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A. Research Interests

IMAGE ANALYSIS

B. Education and Work Experience

- 09/2016 - Current Associated Professor
- School of Information Science and Engineering, University of Jinan
- 09/2012 - 09/2016 Ph.D., Control Science and Engineering
- Nanjing University of Science and Technology
- Advisor: Qiang Chen
- 10/2014 - 09/2015 Visiting Student, Image Processing
- Stanford University
- Advisor: Daniel Rubin
- 09/2009 - 07/2012 Master Degree, Computer Science
- Southwest University of Science and Technology
- Advisor: Yuan Jia
- 08/2007 - 08/2009 Teacher
- Second Senior Middle School of Leling, Dezhou, Shandong
- 09/2003 - 07/2007 Bachelor Degree, Computer Science
- Liaocheng University
- Advisor: NONE

C. Publications

1. Kun Gao, **Sijie Niu***, Zexuan Ji, Menglin Wu, Qiang Chen, Rongbin Xu, Songtao Yuan, Wen Fan, Yuehui Chen, Jiwen Dong, Double-branched and area-constraint fully convolutional networks for automated serous retinal detachment segmentation in SD-OCT images, *Computer Methods and Programs in Biomedicine*, 176:69-80, 2019.
2. Rongbin Xu, **Sijie Niu***, Qiang Chen, Zexuan Ji, Daniel Rubin, Yuehui Chen, Automated geographic atrophy segmentation for SD-OCT images based on two-stage learning model, *Computers in Biology and Medicine*, 105:102-111, 2019.
3. Yuchun Li, **Sijie Niu**, Zexuan Ji, Wen Fan, Songtao Yuan, Qiang Chen:Automated Choroidal Neovascularization Detection for Time Series SD-OCT Images. *MICCAI* (2) 2018: 381-388.
4. Weifang Wang, Jiwen Dong, **Sijie Niu***, Yuehui Chen, EDGE-GUIDED SEMI-COUPLED DICTIONARY LEARNING SUPER RESOLUTION FOR RETINA IMAGE, *IEEE International Symposium on Biomedical Imaging, ISBI 2019*, in press.
5. Xiaofeng Qu, Jiwen Dong, **Sijie Niu***, shallowCNN-LE: A shallow CNN with Laplacian Embedding for

