

# 卢杨

## 个人信息

出生日期: 1990年4月25日  
户籍: 福建省福州市  
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## 教育背景

2014年9月~2019年8月 (预期): 香港浸会大学, 理学院, 计算机科学, 哲学博士学位 (GPA 4.0/4.0), 导师: 张晓明教授 (IEEE Fellow)  
2012年9月~2014年8月: 澳门大学, 科技学院, 软件工程, 理学硕士学位 (GPA: 3.57/4.0, 专业排名前5%, 杰出毕业生), 导师: 唐远炎教授 (IEEE Fellow)  
2008年9月~2012年5月: 澳门大学, 科技学院, 软件工程, 理学学士学位 (GPA: 3.55/4.0, 专业排名前5%)  
2005年9月~2008年6月: 福建省福州市第八中学

## 工作经历

2014年9月~2017年6月: 助教, 香港浸会大学  
2012年9月~2014年6月: 助教, 澳门大学  
2012年6月~2012年8月: 实习研究员, 智能图文信息处理研究室, 清华大学电子工程系

## 学术成果

### 期刊论文

- Bayes Imbalance Impact Index: A Measure of Class Imbalanced Dataset for Classification Problem  
Yang Lu, Yiu-ming Cheung, and Yuan Yan Tang  
*IEEE Transactions on Neural Networks and Learning Systems (TNNLS)* (JCR1区期刊), 第二轮审稿中.
- Adaptive Chunk-based Dynamic Weighted Majority for Imbalanced Data Streams with Concept Drift  
Yang Lu, Yiu-ming Cheung, and Yuan Yan Tang  
*IEEE Transactions on Neural Networks and Learning Systems (TNNLS)* (JCR1区期刊), 第二轮审稿中.
- Self-Adaptive Multi-Prototype-based Competitive Learning Approach: A k-means-type Algorithm for Imbalanced Data Clustering  
Yang Lu, Yiu-ming Cheung, and Yuan Yan Tang

*IEEE Transactions on Cybernetics (TCYB)* (JCR1 区期刊), DOI:10.1109/TCYB.2019.2916196.

- **k-Times Markov Sampling for SVMC**

Bin Zou, Chen Xu, **Yang Lu**, Yuan Yan Tang, Jie Xu, Xinge You

*IEEE Transactions on Neural Networks and Learning Systems (TNNLS)* (JCR1 区期刊), vol. 29, no. 4, pp. 1328-1341, 2018.

- **Hyperspectral Image Classification Based on Three-Dimensional Scattering Wavelet Transform**

Yuan Yan Tang, **Yang Lu**, Haoliang Yuan

*IEEE Transactions on Geoscience and Remote Sensing (TGRS)* (JCR2 区期刊), vol. 53, no. 5, pp. 2467-2480, 2015. (导师一作)

- **A Fractal Dimension and Wavelet Transform Based Method for Protein Sequence Similarity Analysis**

Lina Yang, Yuan Yan Tang, **Yang Lu** and Huiwu Luo

*IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB)* (JCR3 区期刊), vol. 12, no. 2, pp. 348-369, 2015.

- **The Generalization Ability of SVM Classification Based on Markov Sampling**

Jie Xu, Yuan Yan Tang, Bin Zou, Zong Ben Xu, Luo Qing Li, **Yang Lu**, Baochang Zhang

*IEEE Transactions on Cybernetics (TCYB)* (JCR1 区期刊), vol. 45, no. 6, pp. 1169-1179, 2015.

- **Generalization Performance of Gaussian Kernels SVMC Based on Markov Sampling**

Jie Xu, Yuan Yan Tang, Bin Zou, Zong Ben Xu, Luo Qing Li, **Yang Lu**

*Neural Networks* (JCR2 区期刊), vol. 53, pp. 40-51, 2014.

- **Hyperspectral Image Classification Based on Regularized Sparse Representation**

Haoliang Yuan, Yuan Yan Tang, **Yang Lu**, Lina Yang, Huiwu Luo

*IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (JCR3 区期刊), vol. 7, no. 6, pp. 2174-2182, 2014.

