Curriculum Vitae of Kai Yan



Date of Birth: Dec 30, 1988

Nationality: The People's Republic of China

Education Status: PhD student (To graduate in 2017)

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◆ Research Interests：

- Land surface BRDF modeling and albedo estimation
- MODIS/VIIRS LAI/FPAR operational algorithm and products evaluation
- Radiative transfer modeling of vegetation canopy
- Ground measurement of plant parameters

◆ Academic Background：

- Surveying and Mapping
- Geography Information System
- Photogrammetry
- Satellite Remote Sensing
- Vegetation Dynamics

◆ Education Experience：

Nov, 2016 – Current: Beijing Normal University, Department of Geography /
State Key Laboratory of Remote Sensing Science, GIS, Master-PhD student

Oct, 2014 – Oct, 2016: Boston University, Department of Earth and Enviroment, Joint-PhD student
Advisor: Prof. Ranga B. Myneni

Sep, 2011 – Sep, 2014: Beijing Normal University, Department of Geography /
State Key Laboratory of Remote Sensing Science, GIS, Master-PhD student
Advisor: Prof. Guangjian Yan and Wuming Zhang

Sep, 2007 – Jul, 2011: Beijing University of Civil Engineering and Architecture, Surveying and Mapping

◆ Field Experiment and Internship Experience：

Aug, 2015 (2 weeks): Saihanba Experimental Station, Chengde, China. LAI/FVC ground measurement, UAV remote sensing system test, and multi-angler canopy observation system test

Jul, 2014 (2 weeks): Saihanba Experimental Station, Chengde, China. LAI/FVC ground measurement, UAV images acquisition and multi-angler observation of a sand-terrain-table

Aug, 2013 (1 month): Greater Khingan Mountains, Genhe, China. LAI/FVC ground measurement and UAV images acquisition

Jul, 2012 (2 months): HiWATER filed campaign, Zhangye, China. LAI/FVC/FPAR/LST ground measurement, radio-sounding balloon measurement and canopy BRDF measurement

May, 2011 (2 months): National Administration of Surveying, Mapping and Geoinformation, Beijing, China. Quality inspection of electronic map for navigation system

Jan, 2010 (2 weeks): Dongjiakou Port, Qingdao, China. RTK-GPS measurement and mapping

◆ Publications:

1. **Yan K**, Park T, Yan G, Chen C, Yang B, Liu Z, Nemani R, Knyazikhin Y, Myneni R. Evaluation of MODIS LAI/FPAR Product Collection 6. Part 1: Consistency and Improvements [J]. **Remote Sensing**, **2016**, 8(5): 359.
2. **Yan K**, Park T, Yan G, Liu Z, Yang B, Chen C, Nemani R, Knyazikhin Y, Myneni R. Evaluation of MODIS LAI/FPAR Product Collection 6. Part 2: Validation and Intercomparison [J]. **Remote Sensing**, **2016**, 8(6): 460.
3. **Yan K**, Park T, Yan G, Liu Z, Song W, Xu B, Chen C, Nemani R, Knyazikhin Y, Myneni R. Generating Global Products of LAI and FPAR from NPP-VIIRS Data: Theoretical Background and Implementation [J]. **Remote Sensing of Environment, 2017 (in preparing)**.
4. Yang B, Knyazikhin Y, Lin Y, **Yan K**, Chen C, Park T, Choi S, Mõttus M, Rautiainen M, Myneni R, Yan L. Analyses of impact of needle surface properties on estimation of needle absorption spectrum: Case study with coniferous needle and shoot samples [J]. **Remote Sensing, 2016**, 8(7): 563.
5. Bi J, Myneni R, Lyapustin A, Wang Y, Park T, Chen C, **Yan K**, Knyazikhin Y. Amazon Forests' Response to Droughts: A Perspective from the MAIAC Product [J]. **Remote Sensing, 2016**, 8(4): 356.
6. Chen C, Knyazikhin Y, Park T, **Yan K**, Lyapustin A, Wang Y, Yang B, Myneni R. Prototyping of LAI and FPAR Algorithm with MODIS MultiAngle Implementation of Atmospheric Correction (MAIAC) data [J]. **Remote Sensing, 2017 (under review)**.
7. Zeng Y, Li J, Liu Q, Huete A, Xu B, Yin G, Zhao J, Wu S, **Yan K**. An iterative BRDF/NDVI inversion algorithm based on a posteriori variance estimation of observation errors [J]. **IEEE Transactions on Geoscience and Remote Sensing, 2016**, PP(99): 0196-2892.
8. Zeng Y, Li J, Liu Q, Huete A, Yin G, Xu B, Fan W, Zhao J, **Yan K**, Mu X. A Radiative Transfer Model for Heterogeneous Agro-Forestry Scenarios [J]. **IEEE Transactions on Geoscience and Remote Sensing, 2016**, 54(8): 4613-4628.
9. Yang B, Knyazikhin Y, Mõttus M, Rautiainen M, Stenberg P, Yan L, Chen C, **Yan K**, Choi S, Park T, Myneni R. Estimation of leaf area index and its sunlit portion from DSCOVR EPIC data: Theoretical Basis [J]. **Remote Sensing of Environment, 2017 (under review)**
10. Liu Z, Anderson B, **Yan K**, Dong W, Liao H, Shi P. Global and regional changes in exposure to extreme heat and the relative contributions of climate and population change [J]. **Scientific Reports, 2017,** 7:43909 EP
11. Wang H, Zhang W, Chen Y,Chen M, **Yan K**. Semantic Decomposition and Reconstruction of Compound Buildings with Symmetric Roofs from LiDAR Data and Aerial Imagery [J]. **Remote Sensing, 2015**, 7(10): 13945-13974.
12. Zhang W, Zhao J, Chen M, Chen Y, **Yan K**, Li L, Qi J, Wang X, Luo J, Chu Q. Registration of optical imagery and LiDAR data using an inherent geometrical constraint [J]. **Optics express, 2015**, 23(6): 7694-7702.
13. **Yan K**, Park T, Chen C, Yang B, Yan G, Knyazikhin Y, Myneni R, Choi S. Evaluation and Validation of Updated MODIS C6 and VIIRS LAI/FPAR [C]. 2015 AGU Fall Meeting. **AGU, 2015**.

