

Dr. Bo Yuan

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Research Interests

Data Mining, Reinforcement Learning and Evolutionary Computation

Education

Ph.D., Computer Science 10/2002 – 04/2006
The University of Queensland, Brisbane, Australia

M.Sc., Computer Science 03/2001 – 07/2002
The University of Queensland, Brisbane, Australia

B.E., Computer Science 09/1994 – 07/1998
Nanjing University of Science and Technology, Nanjing, P.R. China

Certificate, English Medium Instruction 07/2017 – 07/2017
Hertford College, The University of Oxford, United Kingdom

Work Experience

Research Scientist 08/2021 –
Centre for Intelligent Control,
Research Institute of Tsinghua University in Shenzhen, P.R. China

Co-Founder 07/2021 –
Shenzhen Wisdom & Strategy Technology Co., Ltd., Shenzhen, P.R. China
An innovative AI education solution provider focusing on the development of
information literacy and computational thinking

Associate Professor 12/2009 – 07/2021
Division of Informatics, Shenzhen International Graduate School,
Tsinghua University, Shenzhen, P.R. China

Lecturer 07/2007 – 12/2009
Division of Informatics, Graduate School at Shenzhen,
Tsinghua University, Shenzhen, P.R. China

Research Officer 03/2006 – 04/2007
School of Information Technology and Electrical Engineering,
The University of Queensland, Brisbane, Australia

Professional Positions

Membership

- Senior Member, IEEE (S'02 – M'07 – SM'20) & IEEE Computational Intelligence Society
- Board Member (2020 – 2022), Technical Committee on Higher Education, Shenzhen Education Society
- Member, Chinese Association for Artificial Intelligence
- Member, Technical Committee on Visual Cognition & Computing, China Society of Image and Graphics
- Member, Emergent Technologies Technical Committee, IEEE Computational Intelligence Society

Leadership

- Deputy Director, Office of Academic Affairs, Tsinghua SIGS (2013 – 2020)
- Deputy Director, Working Group on Online Education, Tsinghua SIGS (2019 – 2020)
- Founding Director, Centre for Entrepreneurship Education, Tsinghua SIGS (2014)
- Faculty Member, Advisory Committee for Graduate Studies, Tsinghua SIGS (2015 – 2020)
- Member, Steering Committee for Teaching, Tsinghua SIGS (2013 – 2020)

Affiliation

- Honorary Associate Professor, The University of Queensland, Australia (2023 –)
- Chief AI Scientist, Xi'an Aida Electronic Technology Co., Ltd., P.R. China (2022 –)
- Visiting Scholar, QY Institute of Sciences, P.R. China (2022 – 2023)
- Visiting Fellow, The University of Technology, Sydney, Australia (2018 – 2021)
- Research Assistant, Department of Computer Science, Tsinghua University, P.R. China (1998 – 1999)

Awards & Highlights

Teaching

- Two Awards for Education, Teaching and Research Excellence, Shenzhen Education Bureau (2021)
- National-Level Undergraduate Course Certificate for "Data Mining: Theory and Algorithms" (2020)
- Award for Online Teaching Excellence During the Pandemic, Tsinghua University (2020)
- MOOC Innovation Award for "Data Science Certificate Program", Tsinghua University (2019)
- MOOC Excellence Award for "Data Science: A New Way of Thinking", Tsinghua University (2019)
- 1st Class Award for Education & Teaching Achievement, Tsinghua University (2019)
- National-Level MOOC Certificate for "Data Mining: Theory and Algorithms" (2018)
- Outstanding Teacher of Shenzhen, Shenzhen Education Bureau (2018)
- Annual Teaching Excellence Award, Tsinghua University (2017)
- 1st Class Award for MOOC Operations in 2016 – 2017 Academic Year, XuetaoX (2017)
- "Smart Teaching Star", Research Center for Online Education, Ministry of Education, P.R. China (2017)
- 2nd Class Award/Best Lecture Notes Award/Most Popular Teacher Award, The 10th Beijing Higher Education Young Faculty Teaching Competition, Beijing Municipal Education Commission (2017)
- Top 5%, Postgraduate Course Teaching Assessment, Tsinghua University (2012, 2014, 2016)
- 1st Class Award, The 7th Young Faculty Teaching Competition, Tsinghua University (2016)
- 2nd Class Award for Education & Teaching Achievement, Tsinghua University (2016)
- Young Faculty Award for Teaching Excellence, Tsinghua University (2015)

Research

- Top Downloaded Article, IET Cyber-Systems and Robotics, Wiley (2024)
- Best Paper Award, The 30th Australasian Joint Conference on Artificial Intelligence (2017)
- Best Paper Award, BDM Workshop at PAKDD'11 (2011)

