

# Meng TANG

## Curriculum Vitae

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### Education

- May 2019 **PhD in Computer Science**, *University of Waterloo*, Canada.  
Thesis: Optimization for Image Segmentation. Advisor: Yuri Boykov
- Feb. 2014 **M.Sc. in Computer Science**, *Western University*, Canada.
- June 2012 **BE in Automation**, *Huazhong University of Science and Technology*, China.

### Employment

#### University of California at Merced, CA, USA

- Jan. 2023 – **Assistant Professor**.  
present Director, Generative Spatial Intelligence Lab  
Department of Computer Science and Engineering  
[Meta Reality Labs Research, Redmond, WA, USA](#)
- May 2019 – **Research Scientist**.  
Dec. 2022 Fundamental research in machine perception and learning for AR/VR  
[Borealis AI, Waterloo, ON, Canada](#)
- Nov. 2018 – **Machine Learning Intern (part-time)**.  
May 2019 Host: Pascal Poupart  
[Disney Research Zürich, Zürich, Switzerland](#)
- Aug. 2017 – **Research Intern**.  
Dec. 2017 Host: Christopher Schroers  
[Amazon A9.com, Palo Alto, CA, USA](#)
- June 2016 – **Graduate Computer Vision Intern**.  
Sept. 2016 Mentors: Edward Hsiao & Douglas Gray

### Publications

#### Conferences

- 2026 Yejie Guo, Yunzhong Hou, Wufei Ma, **Meng Tang**, and Ming-Hsuan Yang. Pursuing minimal sufficiency in spatial reasoning. In *International Conference on Learning Representations (ICLR)*, April 2026.
- 2026 Fang Chen, Alex Villa, Gongbo Liang, Li Fuxin, Xiaoyi Lu, and **Meng Tang**. Contrastive conditional-unconditional alignment for long-tailed diffusion model. In *European Conference on Computer Vision (ECCV)*, September 2026.
- 2025 Weimin Qiu, Jieke Wang, and **Meng Tang**. Self-cross diffusion guidance for text-to-image synthesis of similar subjects. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, June 2025.
- 2024 Vicent Tao Hu, David W Zhang, **Meng Tang**, Pascal Mettes, Deli Zhao, and Cees Snoek. Latent Space Editing in Transformer-Based Flow Matching. In *AAAI Conference on Artificial Intelligence (AAAI)*, February 2024.

- 2023 Mujahid Al Rafi, Yuan Feng, Fan Yao, **Meng Tang**, and Hyeran Jeon. Decepticon: Understanding Vulnerabilities of Transformers. In *IEEE International Symposium on Workload Characterization (IISWC)*, October 2023.
- 2020 Martin Runz, Kejie Li, **Meng Tang**, Lingni Ma, Chen Kong, Tanner Schmidt, Ian Reid, Lourdes Agapito, Julian Straub, Steven Lovegrove, and Richard Newcombe. Frodo: From detections to 3d objects. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- 2019 Dmitrii Marin, **Meng Tang**, Ismail Ben Ayed, and Yuri Boykov. Beyond Gradient Descent for Regularized Segmentation Losses. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- 2018 **Meng Tang**, Federico Perazzi, Abdelaziz Djelouah, Ismail Ben Ayed, Christopher Schroers, and Yuri Boykov. On Regularized Losses for Weakly-supervised CNN Segmentation. In *European Conference on Computer Vision (ECCV)*, 2018.
- 2018 **Meng Tang**, Abdelaziz Djelouah, Federico Perazzi, Yuri Boykov, and Christopher Schroers. Normalized Cut Loss for Weakly-supervised CNN Segmentation. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, June 2018.
- 2018 Hoel Kervadec, Jose Dolz, **Meng Tang**, Eric Granger, Yuri Boykov, and Ismail Ben Ayed. Size-constraint loss for weakly supervised cnn segmentation. In *Medical Imaging with Deep Learning (MIDL)*, **Oral**, Amsterdam, Netherlands, 2018.
- 2016 **Meng Tang**, Dmitrii Marin, Ismail Ben Ayed, and Yuri Boykov. Normalized Cut meets MRF. In *European Conference on Computer Vision (ECCV)*, **Oral**, Amsterdam, Netherlands, October 2016.
- 2015 **Meng Tang**, Ismail Ben Ayed, Dmitrii Marin, and Yuri Boykov. Secrets of grabcut and kernel k-means. In *International Conference on Computer Vision (ICCV)*, Santiago, Chile, December 2015.
- 2014 **Meng Tang**, Ismail Ben Ayed, and Yuri Boykov. Pseudo-bound optimization for binary energies. In *European Conference on Computer Vision (ECCV)*, **Oral**, 2014.
- 2013 **Meng Tang**, Lena Gorelick, Olga Veksler, and Yuri Boykov. Grabcut in one cut. In *International Conference on Computer Vision (ICCV)*, Sydney, Australia, 2013.

