GUODONG DING

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RESEARCH INTEREST

My research focuses on understanding human actions in long-range, multi-step video sequences, particularly temporal action segmentation. Recently, my work has expanded to explore efficient understanding of procedural videos in continual and online settings.

EDUCATION

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

ACADEMIC EXPERIENCE

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.

INDUSTRY EXPERIENCE

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

ADVISED STUDENTS

2025 - present	Hang Guo (Master @ THU)
2024 - 2025	Alberto Mate (Master @ UPC)
	Qing Zhong (PhD @ U. Adelaide)
2023 - 2024	Hans Golong (Master @ NUS)

PUBLICATIONS

My advised students are <u>underlined</u>, 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

- [*C7*] **G. Ding**, R. Chen, and A. Yao, "Condensing Action Segmentation Datasets via Generative Network Inversion," in *CVPR*, 2025.
- [*C6*] **G. Ding**, <u>H. Golong</u>, 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*] <u>Q. Zhong</u>, **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.

SERVICE

Tutorial & Workshop Organizer Action localization & segmentation in untrimmed videos (at ECCV) Workshop on vision-based assistants in the real-world (at CVPR)	2022 2025
Area Chair / Senior Program Committee AAAI Conference on Artificial Intelligence (AAAI)	2025
Others Workshop for Women in Computing (at NUS) - Organizer	2024

TALKS

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