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职 称: 教授

研究方向: 植被高光谱遥感

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个人简历

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教育经历:

2004-2007 PhD 日本东京大学 生物环境工学

2003-2004 Research Student 日本东京大学 生物环境工学

1999-2002 MSc 东北师范大学 自然地理

1995-1999 BA 东北师范大学 地理教育

工作经历:

2016至今 东北师范大学 地理科学学院 教授

2008-2016 东北师范大学 地理科学学院 副教授

2007-2008 博士后 日本农业环境技术研究所

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研究经历与主要研究方向:

多年来从事高光谱遥感影像分类、植被参量遥感反演和估算的相关研究。目前任地理科学学院地理信息科学系主任。主要的研究兴趣是植被反射光谱特性、植被生化物质含量的遥感估算、植被指数的开发等。

已发表论文:

(1) Shan Lu, F. Lu, W. You, Z. Wang, Y. Liu, K. Omasa*. A robust vegetation index for remotely assessing chlorophyll content of dorsiventral

- leaves across several species in different seasons. *Plant Methods*. 2018 (14) 1-15
- (2) X. Gao, Shan Lu*. The relationship of the leaf surface wettability and degree of reflectance polarization. *Spectroscopy and Spectral Analysis*, 2018 (38) 923-928.
- (3)W. You, Z. Wang, F. Lu, Y. Zhao, Shan Lu*, Spectral indices to assess Carotenoid/Chlorophyll ratio from adaxial and abaxial leaf reflectance. *Spectroscopy Letters*. 2017 (50) 387-393
- (4)Y. Liu, Y. Zhao, H. Liu, Shan Lu*. Analysis on impact factors of thermal polarized radiation characteristics of the soil. *Spectroscopy and Spectral Analysis*, 2016 (6) 1813-1817.
- (5) Shan Lu, X. Lu, W. Zhao, Y. Liu, Z. Wang, K. Omasa*. Comparing vegetation indices for remote chlorophyll measurement of white poplar and Chinese elm leaves with different adaxial and abaxial surfaces. *Journal of Experimental Botany* 2015 (66), 5625–5637
- (6) X. Lu, Shan Lu* Effects of adaxial and abaxial surface on the estimation of leaf chlorophyll content using hyperspectral vegetation indices. *International Journal of Remote sensing* 2015 (36), 1447-1469
- (7) Shan Lu, S. Inoue*, H. Shibaike, S. Kawashima, S. Yonemura, M. Du. Detection potential of maize pollen release stage by using vegetation indices and red edge obtained from canopy reflectance in visible and NIR region. *Journal of Agricultural Meteorology* 2015 (71), 153-160
- (8) Z. Sun, Y. Lv, Shan Lu*. An assessment of the bidirectional reflectance models basing on laboratory experiment of natural particulate surfaces. *Journal of Quantitative Spectroscopy & Radiative Transfer* 2015 (136), 102-119
- (9) T. Yang, W. Zhao, Z. Wang, X. Lu, Shan Lu* Changes of Cropping System in China Based on Remotely Sensed NDVI data. *Scientia Agricultural Sinica* 2015, (48) , 1915-1925
- (10) H. Ge, Shan Lu* Y. Zhao. Effects of leaf hair on leaf reflectance and hyperspectral vegetation indices. *Spectroscopy and Spectral Analysis*, 2012 (32) 439-444.
- (11) Shan Lu, Y. Shimizu, J. Ishii, I. Washitani, K. Omasa* Identification of invasive vegetation using hyperspectral imagery in the shore of the Kinu River, Japan. *Journal of Agricultural Meteorology*. 2011 (67) 85-88

- (12) Shan Lu, Y. Shimizu, J. Ishii, S. Funakoshi, I. Washitani, K. Omasa*. Estimation of abundance and distribution of moist tall grasses from hyperspectral imagery in Watarase wetland, Japan. *ISPRS Journal of Photogrammetry and Remote Sensing*. 2009 (64) 674-682
- (13) J. Ishii*, Shan Lu, Y. Shimizu, S. Funakoshi, I. Washitani, K. Omasa. Mapping potential habitats of threatened plant species in a moist tall grassland using hyperspectral imagery. *Biodiversity and conservation*. 2009 (18) 2521-2535.
- (14) Shan Lu, K. Oki, Y. Shimizu and K. Omasa*. Comparison between several feature extraction/classification methods for mapping complicated agricultural land use patches using airborne hyperspectral data. *International Journal of Remote sensing*. 2007(28): 963-984
- (15) Shan Lu, S. Funakoshi, Y. Shimizu, J. Ishii, A.M. de Asis, M. Ajima, I. Washitani and K. Omasa*. Estimation of plant abundance and distribution of *Miscanthus sacchariflorus* and *Phragmites australis* using matched filtering of hyperspectral image. *Eco-Engineering*. 2006 (18):65-70.
- (16) K. Oki*, Shan Lu, T. Saruwatari, T. Suhama and K. Omasa. Evaluation of supervised classification algorithms for identifying crops using airborne-hyperspectral data. *International Journal of Remote Sensing*. 2006 (10):1993-2002.

承担的科研项目：

1. 吉林省科技厅, 20180101313JC, 异面叶植物水分状况的高光谱遥感估算, 2018/01-2020/12, 12.0万元, 在研, 主持。
2. 吉林省教育厅, 【2014】B038, 叶片茸毛对利用高光谱指数进行生化物质含量反演的影响, 2014/01-2016/12, 5.0万元, 已结题, 主持。
3. 国家自然科学基金国际合作项目, 41210304039, 基于和谐东亚的地理学合作与发展国际学术研讨会, 2012/06-2012/12, 4.0万元, 已结题, 主持。
4. 国家自然科学基金青年项目, 41001258, 高光谱遥感反演植物生化物质含量的叶片结构依存性研究, 2011/01-2013/12, 18.0万元, 已结题, 主持。

5. 教育部留学回国人员科研启动基金, 遥感技术用于积雪监测, 2010/09 - 2013/08
, 4.0万元, 已结题, 主持。

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教学信息 (数据来源: 教务处)



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