#### Journals

- 2025 Fang Chen, Gourav Datta, Mujahid Al Rafi, Hyeran Jeon, and **Meng Tang**. Redistill: Residual encoded distillation for peak memory reduction of cnn. *Transactions on Machine Learning Research (TMLR)*, 2025.
- 2019 **Meng Tang**, Dmitrii Marin, Ismail Ben Ayed, and Yuri Boykov. Kernel Cuts: Kernel and spectral clustering meet regularization. *International Journal of Computer Vision (IJCV)*, volume 127, pages 477–511, May 2019.
- 2019 Hoel Kervadec, Jose Dolz, **Meng Tang**, Eric Granger, Yuri Boykov, and Ismail Ben Ayed. Constrained-cnn losses for weakly supervised segmentation. *Medical image analysis*, volume 54, pages 88–99. Elsevier, 2019.
- 2017 Dmitrii Marin, **Meng Tang**, Ismail Ben Ayed, and Yuri Boykov. Kernel clustering: Breiman's bias and solutions. *IEEE transactions on Pattern Analysis and Machine Intelligence (PAMI)*, volume 41, pages 136–147, January 2017.
- 2012 **Meng Tang**, Yan-Wu Wang, and Changyun Wen. Improved delay-range-dependent stability criteria for linear systems with interval time-varying delays. *IET Control Theory & Applications*, volume 6, pages 868–873. IET, 2012.

## Workshops

- 2024 Jacob Schnell, Jieke Wang, Lu Qi, Vincent Tao Hu, and **Meng Tang**. ScribbleGen: Generative data augmentation improves scribble-supervised semantic segmentation. In *Workshop on SyntaGen: Harnessing Generative Models for Synthetic Visual Datasets at IEEE Conference on Computer Vision and Pattern Recognition (CVPR-W)*, 2024.
- 2023 Vicent Tao Hu, David W Zhang, **Meng Tang**, Pascal Mettes, Deli Zhao, and Cees Snoek. Latent Space Editing in Transformer-Based Flow Matching. In *Workshop on New Frontiers in Learning, Control, and Dynamical Systems at the International Conference on Machine Learning (ICML-W)*, 2023.

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## Preprints

- 2025 Weimin Qiu, Jieke Wang, Zhining Gu, Vincent Tao Hu, and **Meng Tang**. Diversifying similar subjects for text-to-image synthesis with self-cross diffusion guidance. *preprint*, 2025. Under review.
- 2025 Vincent Tao Hu, Pengwan Yang, Teng Long, Hongzhou Yang, Cheems Wang, **Meng Tang**, and Björn Ommer. Discrete interpolants: Unifying the masked generative and discrete diffusion models. *preprint*, 2025. Under review.
- 2025 Michael Fuest, Vincent Tao Hu, Pengwan Yang, **Meng Tang**, and Björn Ommer. Maskflow: Discrete flows for flexible and efficient long video generation. *preprint*, 2025. Under review.
- 2024 Divin Yan, Lu Qi, Vincent Tao Hu, Ming-Hsuan Yang, and **Meng Tang**. Training class-imbalanced diffusion model via overlap optimization. In *arXiv preprint 2402.10821*, February 2024.

