

Curriculum Vitae

孙宝山 教授，硕士生导师，计算机系主任

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(Professor, Master's Supervisor, Title of Excellent Tutor)



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荣获第六届“我最喜爱的研究生导师”荣誉称号

主要研究领域 RESEARCH INTERESTS

- 人工智能及机器学习 Artificial Intelligence and Machine Learning
- 图像处理及计算机视觉 Image Processing and Computer Vision
- 云计算与大数据分析 Cloud Computing and Big Data Analysis
- 计算机网络技术 Computer Network Technology
- 物联网通信技术 IoT Communication Technology
- 计算智能算法及应用 Computational Intelligence Algorithms and Applications

工作经历 WORK EXPERIENCE

- 孙宝山教授，工学博士，硕士生导师，系副主任。国家公派出国留学英国访问学者、CCF中国计算机学会会员。天津大学计算机应用技术硕士毕业，天津工业大学计算机检测方向博士毕业。荣获天津市工程专业学位优秀指导教师称号，入选天津市高校“优秀青年教师资助计划”。带领科研团队已在相关研究领域及项目取得一系列科研成果。国外SCI期刊、EI期刊、国内重要期刊及国际会议上发表30余篇高水平学术论文，主持及参与科研项目32项。
- Professor, Master's Supervisor, Tiangong University, October, 2025 -- Now
- Title of Excellent Tutor. Selected into the "Supporting Scheme for Excellent Young Teachers" of Tianjin Universities
- Visiting scholar sent by the government to study abroad in the UK
- Member of the CCF China Computer Society
- Academic Journals and Conference Reviewers include the IEEE Transactions on Aerospace and Electronic Systems Society (AESS), IEEE Applied Sciences, Journal of Computational Information Systems, IEEE/ACIS ICIS, ACIRC

企业培训资质 ENTERPRISE TRAINING EXPERIENCE

- 俄罗斯鲁班工坊EPIP师资培训 EPIP Teacher Training at Luban Workshop of Russia
 - Redhat红帽授课认证培训 (RHCSA) Redhat Teaching Certification Training
 - 天津市大学软件学院项目培训 TJISE-Tianjin Software College Project Training
 - 天津市公安局宁河分局网安支队培训 Training for the Network Security Detachment of Ninghe Branch of Tianjin Public Security Bureau
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教育背景 EDUCATION

博士 **Ph.D**, Design and Forming of Composite Materials , Tianjin Polytechnic University, China
硕士 **Master**, Computer Application Technology ,Tianjin University, China

发表论文 PUBLICATION

1. **Sun, Bao-Shan**;Huang, Hao;Chai, Zheng-Yi;Zhao, Ying-Jie;Kang, Hong-Shen. Multi-objective optimization algorithm for multi-workflow computation offloading in resource-limited IIoT. *SWARM AND EVOLUTIONARY COMPUTATION*, 2024,89,101646. (SCI中科院一区)
2. Huang H , Chai Z Y , **Sun B S** ,et al. Multiobjective Deep Reinforcement Learning for Computation Offloading and Trajectory Control in UAV-Base-Station-Assisted MEC[J]. *IEEE Internet of Things Journal*, 2024,11(9): 21805-31821. (SCI中科院一区)
3. **Baoshan Sun**,Chunfei Liu,Qiuyan Wang,Kaiyu Bi and Wenxue Zhang. MFFBi-Unet:Merging Dynamic Sparse Attention and Multi-scale Feature Fusion for Medical Image Segmentation[J]. *Interdisciplinary Sciences: Computational Life Sciences*,2025: 1-14. (SCI中科院二区)
4. Zhuo Zhang, Hongbing Wu, Huan Zhao, Yicheng Shi, Jifang Wang, Hua Bai and **Baoshan Sun**. A Novel Deep Learning Model for Medical Image Segmentation with Convolutional Neural Network and Transformer[J], *Interdisciplinary Sciences: Computational Life Sciences*, 2023, 15(4):663-677. (SCI中科院二区)
5. **Baoshan Sun**,Haolin Tang,Liqing Gao,Kaiyu Bi and Jiabao Wen. RTDETR-MARD: A Multi-Scale Adaptive Real-Time Framework for Floating Waste Detection in Aquatic Environments[J]. *Journal of Marine Science and Engineering*, 2025, 13(5): 996. (SCI中科院三区)
6. **Baoshan Sun** and Xin Cheng. Smoke Detection Transformer: An Improved Real-Time Detection Transformer Smoke Detection Model for Early Fire Warning[J]. *Fire*, 2024, 7(12):488. (SCI中科院三区)
7. Hongbing Wu;Zhuo Zhang;Yuchen Zhang;**Baoshan Sun**. ACX-UNet: a multi-scale lung parenchyma segmentation study with improved fusion of skip connection and circular cross-features extraction. *Signal, Image and Video Processing*, 2024,18(1),525-533. (SCI中科院四区)
8. **Sun B** , Bi K , Wang Q . YOLOv7-FIRE: A tiny-fire identification and detection method applied on UAV[J]. *AIMS Mathematics*, 2024, 9(5).DOI:10.3934/math.2024526. (SCI中科院三区)
9. Zhigang L , **Baoshan S** , Kaiyu B .Optimization of YOLOv7 Based on PConv, SE Attention and Wise-IoU[J]. *International Journal of Computational Intelligence & Applications*, 2024, 23(1).DOI:10.1142/S1469026823500335.
10. **Sun, Baoshan**; Ge, Mengying; Zhao, Peng; Li, Chunqing. Systematic framework for short text classification based on improved TWE and supervised MCFS topic merging strategy. *International Journal of Computers and Applications*,2022,44(5),401-413.
11. Wang, Anna ; **Sun, Baoshan**; Jin, Rize. An improved model of multi-attention lstm for multimodal sentiment analysis. *Proceedings of 2019 3rd International Conference on Computer Science and Artificial Intelligence, CSAI 2019 - Workshop - The 11th International Conference on Information and Multimedia Technology, ICIMT 2019*. 144-149, December 6, 2019.
12. Fu, Weigui; Zhang, Xu; Mao, Yunyun; Pei, Tengfei; **Sun, Baoshan**; Mei, Shuzhen; Chen, Li. A novel γ -Al₂O₃ nanofiltration membrane via introducing hollow microspheres into interlayers for improving water permeability. *Ceramics International*, v 44, n 13, p 15824-15832, September 2018

