhongyi Zhou, Yinqiang Zheng, Stephen Lin, Imari Sato: "Bringing Rolling Shutter Images Alive with Dual Reversed Distortion." *Proceedings of the European Conference on Computer Vision.* **(Oral, top 2.7%)**

- [**ECCV 2022**] Yusheng Wang, Yunfan Lu, Ye Gao, Lin Wang, **Zhihang Zhong**, Yinqiang Zheng, Atsushi Yamashita: "Efficient Video Deblurring Guided by Motion Magnitude." *Proceedings of the European Conference on Computer Vision.*
- [**CVPR 2022**] Mingdeng Cao, **Zhihang Zhong**, Jiahao Wang, Yinqiang Zheng, Yujiu Yang: "Learning Adaptive Warping for Real-World Rolling Shutter Correction." *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition.*
- [**CVPR 2021**] **Zhihang Zhong**, Yinqiang Zheng, Imari Sato: "Towards Rolling Shutter Correction and Deblurring in Dynamic Scenes." *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition.*
- [**ECCV 2020**] **Zhihang Zhong**, Ye Gao, Yinqiang Zheng, Bo Zheng: "Efficient Spatio-Temporal Recurrent Neural Network for Video Deblurring." *Proceedings of the European Conference on Computer Vision.* **(Spotlight, top %5)**
- [**IUI 2020**] **Zhihang Zhong**, Chingszu Lin, Taiki Ogata, Jun Ota: "Multi-attention Deep Recurrent Neural Network for Nursing Action Evaluation Using Wearable Sensor." *Proceedings of the 25th International Conference on Intelligent User Interfaces.*

Journals

- [**IJCV 2022**] **Zhihang Zhong**, Ye Gao, Bo Zheng, Yinqiang Zheng, Imari Sato: "Real-world Video Deblurring: A Benchmark Dataset and An Ecient Recurrent Neural Network." *International Journal of Computer Vision.*
- [**IoTJ 2021**] **Zhihang Zhong**, Chingszu Lin, Masako Kanai-Pak, Jukai Maeda, Yasuko Kitajima, Mitsuhiro Nakamura, Noriaki Kuwahara, Taiki Ogata, Jun Ota: "Multistream Temporal Convolutional Network for Correct/Incorrect Patient Transfer Action Detection Using Body Sensor Network." *IEEE Internet of Things Journal.*
- [**IJSR 2021**] Chingszu Lin, Taiki Ogata, **Zhihang Zhong**, Masako Kanai-Pak, Jukai Maeda, Yasuko Kitajima, Mitsuhiro Nakamura, Noriaki Kuwahara, Jun Ota: "Development and validation of robot patient equipped with an inertial measurement unit and angular position sensors to evaluate transfer skills of nurses." *International Journal of Social Robotics.*

Preprints

- [Under Review] **Zhihang Zhong**, Mingxi Cheng, Zhirong Wu, Yuhui Yuan, Yinqiang Zheng, Ji Li, Han Hu, Stephen Lin, Yoichi Sato, Imari Sato: "ClipCrop: Conditioned Cropping Driven by Vision-Language Model."

Activities

Talks

- "Animation from Motion Blur or Rolling Shutter Distortion", *Mobile Intelligent Photography & Imaging (MIPI) Workshop 2022*

Tutorial

- Co-organizer of "Rolling Shutter Camera: Modeling, Optimization, Learning, and Hardware", *CVPR 2023*

Services

- Program Committee/Reviewers: CVPR, ECCV, ICCV, ACCV, BMVC, TPAMI, IJCV, TCSVT

Awards

- `Research Fellowship for Young Scientists (200,000 Yen/Month; Research grant: up to 1,500,000 Yen/Year), JSPS DC, Apr.1`st`, 2023 - Mar.31`st `2025`
- `Fellowship for Creation of Intelligent World (180,000 Yen/Month; Research grant: 340,000 Yen/Year), The University of Tokyo, Apr.1`st`, 2021 - Sep.30`th `2023`

- Microsoft Research Asia D-CORE 2021 Fellowship (10,000 $), Nov. 17, 2020
- Excellent Master Thesis Award, Department of Precision Engineering, School of Engineering, The University of Tokyo, 2020.
- Monbukagakusho Honors Scholarship (48,000 Yen/Month), JASSO, Oct.1st 2018 - Mar.31st 2019.
- Master Kong Dream Scholarship (900,000 Yen), 2017.