14. Zhang W, Wang H, Chen Y, **Yan K**, Chen M. 3D building roof modeling by optimizing primitive's parameters using constraints from LiDAR data and aerial imagery [J]. **Remote Sensing, 2014**, 6(9): 8107-8133.
15. Zhang W, Zhang X, Chen Y, **Yan K**, Yan G, Liu Q, Zhou G. Generation of pixel-level resolution lunar DEM based on Chang'E-1 three-line imagery and laser altimeter data [J]. **Computers & Geosciences, 2013**, 59: 53-59.
16. **Yan K**, Ren H, Hu R, Mu X, Liu Z, Yan G. Error analysis for emissivity measurement using FTIR spectrometer [C]. Geoscience and Remote Sensing Symposium (**IGARSS**), 2013 IEEE International. **IEEE, 2013**: 3080-3083.
17. Zhang W, Chen Y, **Yan K**, Yan G, Zhou G. Primitive-based 3D building reconstruction method tested by reference airborne data [J]. International Archives of the Photogrammetry, **Remote Sensing and Spatial Information Sciences, 2012**, 39: 373-378.
18. Chen Y, Zhang W, **Yan K**, Li X, Zhou G. Extracting corn geometric structural parameters using Kinect [C]. Geoscience and Remote Sensing Symposium (**IGARSS**), 2012 IEEE International. **IEEE, 2012**: 6673-6676.
19. Zhou G, **Yan K**, Zhang W, Yan G, Chen Y, Grussenmeyer P, Mohamed M. Comparison of 3D buildings reconstructed by different data sources [C]. Geoscience and Remote Sensing Symposium (**IGARSS**), 2012 IEEE International. **IEEE, 2012**: 6001-6004.
20. Yan G, Ren H, Hu R, **Yan K**, Zhang W. A portable multi-angle observation system [C]. Geoscience and Remote Sensing Symposium (**IGARSS**), 2012 IEEE International. **IEEE, 2012**: 6916-6919.

◆ Patent of Invention：

- Xihan Mu, Guangjian Yan, Kai Yan, Jianbo Qi, A device for remote sensing multi-angle ground measurement, No.: ZL201410001586.3.
- Xihan Mu, Kai Yan, Jianbo Qi, Guangjian Yan, Peng Liu, An automatic and multi-angular observation system for UAV, No.: 2014102193507
- Kai Yan, Zhao Liu, A method and a system for the route planning of multi-destination navigation, No.: CN201610054144.4.
- Kai Yan, Guangjian Yan, et.al, A method for measuring the BRF of rugged terrain based on a sand table.

◆ Important Awards：

- 2014, Two-year scholarship from China Scholarship Council
- 2011, Outstanding graduates of Beijing
- 2010, National scholarship of China