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## Funding

Total awarded: **\$916,821**, My share: **\$482,307**.

### Federal

- 2024 Meng Tang (Lead PI), Ming-Hsuan Yang (Co-PI), "Learning to See by Learning to Synthesize Images", sponsored by Department of Defense, 09/01/2024-08/31/2025, **\$798,960**.

### Industry

- 2026 Meng Tang (Sole PI), NVIDIA Academic Grant Award (in-kind support).
- 2024 Meng Tang (Lead PI), Gongbo Tony Liang (Co-PI), "Mitigating Bias in Class-Imbalanced Image Synthesis Models", sponsored by Google-CAHSI Institutional Research Program, **\$100,000**.(including \$20,000 GCP credit)
- 2024 Meng Tang (Sole PI), Google Cloud Research Credit, **\$5,000**.

### Internal

- 2024 Meng Tang (Sole PI), Academic Senate Faculty Research Grant, **\$9,872**.
- 2023 Meng Tang (Sole PI), Faculty Professional Development Grant from the MacKenzie Scott gift to UC Merced, **\$3,500**.

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## Awards

- 2019 Doctoral Consortium Travel Award, CVPR 2019.
- 2018 – 2019 David R. Cheriton Graduate Scholarship, University of Waterloo.
- 2018 International Doctoral Student Award, University of Waterloo.
- 2012 – 2017 Western Graduate Research Scholarship, Western University.
- 2012 Outstanding Graduate, Huazhong University of Science and Technology.
- 2009 National Scholarship, Huazhong University of Science and Technology.

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## Professional Services

### Area Chair

- 2025-2026 **Winter Conference on Applications of Computer Vision.**
- 2024-2025 **British Machine Vision Conference.**
- 2024-2025 **International Conference on Machine Learning.**
- 2025-2026 **International Conference on Learning Representation.**

### Senior program committee

- 2023-2025 **AAAI Conference on Artificial Intelligence.**

### Panelist for funding programs

- 2023-2024 **National Science Foundation.**

### Institution services at UC Merced

- 2026 **PhD Defense Committee (Mujahid Al Rafi).**
- 2025 **PhD Defense Committee (Tiantian Wang, Chieh Hubert Lin, Younce Yang).**
- 2025 **PhD Qualification Exam Committee (Yu-Ju Tsai, Tsai-Shien Chen, Altynay Smagulova).**
- 2024 **PhD Qualification Exam Committee (Younce Yang, Kuat Gazizov).**
- 2024 **Faculty moderator, UC Merced Innovate to Grow (I2G) program.**
- 2023, 2024 **Faculty search committee for AI/DS, Department of Computer Science and Engineering.**
- 2023 **PhD Qualification Exam Committee (Haolin Liang, Mujahid Al Rafi).**
- 2023 **PhD Defense Committee (Aditya Ranganath).**

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## Teaching

- Spring, 2026 **CSE 190: Introduction to Deep Learning, Lecturer, University of California Merced.**
- Fall, 2025 **EECS 242: Advanced Topics in Deep Learning, Lecturer, University of California Merced.**
- Fall, 2024 **CSE 176: Introduction to Machine Learning, Lecturer, University of California Merced.**
- Spring, 2024 **EECS 230: Deep Learning, Lecturer, University of California Merced.**
- Fall, 2023 **CSE 185: Introduction to Computer Vision, Lecturer, University of California Merced.**
- Fall, 2018 **CS484/684: Computational Vision, Teaching Assistant, University of Waterloo.**
- Winter, 2018 **CS115: Introduction to Computer Science, Teaching Assistant, University of Waterloo.**
- 2016 – 2017 **CS1027b: CS Fundamentals II (JAVA), Teaching Assistant, Western University.**
- 2012 – 2016 **CS1037a: CS Fundamentals II (C++), Teaching Assistant, Western University.**