



## 研究生教育

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导师简介

规章制度

研究生通知

课程建设

双选系统

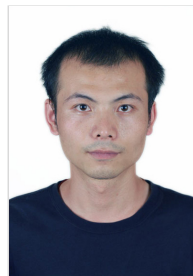
科研团队宣讲

## 导师简介

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### 杨德富

上传时间: 2019-05-06 浏览次数:



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博士招生:  
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2015 年于西安电子科技大学电子工程学院取得工学博士学位。长期采用交叉学科手段研究生物光学成像算法、医学图像处理与分析、脑功能及脑疾病问题的研究。累计发表 SCI 期刊（包括计算机人工智能领域顶级期刊 IEEE TPAMI 等）20 余篇、国际会议 20 余篇、授权发明专利 3 项，申请美国专利 1 项。曾获博士研究生国家奖学金、陕西省高等学校科学技术一等奖、陕西省自然科学二等奖。主持国家自然科学基金委青年项目 1 项，参与国家自然科学基金委面上项目 1 项，参与国家科技部重点研发计划 2 项。

#### 学术成果

##### 期刊论文

- [1] **D. Yang**, X. Zhu, C. Yan, Z. Peng, M. Bagonis, P. J. Laurienti, et al., Joint hub identification for brain networks by multivariate graph inference, *Medical Image Analysis*, vol. 73, p. 102162, 2021. (SCI, IF8.545, JCR 1 区, TOP)
- [2] **D. Yang**, J. Chen, C. Yan, M. Kim, P. J. Laurienti, M. Styner, et al., Group-wise Hub Identification by Learning Common Graph Embeddings on Grassmannian Manifold, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2021. (SCI, IF16.389, JCR 1 区, TOP)
- [3] L. Wang, W. Zhu, Y. Zhang, S. Chen, and **D. Yang\***, Harnessing the Power of Hybrid Light Propagation Model for Three-Dimensional Optical Imaging in Cancer Detection, *Frontiers in Oncology*, pp. NA-NA, 2021. (SCI, IF6.244)
- [4] Y. Lin, **D. Yang\***, J. Hou, C. Yan, M. Kim, P. J. Laurienti, et al., Learning dynamic graph embeddings for accurate detection of cognitive state changes in functional brain networks, *NeuroImage*, vol. 230, p. 117791, 2021. (SCI, IF6.556, JCR 1 区, TOP)
- [5] M. Kim, C. Yan, **D. Yang**, P. Liang, D. I. Kaufer, and G. Wu, Constructing Connectome Atlas by Graph Laplacian Learning, *Neuroinformatics*, vol. 19, pp. 233-249, 2021. (SCI, IF4.085)
- [6] J. Chen, G. Han, H. Cai, **D. Yang**, P. J. Laurienti, M. Styner, et al., Learning Common Harmonic Waves on Stiefel Manifold—A New Mathematical Approach for Brain Network Analyses, *IEEE Transactions on Medical Imaging*, vol. 40, pp. 419-430, 2020. (SCI, IF10.048, JCR 1 区, TOP)

