

姓名：屠良平

学位职称：博士，教授

任职/辽宁省百千万人才层次/不填：理学院院长，博士生导师

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主讲课程：机器学习，常微分方程，线性代数，概率与数理统计，组合数学，组合优化等

科研方向：机器学习，人工智能，模式识别，天文信息处理



#### 教育工作简历：

1996.09-2000.07	兰州大学	应用数学专业	学士
2002.09-2005.04	辽宁科技大学	计算机应用技术	硕士
2007.09-2010.07	中国科学院自动化研究所（北京）	模式识别与智能系统	博士
2010.11-2014.11	中国科学院国家天文台	天文技术与方法	博士后
2000.07-今	辽宁科技大学 理学院	教师	

#### 学术成果：

##### 【获奖】

辽宁科技大学特聘教授

辽宁科技大学首批青年拔尖人才

鞍山市优秀青年教师

辽宁科技大学优秀教师

辽宁科技大学青年科技奖

辽宁科技大学十佳教学明星

辽宁科技大学十大杰出青年

辽宁科技大学学生最喜爱教师等

##### 【代表性学术著作、论文】

1. Xiang Gao, **Liangping Tu\***, Juan Li and Xin Li, Automatic Classification Algorithm of Astronomical Objects Based on Improved ResNet, International Journal of Innovative Computing, Information and Control, Volume 19, Number 2, April 2023, Pages 579 - 596.

2. 李双川, 屠良平\*, 李馨, 王莉莉. 基于 Transformer 特征提取的 A 型恒星光谱子型分类算法. 光谱学与光谱分析, 43, 5, 2023. (SCI)
3. 屠良平, 李双川, 涂东鑫, 李建喜\*, 丁治超. SATS: 基于 Analysis 和 Transformer 多重特征提取的恒星光谱分类算法. 光谱学与光谱分析.
4. 仲峥迪, 屠良平\*, 冯雪琦, 李娟, 李馨, EfficientNetV2-S-Triplet7: 一种改进的星系形态学分类算法, 天文学报. (T2, 录用)
5. 冯雪琦, 屠良平\*, 仲峥迪, 李娟, 李馨, 一种低表面亮度星系的自动搜索算法——YOLOX-CS, 天文学报. 天文学报. (T2, 录用)
6. 李馨, 屠良平\*, 李娟, 高翔, 冯雪琦, 仲峥迪, Xception-AS: 一种基于 Xception 算法结构的天体目标自动分类算法, 天文技术与进展, 第 20 卷, 第 3 期, 2023 年 5 月. (T3)
7. Juan Li, Liangping Tu\*, Xiang Gao, Xin Li, Zhengdi Zhong, Xueqi Feng, Automatic classification of galaxy morphology based on the RegNetX-CBAM3 algorithm, Monthly Notices of the Royal Astronomical Society, Volume 517, Issue 1, November 2022, Pages 808 - 824. (SCI)
8. Li, HF; Tu, LP\*; Hu, YH; Liu, H; Zhao, J. Automatic Measurement of Stellar Atmospheric Physical Parameters Based on Kernel Ridge Regression Method. Spectroscopy and Spectral Analysis, 40(4) (2020) 1297-1303. (SCI)
9. Zhang, X. W., H. Liu, and L. P. Tu. "A modified particle swarm optimization for multimodal multi-objective optimization." Engineering Applications of Artificial Intelligence 95(2020):103905. (SCI)
10. Liu, H., X. W. Zhang, and L. P. Tu. "A modified particle swarm optimization using adaptive strategy - ScienceDirect." Expert Systems with Applications 152. (SCI)
11. Hu, Y., Liu, H., Zhao, J., Tu, L. Dynamic analysis of dissemination model of innovation ability of enterprise r&d personnel. Physica A: Statistical Mechanics and its Applications, 531, 121743. (SCI)
12. Tu Liang-ping, Wei Hui-ming, Luo A-li, Zhao Yong-heng, Automatic Measurement of the Stellar Atmospheric Parameters Based Mass Estimation, Spectroscopy and Spectral Analysis, 35(11) (2015) 3204-3208. (SCI)
13. Tu Liang-ping, Wei Hui-ming, Wang Zhi-heng, Wei Peng, Luo A-li, Zhao Yong-heng, Spectra Classification Based on Local Mean-Based K-Nearest Centroid Neighbor Method, Spectroscopy and Spectral Analysis, 35(4) (2015) 1103-1106. (SCI)

