

# 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 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

- 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.
- 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 **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 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.

- 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.
- 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.
- 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.
- 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.
- 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.

## Grant

### Internal

- 2023 **\$3,500**, Faculty Professional Development Grant from the MacKenzie Scott gift to UC Merced

## 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.

## Professional Services

### Reviewer for journals

**IEEE Transactions on Image Processing.**

**International Journal of Computer Vision.**

**Computer Vision and Image Understanding.**

**IEEE Transactions on Pattern Analysis and Machine Intelligence.**

Reviewer for conferences

- 2017-2019 **British Machine Vision Conference.**
- 2023 **British Machine Vision Conference.**
- 2016 – 2020 **European Conference on Computer Vision.**
- 2015 – 2021 **IEEE International Conference on Computer Vision.**
- 2015 – 2021 **IEEE Conference on Computer Vision and Pattern Recognition.**
- Senior program committee for conferences
- 2023-2024 **AAAI Conference on Artificial Intelligence.**
- Panelist for funding programs
- 2023 **National Science Foundation.**
- Institution services at UC Merced
- 2023 **Faculty search committee for AI/DS, Department of Computer Science and Engineering.**
- 2023 **PhD Qualification Exam Committee (Haolin Liang).**

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## Talks

- "Optimization for Deep Image Segmentation"
- May. 2023 **Institute for Mathematical Sciences, Renmin University of China, China.**
- "Visual Perception with Little Supervision"
- Jan. 2023 **Centre for Frontier AI Research (CFAR), A\*STAR, Singapore.**
- "Advances in Weakly-supervised Image Segmentation"
- Oct. 2018 **SRI International, Princeton, NJ.**
- Oct. 2018 **Facebook, Menlo Park, CA.**
- Oct. 2018 **MEGVII Research, Redmond, WA.**
- Oct. 2018 **Amazon, Seattle, WA.**
- Oct. 2018 **Microsoft, Redmond, WA.**
- Sept. 2018 **Pony.ai, Fremont, CA.**
- "Optimization for Image Segmentation"
- Aug. 2018 **Nvidia, Toronto, ON.**
- "On Regularized Losses for Weakly-supervised CNN Segmentation"
- July 2018 **Borealis AI, Toronto, ON.**
- "Kernel Clustering, MRF and Convolutional Neural Networks for Image Segmentation"
- April 2018 **Huawei Noah's Ark Lab, Toronto, ON.**
- "Kernel (Spectral) Clustering meets Markov Random Field"
- Nov. 2017 **ETH Zürich, Zürich, Switzerland.**
- "Energy minimization for segmentation in computer vision"
- Nov. 2016 **ETS Montreal, Université du Québec, Montreal, QC.**
- "Normalized Cut Meets MRF"
- Oct. 2016 **European Conference on Computer Vision, Amsterdam, Netherlands.**
- "Pseudo-Bound optimization for binary energies"
- Sept. 2014 **European Conference on Computer Vision, Zürich, Switzerland.**

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## Teaching

- Fall, 2023 **CSE 185: Introduction to Computer Vision, Lecturer, University of California at Merced.**

Fall, 2018 **CS484/684: Computational Vision**, *Teaching Assistant*, University of Waterloo.  
Winter, 2018 **CS115: Introduction to Computer Science**, *Teaching Assistant*, University of Waterloo.  
2012 – 2016 **CS1037a: CS Fundamentals II (C++)**, *Teaching Assistant*, Western University.  
2016 – 2017 **CS1027b: CS Fundamentals II (JAVA)**, *Teaching Assistant*, Western University.

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## Referees

### **Dr. Yuri Boykov**

*Professor, Cheriton School of  
Computer Science*

University of Waterloo, Waterloo, ON

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### **Dr. Olga Veksler**

*Professor, Cheriton School of  
Computer Science*

University of Waterloo, Waterloo, ON

✉ oveksler@uwaterloo.ca

### **Dr. Ismail Ben Ayed**

*Associate Professor, Ecole de Technologie  
Supérieure (ETS), Montreal, QC*

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### **Dr. Tomasz Malisiewicz**

*Research Scientist Manager*

Meta Reality Labs Research, Redmond, WA

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