- [7] X. Chen, S. Zhu, H. Wang, C. Bao, **D. Yang**, C. Zhang, et al., Accelerated stimulated Raman projection tomography by sparse reconstruction from sparse-view data, *IEEE Transactions on Biomedical Engineering*, vol. 67, pp. 1293-1302, 2019. ( **SCI, IF4.538, JCR 2** )
- [8] D. Chen, F. Zhao, **D. Yang**, S. Fan, and K. Wu, Feasibility study of three-dimensional multiple-beam x-ray luminescence tomography, *Journal of the Optical Society of America A*, vol. 36, pp. 1669-1674, 2019. ( **SCI, IF2.129** )
- [9] **D. Yang**, C. Yan, L. Yang, D. Peng, and X. Chen, An alternative reconstruction framework with optimal permission source region for bioluminescence tomography, *Optics Communications*, vol. 427, pp. 112-122, 2018. ( **SCI, IF 2.31** )
- [10] **D. Yang**, L. Wang, D. Chen, C. Yan, X. He, J. Liang, et al., Filtered maximum likelihood expectation maximization based global reconstruction for bioluminescence tomography, *Medical & biological engineering & computing*, vol. 56, pp. 2067-2081, 2018. ( **SCI, IF 2.602** )
- [11] **D. Yang**, X. Chen, C. Zhang, L. Wan, F. Meng, Q. Xie, et al., Cerenkov luminescence imaging guided selective-reconstruction for a flexible dual-head PET, *Journal of Instrumentation*, vol. 12, p. P04005, 2017. ( **SCI, IF 1.415** )
- [12] L. Wang, Y. Zhan, **D. Yang**, and X. Chen, Specific Modeling of Light Propagation in Live Body with Coupled SP3-Radiosity-Diffusion Equation, *Journal of Medical Imaging and Health Informatics*, vol. 7, pp. 828-832, 2017. ( **SCI, IF 0.659** )
- [13] **D. Yang**, X. Chen, X. Cao, J. Wang, J. Liang, and J. Tian, Performance investigation of SP 3 and diffusion approximation for three-dimensional whole-body optical imaging of small animals, *Medical & biological engineering & computing*, vol. 53, pp. 805-814, 2015. ( **SCI, IF 2.602** )
- [14] X. Chen<sup>#</sup>, **D. Yang**<sup>#</sup>, F. Sun, X. Cao, and J. Liang, Adaptively alternative light-transport-model-based three-dimensional optical imaging for longitudinal and quantitative monitoring of gastric cancer in live animal, *IEEE Transactions on Biomedical Engineering*, vol. 63, pp. 2095-2107, 2015. ( **SCI, IF4.538, JCR 2** )
- [15] X. Chen, F. Sun, **D. Yang**, S. Ren, Q. Zhang, and J. Liang, Hybrid simplified spherical harmonics with diffusion equation for light propagation in tissues, *Physics in Medicine & Biology*, vol. 60, p. 6305, 2015. ( **SCI, IF 3.609, JCR 2** , **TOP** )
- [16] X. Chen, F. Sun, **D. Yang**, and J. Liang, Coupled third-order simplified spherical harmonics and diffusion equation-based fluorescence tomographic imaging of liver cancer, *Journal of biomedical optics*, vol. 20, p. 090502, 2015. ( **SCI, IF 3.17** )
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- [20] **D. Yang**, X. Chen, Z. Peng, X. Wang, J. Ripoll, J. Wang, et al., Light transport in turbid media with non-scattering, low-scattering and high absorption heterogeneities based on hybrid simplified spherical harmonics with radiosity model, *Biomedical optics express*, vol. 4, pp. 2209-2223, 2013. ( **SCI, IF3.732, JCR 1** , **TOP** )
- [21] X. Chen, J. Liang, X. Cao, **D. Yang**, D. Chen, J. Ripoll, et al., Feasibility study of endoscopic X-ray luminescence computed tomography: simulation demonstration and phantom application, *Journal of Applied Physics*, vol. 114, p. 084701, 2013. ( **SCI, IF 2.546** )
- [22] X. Chen, **D. Yang**<sup>#</sup>, X. Qu, J. Liang, J. Tian, H. Hu, et al., Comparisons of hybrid radiosity-diffusion model and diffusion equation for bioluminescence tomography in cavity cancer detection, *Journal of biomedical optics*, vol. 17, p. 066015, 2012. ( **SCI, IF 3.17** )
- 会议论文
- [1] M. A. Turja, G. Wu, **D. Yang**, and M. A. Styner, Learning the Latent Heat Diffusion Process through Structural Brain Network from Longitudinal  $\beta$ -Amyloid Data, in **Medical Imaging with Deep Learning**, 2021.
- [2] Q. Liu, **D. Yang**, J. Zhang, Z. Wei, G. Wu, and M. Chen, Analyzing The Spatiotemporal Interaction And Propagation Of Atn Biomarkers In Alzheimer's Disease Using Longitudinal Neuroimaging Data, in **2021 IEEE 18th International Symposium on Biomedical Imaging (ISBI)**, 2021, pp. 126-129.
- [3] M. Kim, **D. Yang**, and G. Wu, Discovering Unprecedented Heuristics For Hub Identification By Joint Graph Embedding And Reinforcement Learning, in **2021 IEEE 18th International Symposium on Biomedical Imaging (ISBI)**, 2021, pp. 1573-1576.
- [4] J. Chen, **D. Yang**, H. Cai, M. Styner, and G. Wu, Discovering Spreading Pathways of Neuropathological Events in Alzheimer's Disease Using Harmonic Wavelets, in **International Conference on Information Processing in Medical Imaging**, 2021, pp. 228-240.
- [5] J. Zhang, **D. Yang**, W. He, G. Wu, and M. Chen, A Network-Guided Reaction-Diffusion Model of AT [N] Biomarkers in Alzheimer's Disease, in **2020 IEEE 20th International Conference on Bioinformatics and Bioengineering (BIBE)**, 2020, pp. 222-229.
- [6] Y. Wang, **D. Yang**, Q. Li, D. Kaufer, M. Styner, and G. Wu, Characterizing the Propagation Pattern of Neurodegeneration in Alzheimer's Disease by Longitudinal Network Analysis, in **2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI)**, 2020, pp. 292-295.
- [7] J. Ma, X. Zhu, **D. Yang**, J. Chen, and G. Wu, Attention-guided deep graph neural network for longitudinal alzheimer's disease analysis, in **International Conference on Medical Image Computing and Computer-Assisted Intervention**, 2020, pp. 387-396.
- [8] A. Chen, **D. Yang**, C. Yan, Z. Peng, M. Kim, P. J. Laurienti, et al., A Novel Spatio-Temporal Hub Identification Method for Dynamic Functional Networks, in **2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI)**, 2020, pp. 1416-1419.
- [9] **D. Yang**, C. Yan, F. Nie, X. Zhu, M. A. Turja, L. C. P. Zsembik, et al., Joint Identification of Network Hub Nodes by Multivariate Graph Inference, in **International Conference on Medical Image Computing and Computer-Assisted Intervention**, 2019, pp. 590-598.
- [10] T. Feng, **D. Yang**, W. Zhu, Y. Dong, and H. Li, Real-time data-driven rigid motion detection and correction for brain scan with listmode PET, in **2016 IEEE Nuclear Science Symposium, Medical Imaging Conference and Room-Temperature Semiconductor Detector Workshop (NSS/MIC/RTSD)**, 2016, pp. 1-4.
- [11] X. Chen, J. Liang, H. Hu, X. Qu, **D. Yang**, D. Chen, et al., Hybrid light transport model based bioluminescence tomography reconstruction for early gastric cancer detection, in **Multimodal Biomedical Imaging VII**, 2012, p. 82160Q.
- [12] **Yang, Defu**, Xueli Chen, Fanzhen Meng, Jimin Liang, and Jie Tian. Image reconstruction for a dual-head PET guided by the Cerenkov luminescence imaging. *World Molecular Imaging Congress 2014*, Seoul , Korea , September 17-20th, 2014. ( **Winner of Student Travel Stipend Award** )
- [13] **Yang, Defu**, Xueli Chen, Shouping Zhu, Xianghan Zhang, Jimin Liang, and Jie Tian. Tissue specificity based light transport model for three dimensional optical imaging. *World Molecular Imaging Congress 2013*, Savannah, Georgia, USA, September 18-21th, 2013.
- [14] **Yang, Defu**, Xueli Chen, Xiaochao Qu, Jimin Liang, Jie Tian. Light transport in turbid media based on simplified spherical harmonics coupled with radiosity theory. *World Molecular Imaging Congress 2012*, Dublin, Ireland, September 5-8th, 2012. ( **Winner of Student Travel Stipend Award** )