13. **Sun, Baoshan**; Lu, Yang. High-available and load-balancing architecture design for flight control computer cluster in stratospheric airship. *ACM International Conference Proceeding Series*, v Part F131934, p 1-6, September 15, 2017, *Proceedings of the 2nd International Conference on Robotics, Control and Automation, ICRCA 2017*.
14. **Sun, Baoshan**; Zhao, Peng. Feature extension for Chinese short text classification based on topical N-Grams. *Proceedings - 16th IEEE/ACIS International Conference on Computer and Information Science, ICIS 2017*, p 477-482, June 27, 2017, *Proceedings - 16th IEEE/ACIS International Conference on Computer and Information Science, ICIS 2017*.
15. **Sun, Baoshan**; Dong, Lingyu. Dynamic Model Adaptive to User Interest Drift Based on Cluster and Nearest Neighbors. *IEEE Access*, v 5, p 1682-1691, 2017.
16. Li, JinShuai; Zhao, XiaoFei; **Sun, BaoShan**. Research on the method of splitting large class diagram based on multilevel partitioning. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, v 10585 LNCS, p 163-172, 2017, *Intelligent Data Engineering and Automated Learning – IDEAL 2017 - 18th International Conference, Proceedings, 2017*.
17. **Sun, Baoshan**; Liu, Xiaoxiao; Huang, Yanli. An object-oriented design method and simulation of flight control software. *Journal of Computational Information Systems*, v 10, n 20, p 8591-8598, October 15, 2014.
18. **Sun, Baoshan**; Zhu, Meixia. A transforming method of keeping the mutual simulation relationship between sequence diagram and CCSL models. *Journal of Computational Information Systems*, v 9, n 21, p 8659-8666, November 1, 2013.
19. **Sun, Baoshan**; Huang, Yanli. Flight control software for stratospheric airship. *Journal of Computational Information Systems*, v 9, n 10, p 4139-4146, May 15, 2013.
20. **Sun, Baoshan**; Wan, Zhenkai. Three-dimensional braided composites detection method based on improved chaotic neural network. *Materials Engineering and Automatic Control*, v 562-564, p 455-458, 2012.
21. **Sun, Baoshan**; Wan, Zhenkai. Based on Linux school short message system design and implementation. *Proceedings - 2010 3rd IEEE International Conference on Computer Science and Information Technology, ICCSIT 2010*, v 5, p 552-555, 2010, *Proceedings - 2010 3rd IEEE International Conference on Computer Science and Information Technology, ICCSIT 2010*.
22. Yu, Junle; **Sun, Baoshan**. Research of education evaluation information mining technology based on analytical hierarchy process (AHP) and Genetic Algorithm (GA). *ICACTE 2010 - 2010 3rd International Conference on Advanced Computer Theory and Engineering, Proceedings*, v 4, p V4289-V4292, 2010, *ICACTE 2010 - 2010 3rd International Conference on Advanced Computer Theory and Engineering, Proceedings*.
23. **Sun, Baoshan**; Wan, Zhenkai. Based on an improved ant colony algorithm fabric image detection method. *Proceedings - 2010 3rd IEEE International Conference on Computer Science and Information Technology, ICCSIT 2010*, v 5, p 568-571, 2010, *Proceedings - 2010 3rd IEEE International Conference on Computer Science and Information Technology, ICCSIT 2010*.
24. Yao, Nan; **Sun, Baoshan**. Study of resource index algorithm based on p2p. *Proceedings of ICCIA 2010 - 2010 International Conference on Computer and Information Application*, p 255-258, 2010, *Proceedings of ICCIA 2010 - 2010 International Conference on Computer and Information Application*.
25. **Sun, Baoshan** ; Wan, Zhenkai. A method of image recognition based on improvement ant colony algorithm. *2009 4th IEEE Conference on Industrial Electronics and Applications, ICIEA 2009*, p

