

# GUODONG DING

Senior Research Fellow  
+65 8930 4392 ◊ dinggd@comp.nus.edu.sg  
11 Computing Drive, Singapore 117416  
<https://comp.nus.edu.sg/~dinggd>

## RESEARCH INTEREST

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My research develops AI systems for understanding, modeling, and reasoning over complex human activities in long-horizon video, with a focus on procedural and multi-step tasks under realistic constraints: limited supervision, streaming data, and evolving environments.

## ACADEMIC EXPERIENCE

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- 2023 - present **Senior Research Fellow**
- 2020 - 2023 **Research Fellow**  
School of Computing, National University of Singapore, Singapore.
- 02 - 11.2017 **Visiting Scholar**, Australian National University, Australia.
- 2015 - 2017 **Research Assistant**, The Hong Kong Polytechnic University, HKSAR, China.

## EDUCATION

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- 2013 - 2020 **PhD Computer Science**  
Nanjing University of Science & Technology, China
- 2009 - 2013 **BEng Computer Science**  
Nanjing University of Science & Technology, China

## INDUSTRY EXPERIENCE

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- 06 - 10.2019 **Research Intern**  
Computer Vision Team, Qualcomm, China.

## ADVISED STUDENTS

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- 11.2025 - present **Arthème Gauthier Villars** (Master @ ETH)
- 2025 - 2026 **Huaian Lin** (Master @ NUS)
- 03 - 06.2025 **Hang Guo** (Master @ THU)
- 2024 - 2025 **Alberto Mate** (Master @ UPC)  
**Qing Zhong** (PhD @ U. Adelaide)
- 2023 - 2024 **Hans Golong** (Master @ NUS)

## PUBLICATIONS

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My advised students are underlined, my name is in **bold**.

### Journal Articles

- [J8] **G. Ding**, F. Sener, S. Ma, and A. Yao, “Spatial and temporal beliefs for mistake detection in assembly tasks,” *Computer Vision and Image Understanding (CVIU)*, p. 104338, 2025.

- [J7] **G. Ding**, F. Sener, and A. Yao, “Temporal action segmentation: An analysis of modern techniques,” *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, vol. 46, no. 2, pp. 1011–1030, 2024.
- [J6] Q. Yin and **G. Ding**, “A large scale benchmark of person re-identification,” *Drones*, vol. 8, no. 7, p. 279, 2024.
- [J5] **G. Ding** and A. Yao, “Temporal action segmentation with high-level complex activity labels,” *IEEE Transactions on Multimedia (TMM)*, vol. 25, pp. 1928–1939, 2023.
- [J4] Q. Yin, G. Wang, **G. Ding**, Q. Li, S. Gong, and Z. Tang, “Rapid person re-identification via sub-space consistency regularization,” *Neural Processing Letters (NPL)*, vol. 55, no. 3, pp. 3149–3168, 2023.
- [J3] Q. Yin, **G. Ding**, S. Gong, Z. Tang, *et al.*, “Multi-view label prediction for unsupervised learning person re-identification,” *IEEE Signal Processing Letters (SPL)*, vol. 28, pp. 1390–1394, 2021.
- [J2] **G. Ding**, S. Khan, Z. Tang, and F. Porikli, “Feature mask network for person re-identification,” *Pattern Recognition Letters (PRL)*, vol. 137, pp. 91–98, 2020.
- [J1] **G. Ding**, S. Zhang, S. Khan, Z. Tang, J. Zhang, and F. Porikli, “Feature Affinity-Based Pseudo Labeling for Semi-Supervised Person Re-Identification,” *IEEE Transactions on Multimedia (TMM)*, vol. 21, no. 11, pp. 2891–2902, 2019.

## Conference Proceedings

- [C9] G. Li, R. Chen, B. Li, L. Yang, and **G. Ding**, “Medfact-r1: Towards factual medical reasoning via pseudo-label augmentation,” in *ICASSP*, 2026.
- [C8] **G. Ding**, R. Chen, and A. Yao, “Condensing Action Segmentation Datasets via Generative Network Inversion,” in *CVPR*, 2025.
- [C7] Q. Zhong, P.-T. Jiang, W. Wang, **G. Ding**, L. Wu, and K. Huang, “A temporal modeling framework for video pre-training on video instance segmentation,” in *ICME*, 2025.
- [C6] **G. Ding**, H. Golong, and A. Yao, “Coherent temporal synthesis for incremental action segmentation,” in *CVPR*, 2024.
- [C5] **G. Ding**, F. Sener, S. Ma, and A. Yao, “Ordering mistake detection in assembly tasks,” in *CVPRW*, 2024.
- [C4] Q. Zhong, **G. Ding**, and A. Yao, “Onlinetas: An online baseline for temporal action segmentation,” in *NeurIPS*, 2024.
- [C3] **G. Ding** and A. Yao, “Leveraging action affinity and continuity for semi-supervised temporal action segmentation,” in *ECCV*, 2022.
- [C2] **G. Ding**, S. Khan, Z. Tang, J. Zhang, and F. Porikli, “Dispersion based Clustering for Unsupervised Person Re-identification,” in *BMVC*, 2019.
- [C1] **G. Ding**, S. Zhang, S. Khan, and Z. Tang, “Center based pseudo-labeling for semi-supervised person re-identification,” in *ICMEW*, 2018.

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## SERVICE

**Tutorial & Workshop Organizer**

Action localization & segmentation in untrimmed videos (at ECCV) 2022  
Workshop on vision-based assistants in the real-world (at CVPR) 2025-26

**Area Chair / Senior Program Committee**

AAAI Conference on Artificial Intelligence (AAAI) 2025

**Others**

Workshop for Women in Computing (at NUS) - Organizer 2024

**TALKS**

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Media Lunch Talk 10.2024  
"Unraveling Actions in Procedural Videos" Singapore