- [15] **Yang, Defu**, Di Hu, Martin Styner, Guorong Wu. Discovering Propagation Pattern of Neurodegeneration across Brain Networks. 26th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2019). 2020. (Oral Presentation)
- [16] Chen, Anqi, **Defu Yang**, Chenggang Yan, Minjeong Kim, Paul J Laurienti, Guorong Wu. Reinforcement Learning the Heuristics of Hub Identification over Brain Networks. 26th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2019). 2020.
- [17] Lin, Yi, **Defu Yang**, Jie Peng, Chengang Yan, Yue Gao, Minjeong Kim, Paul J.Laurienti, Guorong Wu. A General Learning-based Framework to Characterize Intrinsic Connectivity Strength in Brain Networks. 26th Annual Meeting of the Organization for Human Brain Mapping (OHBM 2019). 2020.

主持科研项目（课题）

国家自然科学基金委青年项目，基于多视角数据的高分辨率和高对比度的三维宽场荧光显微图像重建方法，2019/01-2021/12，26万元，结题，主持。

荣誉与奖励

- |  |                              |
|--|------------------------------|
| <b>2012 World Molecular Imaging Congress</b>                           | Student Travel Stipend Award |
| <b>2014 World Molecular Imaging Congress</b>                           | KSMI Travel Stipend Award    |
| <b>2020 Annual Meeting of the Organization for Human Brain Mapping</b> | Oral Presentation            |
| <b>2022 IEEE International Symposium on Biomedical Imaging</b>         | Oral Presentation            |
| 陕西省高等学校科学技术奖   | 一等奖                          |
| 陕西省自然科学奖   | 二等奖                          |

<b>学院概况</b>	<b>本科教育</b>	<b>研究生教育</b>	<b>科学研究</b>	<b>联系我们</b>
学院简介	专业介绍	学位点介绍	科研机构	  
院长致辞	教学研究	导师简介	科研成果	
学院领导	课程建设	规章制度		
机构设置	办事指南	研究生通知		
师资队伍	本科教学	课程建设		
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