14. **Tu Liang-ping**, Wei Hui-ming, Wei Peng, Pan Jing-chang, Luo A-li, Zhao Yong-heng, SKLOF : A New Algorithm to Reduce the Range of Supernova Candidates, Spectroscopy and Spectral Analysis, 35(1)(2015) 258-262. (SCI)
15. **Liangping Tu**, Huiming Wei, Liya Ai, Galaxy and Quasar Classification Based on Local Mean-based k-Nearest Neighbor Method, Electronics Information and Emergency Communication (ICEIEC), 2015 5th International Conference on, 2015/5/14-2015/5/16. (EI)
16. Si Jian-Min, Li Yin-Bi, Luo A-Li, **Tu Liang-Ping**, Shi Zhi-Xin, Identifying Carbon stars from the LAMOST pilot survey with the efficient manifold ranking algorithm, Research in Astronomy and Astrophysics, 15(10) (2015)1671-1694. (SCI)
17. Peng Wei, Ali Luo, Yinbi Li, **Liangping Tu**, et al. On the construction of a new stellar classification template library for the lamost spectral analysis pipeline. The Astronomical Journal, 147(5) (2014) No.101. (SCI)
18. Shi Zhi-xin, Comte Georges, Luo A-li, Tu Liang-ping, Zhao Yong-heng, Wu Fu-chao, The Background Sky Subtraction Around [OIII] Line in LAMOST QSO Spectra, Spectroscopy and Spectral Analysis, 34(11) (2014)3132-3135. (SCI)
19. Shou-Jun Xu, Hai-Yang Chen, Qiu-Xia Zhang, **Liangping Tu**. Hosoya polynomials of twisted toroidal polyhexes, Ars Comb. 114 (2014) 417-425. (SCI)
20. Xiu-Song Liu, Shou-Jun Xu, **Liangping Tu**. Global forcing numbers of Handgun-shaped benzenoid systems, Curr. Nanoscience, Curr. Nanosci., 10 (2014) 766-771. (SCI)
21. Tan Xin, Pan Jing-chang, Wang Jie, Luo A-li, **Tu Liang-ping**. Stellar Spectrum Parameter Measurement Based on Line Index by Linear Regression, Spectroscopy and Spectral Analysis, 33(5) (2013) 1397-1400. (SCI)
22. **Tu Liangping**, Dong Changqing, Histogram equalization and image feature matching, The 6th International Congress on Image and Signal Processing (CISP2013), 443-447. (EI)
23. Tan Xin, Pan Jing-chang, Wang Jie, Luo A-li, **Tu Liang-ping**. Line Index Stellar Atmospheric Physical Parameter Measurement Based on Artificial Neural Network, Spectroscopy and Spectral Analysis, 33(6)(2013) 1701-1705. (SCI)
24. Peng Wei, Ali Luo, Yinbi Li, Jingchang Pan, Yongheng Zhao, **Liangping Tu**, et al. Mining unusual and rare stellar spectra from large spectroscopic survey data sets using the outlier-detection method. Monthly notices of the Royal Astronomical Society, 431(2) (2013) 1800-1811. (SCI)

25. **Tu Liang-ping**, Luo A-Li, Jiang Bin, Wei Peng, Zhao Yong-Heng, Liu Rong, A Novel Method to Determine the Redshifts of Active Galaxies Based on Wavelet Transform, Spectroscopy and Spectral Analysis, 32(10) (2012) 2858-2862. (SCI)
26. **Tu LiangPing**, Luo Ali, Wu FuChao, Zhao YongHeng, A method of searching for supernova candidates from massive galaxy spectra, Science China Physics, Mechanics & Astronomy, 53(10) (2010) 1928-1938. (SCI)
27. **Tu Liang-Ping**, Wu Fu-Chao, Luo A-li, Zhao Yong-Heng, Heping Zhang, Galaxy spectrum subtraction of a mixed spectrum based on two class PCA eigen-spectra, Spectroscopy and Spectral Analysis, 30(6) (2010) 1707-1711. (SCI)
28. **Tu Liang-Ping**, Luo A-li, Wu Fu-Chao, Zhao Yong-Heng, New supernova candidates from the SDSS-DR7 spectral survey, Research in Astronomy and Astrophysics 9(6) (2009) 635-640. (SCI)
29. **Tu Liang-Ping**, Luo A-li, Wu Fu-Chao, Zhao Yong-Heng, Heping Zhang, Reducing the searching range of supernova candidates automatically in a flood of spectra of galaxies, Spectroscopy and Spectral Analysis, 29(12) (2009) 3420-3423. (SCI)
30. **Liangping Tu**, Fuchao Wu, Ali Luo, Jiannan Zhang. Automatic Classification of Stellar Spectra Used Neural Network, IEEE International Conference on Natural Computation (ICNC2008), 105-109. (EI)

#### 【主要科研项目】

1. 国家自然科学基金青年基金项目 星系光谱自动分析与特殊天体自动搜寻研究（主持）  
201301-201512
2. 国家自然科学基金天文联合基金项目 LAMOST 天体光谱科学参数的自动测量及特殊天体目标的自动搜索算法研究（主持） 201801-202012
3. 辽宁省教育厅科研项目 基于 LAMOST 项目的海量光谱数据自动分析研究（主持）  
20120630-20140701.
4. 企业委托 基于双轴云台的图像显控终端系统研发（主持） 20200701-20230701