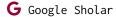
Xiangde Luo, PhD











Bio: Xiangde focuses on annotation-efficient medical image analysis, such as self-supervised, semi-supervised, weakly-supervised, active learning and human-in-the-loop and applies them to clinical applications, especially AI for radiotherapy. Recently, he promoted some interesting projects in the MICCAI community: 1) built a semi-supervised medical image segmentation benchmark **SSL4MIS** with more than 2000 stars on GitHub; 2) organized a challenge **SegRap2023** in conjunction with MICCAI; 3) released a large scale abdominal organ segmentation dataset **WORD**. He has published several top journals or conferences and these works were cited > 5100 times (**four of them citations** > 100), *h, i10*-index are 17, 22, respectively.

Education

2018-09 - 2024-06

Ph.D., University of Electronic Science and Technology of China (UESTC) Supervisor: Prof. Shaoting Zhang

Thesis title: Medical Image Segmentation Using a Limited Amount of Labeled Data

2014-09 - 2018-06

■ B.E., University of Electronic Science and Technology of China (*UESTC*) Supervisor: *Prof. Shaoting Zhang*

Thesis title: Data capture using crawl and its applications

Employment History

2019-07 - 2020-06

Research Intern SenseTime Research, **Mentor**: **Dr. Tao Song**

2021-06 - 2024-06

Research Intern Shanghai AI Laboratory, Mentor: Prof. Xiaofan Zhang

Highlight Publications

Journal Articles

- H. Wang, ..., and **X. Luo***, "Dual-reference source-free active domain adaptation for nasopharyngeal carcinoma tumor segmentation across multiple hospitals," *IEEE Transactions on Medical Imaging*, (Accepted), 2024. **Corresponding author**.
- **X. Luo**, J. Fu, Y. Zhong, et al., "SegRap2023: A benchmark of organs-at-risk and gross tumor volume segmentation for radiotherapy planning of nasopharyngeal carcinoma," Submitted to Medical Image Analysis, (Under Review), 2023. Challenge report, organized in conjunction with MICCAI2023.
- X. Luo, G. Wang, W. Liao, et al., "Semi-supervised medical image segmentation via uncertainty rectified pyramid consistency," *Medical Image Analysis*, vol. 80, p. 102 517, 2022. *ESI Highly Cited Papers*.
- **X. Luo**, W. Liao, Y. He, *et al.*, "Deep learning-based accurate delineation of primary gross tumor volume of nasopharyngeal carcinoma on heterogeneous magnetic resonance imaging: A large-scale and multi-center study," *Radiotherapy and Oncology*, vol. 180, p. 109 480, 2023.
- **X. Luo**, W. Liao, J. Xiao, *et al.*, "Word: A large scale dataset, benchmark and clinical applicable study for abdominal organ segmentation from ct image," *Medical Image Analysis*, vol. 82, p. 102 642, 2022.
- **X. Luo**, T. Song, G. Wang, *et al.*, "SCPM-Net: An anchor-free 3d lung nodule detection network using sphere representation and center points matching," *Medical Image Analysis*, vol. 75, p. 102 287, 2022.
- **X. Luo**, G. Wang, T. Song, *et al.*, "MIDeepSeg: minimally interactive segmentation of unseen objects from medical images using deep learning," *Medical Image Analysis*, vol. 72, p. 102 102, 2021.

Conference Proceedings

- Y. Wu*, X. Luo*, Z. Xu, et al., "Diversified and personalized multi-rater medical image segmentation," in IEEE/CVF Conference on Computer Vision and Pattern Recognition, 2024. Co-first authors.
- **X. Luo**, Z. Li, W. Liao, S. Zhang, and G. Wang, "Rethinking abdominal organ segmentation (RAOS) in the clinical scenario: A robustness evaluation benchmark with challenging cases," in *International Conference on Medical Image Computing and Computer-Assisted Intervention (Early Accept)*, 2024.
- **X. Luo**, M. Hu, W. Liao, *et al.*, "Scribble-supervised medical image segmentation via dual-branch network and dynamically mixed pseudo labels supervision," in *International Conference on Medical Image Computing and Computer-Assisted Intervention*, Springer, 2022, pp. 528–538.
- **X. Luo**, M. Hu, T. Song, G. Wang, and S. Zhang, "Semi-supervised medical image segmentation via cross teaching between cnn and transformer," in *International Conference on Medical Imaging with Deep Learning*, PMLR, 2022, pp. 820–833.
- **X. Luo**, J. Chen, T. Song, and G. Wang, "Semi-supervised medical image segmentation through dual-task consistency," in *Proceedings of the AAAI conference on artificial intelligence*, vol. 35, 2021, pp. 8801–8809.
- **X. Luo**, W. Liao, J. Chen, *et al.*, "Efficient semi-supervised gross target volume of nasopharyngeal carcinoma segmentation via uncertainty rectified pyramid consistency," in *International Conference on Medical Image Computing and Computer-Assisted Intervention*, Springer, 2021, pp. 318–329.

Skills

IT and Coding Python, PyTorch, TensorFlow, R, Linux

Deep learning Self-/Semi-/Weakly-Supervised Learning, Active Learning, Human-in-the-loop

Medical Images SimpleITK, Radiomics, 3D Slicer, ITK-SNAP

Academic Experience and Achievements

Awards and Achievements

2023 | TMI Distinguished Reviewer

2022 MICCAI Student Travel Award

Scholarship 2020 third class, 2021/2023 second class, 2022 first class

Journals/Conferences Review

Journals | TPAMI, MedIA, TMI, TNNLS, TGRS, PR, JBHI

Conferences MICCAI2021, MICCAI2022, MICCAI2023, MICCAI2024, AAAI2022, AAAI2023

Open Source Projects

DTC https://github.com/HiLab-git/DTC (> 270 stars)

WORD | https://github.com/HiLab-git/WORD (> 130 stars)

SSL₄MIS https://github.com/HiLab-git/SSL₄MIS (> 2000 stars)

WSL₄MIS | https://github.com/HiLab-git/WSL₄MIS (> 180 stars)

MIDeepSeg | https://github.com/HiLab-git/MIDeepSeg (> 110 stars)