3737-3740, 2009, 2009 4th IEEE Conference on Industrial Electronics and Applications, ICIEA 2009.

26. Song, Limei; Luo, Jing; **Sun, Baoshan**; Wen, Yuhua. Two cameras vision model for the 3D shape recovery. 5th International Conference on Natural Computation, ICNC 2009, v 5, p 246-250, 2009, 5th International Conference on Natural Computation, ICNC 2009.

主要科研项目 RESEARCH PROJECT

- 1.资源受限网络化控制系统协同设计研究, 国家自然科学基金
- 2.识别蛋白质超家族之间远程同源性的算法研究, 国家自然科学基金
- 3.面向灾变现场监测的无线传感器网络关键技术研究, 天津市科技计划项目
- 4.面向认知物联网的频谱大数据处理关键技术研究, 天津市自然科学基金
- 5.面向听障人士无障碍交流的多模态手语理解方法研究, 天津市自然科学基金
- 6.天津市居住证积分协同办公及大数据采集方法研究, 天津市科技计划项目
- 7.面向汽车行业的在线高速3D光学检测装备, 河北省天津工业大学沧州研究院
- 8.正面人脸图像自动合成算法研究, 天津市教委项目
- 9.低质量图像重建技术与开发, 企业合作项目
- 10. AI大数据智能综合系统平台研究与开发, 企业合作项目
- 11.环保除尘系统改造自动控制系统与控制程序开发研究, 企业合作项目
- 12.中空纤维陶瓷膜的制备、应用实验及产业化开发, 企业合作项目
- 13.肺癌气体标志物分离膜的制备, 企业合作项目
- 14.智能人力资源综合管理平台研究与开发, 企业合作项目
- 15.高漫反射效率的激光反光带材料的研制, 企业合作项目
- 16.构建新时代科技人才创新创业新格局体系的研究, 天津市科技计划项目
- 17.三维舞台场景界面系统开发, 企业合作项目
- 18.基于SDN的动态感知QoS路由算法研究, 重点实验室开放课题
- 19.重磁异常二三维一体化正反演解释软件开发, 企业合作项目
- 20.智能便携转运系统设计, 企业合作项目
- 21.基于流固耦合技术对调压阀结构的改型优化开发, 企业合作项目
- 22.天津市滨海新区行政审批局自贸区系统, 企业合作项目
- 23.企业信息管理平台的设计及软件开发, 企业合作项目
- 24.陕西省电力公司卓越绩效评价试点项目技术服务合同, 企业合作项目
- 25.天津市企业共享服务平台建设及行政审批服务网升级完善项目, 企业合作项目

主要获奖 AWARDS

- 1.荣获天津市工程专业学位优秀指导教师称号
- 2.荣获第六届“我最喜爱的研究生导师”荣誉称号
- 3.入选天津市高校“优秀青年教师资助计划”
- 4.第十三届全国多媒体课件大赛 二等奖
- 5.荣获天津工业大学2022年度年优秀班导师称号
- 6.天津工业大学2020年、2025年度考核优秀
- 7.天津工业大学青年教师教学基本功竞赛 二等奖
- 8.首届“园丁杯”教育信息化创新应用征文优秀论文奖
- 9.天津工业大学教学成果奖 二等奖、“优秀教学质量奖” 二等奖、三等奖
- 10.天津工业大学年度“优秀教师”
- 11.连续三年获得天津市和平区人民政府颁发“优秀志愿者”称号