- face anti-spoofing, *2019 14th IEEE International Conference on Automatic Face & Gesture Recognition (FG 2019)*, 2019, in press.
6. Qiang Chen, **Sijie Niu**, et al. Automated choroid segmentation of three-dimensional SD-OCT images by incorporating EDI-OCT images, *Computer Methods and Medicine*. 158: 161-171 (2018).
 7. Zexuan Ji, Qiang Chen, **Sijie Niu**, Theodore Leng, Daniel L. Rubin, Beyond Retinal Layers: A Deep Voting Model for Automated Geographic Atrophy Segmentation in SD-OCT Images. *Translational Vision Science & Technology*, 2018.1, 7(1):1.
 8. **Sijie Niu**, Qiang Chen, Luis de Sisternes, Theodore Leng and Daniel L. Rubin. Automated detection of foveal center in SD-OCT images using the saliency of retinal thickness maps, *Medical Physics*, 44(12): 6390-6403, 2017.12.
 9. Yubo Huang, Zexuan Ji, Qiang Chen, **Sijie Niu**. Geographic Atrophy Segmentation for SD-OCT Images by MFO Algorithm and Affinity Diffusion. *Intelligence Science and Big Data Engineering*, pp. 473-484, 2017
 10. **Sijie Niu**, Chenchen Yu, Qiang Chen, Songtao Yuan, Jiang Lin, Wen Fan, Qinghuai Liu. Multimodality analysis of Hyperreflective Foci and Hard Exudates in Patients with Diabetic Retinopathy. *Scientific Reports*, 2017.5.8, 7(1):1568.
 11. **Sijie Niu**, Luis de Sisternes, Qiang Chen, Daniel L. Rubin, Theodore Leng, Fully automated prediction of geographic atrophy growth using quantitative spectral-domain optical coherence tomography imaging biomarkers, *Ophthalmology*, 2016, 123(8): 1737-1750.
 12. **Sijie Niu**, Luis de Sisternes, Qiang Chen, Zexuan Ji, Daniel L. Rubin, Robust noise region-based active contour model via local similarity factor for image segmentation, *Pattern Recognition*, 2017, 61: 104-119.
 13. Jun Xu, Qiang Chen, **Sijie Niu**. Retinal Nerve Fiber Layer Segmentation of Spectral Domain Optical Coherence Tomography Images Based on Random Forest, *Journal of Computer-Aided Design & Computer Graphics*, 2017, 29 (6): 977-983
 14. Qiang Chen, Jun Xu, **Sijie Niu**. Retinal Nerve Fiber Layer Segmentation of Spectral Domain Optical Coherence Tomography Images Based on Random Forest, *Journal of Electronics & Information Technology*, 39 (5): 1101-1108, 2017
 15. **Sijie Niu**, Luis de Sisternes, Qiang Chen, Theodore Leng, and Daniel L. Rubin, Automated geographic atrophy segmentation for SD-OCT images using region-based C-V model via local similarity factor, *Biomedical Optics Express*, (2016) 7(2): 581-600.
 16. **Sijie Niu**, Luis De Sisternes, Qiang Chen, Theodore Leng, Daniel L Rubin, Automated Segmentation and Quantification in SD-OCT Images to Predict Future Geographic Atrophy Involvement, *Investigative Ophthalmology Visual Science*, (2015)56(7):2839.
 17. **Sijie Niu**, Qiang Chen, Luis de Sisternes, Daniel L. Rubin, et al. Automated retinal layers segmentation and quantitative evaluation in SD-OCT images. *Computers in Biology and Medicine*, (2014)54: 116-128.
 18. **Sijie Niu**, Qiang Chen, Luis de Sisternes, Daniel L. Rubin. Registration of SD-OCT en-face images with color fundus photographs based on blood vessel. International workshop on Ophthalmic Medical Image Computing and Computer Assisted Intervention (MICCAI 2014), (2014) 25-32.
 19. **Sijie Niu**, Qiang Chen, Shengtao Lu, Honglie Shen. SD-OCT Image Layer Segmentation Using Multi-scale

- 3-D Graph search Method, *Computer Science*, 42(9), 272-277, 2015.
20. Qiang Chen, **Sijie Niu**, Songtao Yuan, Wen Fan, Qinghuai Liu, Choroidal Vasculature Characteristics Based Choroid Segmentation for Enhanced Depth Imaging Optical Coherence Tomography Images, *Medical Physics*, 43(4):1649-1661, 2016.
21. Qiang Chen, **Sijie Niu**, Honglie Shen, Theodore Leng, Luis de Sisternes, Daniel L. Rubin, Restricted Summed-Area Projection for Geographic Atrophy Visualization in SD-OCT Images, *Trans. Vis. Sci. Tech.*, 2015; 4(5):2.
22. Qiang Chen, **Sijie Niu**, Songtao Yuan, Wen Fan, Qinghuai Liu. High-low reflectivity enhancement based retinal vessel projection for SD-OCT images. *Medical Physics*, 43(10):5464-5474, 2016.
23. Qiang Chen, Theodore Leng, **Sijie Niu**, Jiajia Shi, Luis de Sisternes, and Daniel L. Rubin. A false color fusion strategy for drusen and GA visualization in OCT images. *Retina*, 34(12):2346-58, 2014.
24. Qiang Chen, Wen Fan, **Sijie Niu**, Jiajia Shi, Honglie Shen, and Songtao Yuan. Automated choroid segmentation based on gradual intensity distance in HD-OCT images. *Optics Express*, 23(7): 8974-8994, 2015.

D. Awards and Honors

25. 12/2017 ACM China Excellent Doctoral Thesis Award (Jinan)
26. 06/2018 Excellent Doctoral Dissertation Award of Nanjing University of Technology

E. Professional Services

27. **Organizer**, 2018 International Workshop on Pattern Recognition
28. **Journal reviewer**: IEEE Transaction on Medical Imaging, Biomedical Optics Express, Pattern Recognition, IEEE Transaction on Biomedical Engineering
29. **Conference reviewer**: International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), IEEE International Symposium on Biomedical Imaging (ISBI)

F. Travel History

30. U.S. (OCT 2014-SEP 2015); ITALY (APR 2019)