- **Spectral-Spatial Classification of Hyperspectral Image Based on Discriminant Analysis**

Haoliang Yuan, Yuan Yan Tang, **Yang Lu**, Lina Yang, Huiwu Luo

*IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (JCR3 区期刊), vol. 7, no. 6, pp. 2035-2043, 2014.

- **The Generalization Performance of Regularized Regression Algorithms Based on Markov Sampling**

Bin Zou, Yuan Yan Tang, Zong Ben Xu, Luo Qing Li, Jie Xu, **Yang Lu**

*IEEE Transactions on Cybernetics (TCYB)* (JCR1 区期刊), vol. 44, no. 9, pp. 1497-1507, 2014.

## 会议论文

- **Dynamic Weighted Majority for Incremental Learning of Imbalanced Data Streams with Concept Drift**

**Yang Lu**, Yiu-ming Cheung, and Yuan Yan Tang

*Proceedings of International Joint Conference on Artificial Intelligence (IJCAI)* (CCF A 类会议), pp. 2393-2399, Melbourne, Australia, August 19-25, 2017.

- **GOBoost: G-mean Optimized Boosting Framework for Class Imbalance Learning**

**Yang Lu**, Yiu-ming Cheung, and Yuan Yan Tang

*Proceedings of the 12th World Congress on Intelligent Control and Automation (WCICA)*, pp. 3149-3154, Guilin, China, June 12-15, 2016.

- **Hybrid Sampling with Bagging for Class Imbalance Learning**

**Yang Lu**, Yiu-ming Cheung, and Yuan Yan Tang

*Proceedings of Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)* (CCF C类会议), pp. 14-26, Auckland, New Zealand, April 19-22, 2016. (Long oral presentation 39/307)

- **Learning Performance of DAGSVM Algorithm Based on Markov Sampling**

Jie Xu, **Yang Lu**, Bin Zou

*Proceedings of International Conference on Machine Learning and Cybernetics (ICMLC)*, pp. 910-915, Guangzhou, China, July 12-15, 2015.

- **A Novel Method for Protein Structure Retrieval Using Tableau Representation and Sparse Coding**

**Yang Lu**, Lina Yang, Haoliang Yuan, Yulong Wang, Huiwu Luo and Yuan Yan Tang

*Proceedings of IEEE International Conference on Systems, Man and Cybernetics (SMC)* (CCF C类会议), pp. 4042-4046, San Diego, USA, October 5-8, 2014.

- **Sparse Representation Using Contextual Information for Hyperspectral Image Classification**

Haoliang Yuan, **Yang Lu**, Lina Yang, Huiwu Luo, and Yuan Yan Tang

*Proceedings of IEEE International Conference on Cybernetics (CYBCONF)*, pp. 138-143, Lausanne, Switzerland, June 13-15, 2013.

- **Spectral-Spatial Linear Discriminate Analysis for Hyperspectral Image Classification**

Haoliang Yuan, **Yang Lu**, Lina Yang, Huiwu Luo, and Yuan Yan Tang

*Proceedings of IEEE International Conference on Cybernetics (CYBCONF)*, pp. 144-149, Lausanne, Switzerland, June 13-15, 2013.

## 语言能力

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- 普通话（母语）
- 粤语（精通）
- 英语（流利）

## 专业技能

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- 精通Python (numpy, scikit-learn, pandas) , Matlab, 以及在机器学习中的应用
- 精通TensorFlow以及深度学习框架
- 熟悉C++, Java, C, SQL, 以及数据结构与算法
- 了解Linux平台, Shell指令

## 研究方向

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- 类别不平衡学习 (Class imbalance learning)
- 深度推荐系统 (Deep learning based recommender system)
- 集成学习 (Ensemble learning)
- 在线学习 (Online learning)
- 无监督学习与聚类 (Unsupervised learning and clustering)

- 高光谱图像处理 (Hyperspectral image processing)

## 学术奖项

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2008~2012:	院长特殊荣誉奖, 澳门大学
2012~2014:	研究生奖学金, 澳门大学
2014年6月:	杰出硕士毕业生, 澳门大学
2016年3月:	优秀助教奖, 香港浸会大学
2016年8月:	杰出助教奖, 香港浸会大学
2017年6月:	第20届研究生座谈会荣誉研究奖, 香港浸会大学
2017年8月:	研究生论文竞赛二等奖, IEEE香港智能计算分会