

Dazhou Guo

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EDUCATION

- 2010 – 2019 University of South Carolina, South Carolina, USA**
Ph. D. in Computer Science
- 2008 – 2010 Tianjin University, Tianjin, China**
M. S. Eng. in Information and Informatics Engineering
- 2004 – 2008 Dalian University of Technology, Dalian, China**
B. S. Eng. in Electronic Engineering

EXPERIENCE

- 09/2019 – now PAII Inc., Senior Research Scientist**
Automated segmentation in cancer radiotherapy planning
- 02/2019 – 05/2019 Pactera Technology, Research Scientist Internship**
Automated segmentation in cancer radiotherapy planning
- 05/2017 – 08/2017 TuSimple LLC, General Software Engineer Internship**
Precise traffic lane detection and segmentation
- 08/2013 – 05/2019 University of South Carolina, Undergraduate Lecturer**
CSCE 212: Introduction to computer architecture
- 08/2010 – 08/2013 University of South Carolina, Research Assistant**
Aphasia related brain MRI imaging

RESEARCH INTERESTS

Computer vision, Medical imaging, Deep learning, Machine learning

PUBLICATIONS

- [1] **Dazhou Guo***, Dakai Jin*, et al.: DeepTarget: Gross Tumor and Clinical Target Volume Segmentation in Esophageal Cancer Radiotherapy. to appear, MICCAI-2019 Selected Papers Special Issue by Elsevier, 2020.
- [2] Zhuotun Zhu, Dakai Jin, Ke Yan, Tsung-Ying Ho, Xianghua Ye, **Dazhou Guo**, Chun Hung Chao, Jing Xiao, Alan Yuille, Le Lu. Lymph Node Gross Tumor Volume Detection and Segmentation via Distance-based Gating using 3D CT/PET Imaging in Radiotherapy. In International Conference on Medical Image Computing and Computer-Assisted Intervention, Lima, Peru, 2020
- [3] Chun Hung Chao, Zhuotun Zhu, **Dazhou Guo**, Dakai Jin, Jinzheng Cai, Ke Yan, Tsung-Ying Ho, Xianghua Ye, Alan Yuille, Le Lu. Lymph Node Gross Tumor Volume Detection in Oncology Imaging via Relationship Learning Using Graph Neural Network. In International Conference on Medical Image Computing and Computer-Assisted Intervention, Lima, Peru, 2020
- [4] **Guo, D.**, Jin, D., Zhu, Z., Ho, T., Harrison, A. P., Chao, C., Xiao, J., Yuille, A., Lu, L. (2020). Organ at Risk Segmentation for Head and Neck Cancer using Stratified Learning and Neural Architecture Search. In Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition.
- [5] Yu, H., **Guo, D.**, Yan, Z., Fu, L., Simmons, J., Przybyla, C. P., & Wang, S. (2020). Weakly Supervised Easy-to-hard Learning for Object Detection in Image Sequences. Neurocomputing.
- [6] Jin, D., **Guo, D.**, Ho, T. Y., Harrison, A. P., Xiao, J., Tseng, C. K., & Lu, L. (2019, October). Deep Esophageal Clinical Target Volume Delineation Using Encoded 3D Spatial Context of Tumors, Lymph Nodes, and Organs At Risk. In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 603-612). Springer, Cham.
- [7] Jin, D., **Guo, D.**, Ho, T. Y., Harrison, A. P., Xiao, J., Tseng, C. K., & Lu, L. (2019, October). Accurate esophageal gross tumor volume segmentation in pet/ct using two-stream chained 3d deep network fusion. In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 182-191). Springer, Cham.
- [8] Song, S., Yu, H., Miao, Z., **Guo, D.**, Ke, W., Ma, C., & Wang, S. (2019). An easy-to-hard learning strategy for within-image co-saliency detection. Neurocomputing, 358, 166-176.
- [9] **Guo, D.**, Pei, Y., Zheng, K., Yu, H., Lu, Y., & Wang, S. (2019). Degraded Image Semantic Segmentation With Dense-Gram Networks. IEEE Transactions on Image Processing, 29, 782-795.
- [10] **Guo, D.**, Zhu, L., Lu, Y., Yu, H., Wang, S. (2019) Small object sensitive segmentation of urban street scene with spatial adjacency between object classes. IEEE Transactions on Image Processing.
- [11] **Guo, D.**, Zheng, K., & Wang, S. (2017, September). Lesion detection using T1-weighted MRI: A new approach based on functional cortical ROIs. In *Image Processing (ICIP), 2017 IEEE International Conference on* (pp. 4427-4431). IEEE.
- [12] **Guo, D.**, Fridriksson, J., Fillmore, P., Rorden, C., Yu, H., Zheng, K., & Wang, S. (2015). Automated lesion detection on MRI scans using combined unsupervised and supervised methods. *BMC medical imaging*, 15(1), 50.
- [13] Zheng, K., Fan, X., Lin, Y., Guo, H., Yu, H., **Guo, D.**, & Wang, S. (2017, October). Learning View-Invariant Features for Person Identification in Temporally Synchronized Videos Taken by Wearable Cameras. In *Computer Vision (ICCV), 2017 IEEE International Conference on* (pp. 2877-2885). IEEE.
- [14] Zheng, K., Lin, Y., Zhou, Y., Salvi, D., Fan, X., **Guo, D.**, ... & Wang, S. (2014, September). Video-based action detection using multiple wearable cameras. In *Workshop at the European Conference on Computer Vision* (pp. 727-741). Springer.
- [15] Basilakos, A., Fillmore, P. T., Rorden, C., **Guo, D.**, Bonilha, L., & Fridriksson, J. (2014). Regional white matter damage predicts speech fluency in chronic post-stroke aphasia. *Frontiers in human neuroscience*, 8, 845.
- [16] Fridriksson, J., **Guo, D.**, Fillmore, P., Holland, A., & Rorden, C. (2013). Damage to the anterior arcuate fasciculus predicts non-fluent speech production in aphasia. *Brain*, 136(11), 3451-3460.
- [17] Fridriksson, J., Fillmore, P., **Guo, D.**, & Rorden, C. (2014). Chronic Broca's aphasia is caused by damage to Broca's and Wernicke's areas. *Cerebral Cortex*, 25(12), 4689-4696.

PATENTS

- [18] **Guo, D.**, Wei, Y., Mei, X., & Hou, X. (2020). U.S. Patent No. 10,528,823. Washington, DC: U.S. Patent and Trademark Office.
- [19] Mei, X., Hou, X., Dazhou, **Guo, D.**, Wei, Y. (2019). U.S. Patent Application No. 15/822,689.

AWARD

Medical Image Analysis MICCAI-2019 selected papers.

PROFESSIONAL SERVICES

Journal Reviewer

IEEE Transactions on Pattern Analysis and Machine Intelligence

IEEE Transactions on Image Processing

IEEE Transactions on Multimedia

Pattern Recognition Letters

Conference Reviewer

AAAI 2020, MICCAI 2020-2021

SKILLS

Programming languages: Python, Matlab, Java, C/C++

Open-source libraries: PyTorch, Caffe, SimpleITK, PyDiCOM, OpenCV

Language: English, Chinese