Student Training

- Six Awards for Master's Thesis Excellence, Tsinghua University (2015, 2017, 2018, 2020, 2021, 2023)
- Three Awards for Outstanding Master's Graduate, Tsinghua University/Beijing City (2018, 2021, 2023)
- National Postgraduate Scholarship, Ministry of Education (2018)
- 1st Class Internship Scholarship, Graduate School at Shenzhen, Tsinghua University (2018)
- Top Class "RONG" Scholarship, Institute of Data Science, Tsinghua University (2017)
- 2nd Class Student Contribution Award for Laboratory Development, Tsinghua University (2017)
- The Fifth Place Team in PAKDD'09 Data Mining Competition (2009)

Scholarship & Grant

- Australian Postgraduate Award (2003 – 2006)
- Queensland Government Travel Grant for IEEE WCCI 2012 (2012)
- ACM SIGEVO Student Travel Grant (2005)
- IEEE Neural Networks Society Student Travel Grant (2002)

Miscellaneous

- Shenzhen Overseas High-Level Talents Certificate (2015)
- Shenzhen High-Level Professional Certificate (2009)
- Recipient of the B.E. degree at the age of 18 (1998)

Teaching

- Academic Writing in English and Conference Presentation
- Advanced Computing Techniques and Applications
- Big Data Science and Application Seminar Series
- Data Mining: Theory and Algorithms (MOOC)
- Data Science: A New Way of Thinking (MOOC)
- Data Visualization
- Postgraduate English
- Instructor, Online Data Science Certificate Program, Tsinghua University
- Instructor, GPU Education Center at Tsinghua University, NVIDIA

Professional Services**Journal Editorship**

- Associate Editor, IEEE Access (2018 – 2023)

Conference Organizer

- Virtual Organizing Co-Chair, IEEE RO-MAN (2024)
- Publicity Chair, International Conference on Service Science (2013)

Conference Program Committee Member

- AAAI, IJCAI, KDD

Ph.D. Thesis Examiner

- Deakin University (2018), The University of Sydney (2009)
- National Ph.D. Thesis Random Inspection Program, Ministry of Education, P.R. China (2016)

Grant Reviewer

- National Natural Science Foundation of China
- Research Foundation for Returned Overseas Scholars, Ministry of Education, P.R. China

Invited Speaker

- All-Staff Summer Training Workshop for Schools in Yantian District, Shenzhen (07/2023)
- Workshop on National Internet+ Innovation and Entrepreneurship Competition, Shenzhen (01/2021)
- 11th National Digital Campus Development and Innovation Summit, Shenzhen (10/2020)
- XuetangX Distinguished Teacher Seminar Series, Online (06/2020)
- Sichuan Province High Quality Course Development Symposium, Chengdu (12/2019)
- 2019 Artificial Intelligence and Intelligent Robotics Symposium, Shenzhen (01/2019)
- Guangdong Higher Education Smarting Teaching Symposium, Guangzhou (11/2018)
- 5th Anniversary Symposium of XuetangX, Beijing (10/2018)

- 2nd UNESCO International Forum for Online Engineering Education, Beijing (07/2018)
- 9th National Digital Campus Development and Innovation Summit, Shenzhen (05/2018)
- 7th National Symposium on Higher Education Computer Software Courses, Guangzhou (05/2017)
- 4th National Conference on MOOC and Higher Education Computing Courses, Xiamen (11/2016)
- 10th National Conference on Control Engineering Postgraduate Education, Xi'an (11/2016)
- 2nd China Quantitative Investment International Summit, Shenzhen (08/2012)

Instructor

- Blended Teaching Workshop, Dalian Naval Academy, Online (12/2022)
- Workshop on the Development of Digital Government in Guangdong Province, Guangzhou (12/2021)
- Workshop on Government Service Data Management in Guangdong Province, Guangzhou (12/2020)
- Workshop on the Development of Digital Government in Guangdong Province, Shenzhen (11/2020)
- Referee, Huawei ICT Competition 2019 – 2020 Global Final, Dongguan (11/2020)
- XuetaoX Summer School for Online Teaching of Postgraduate Courses, Online (08/2020)
- Tsinghua Global Summer School, Online (07/2020)
- Training Workshop on High Quality Course Development, Guangzhou (12/2019)
- Blended Teaching Workshop, University of Science and Technology of China, Hefei (12/2019)
- UNESCO ICEE&IKCEST International Engineering Education Training Workshop, Beijing (07/2019)
- Blended Teaching Workshop for "Foundations of Online Education", Xining (06/2019)
- Artificial Intelligence Workshop, Guizhou University, Guiyang (05/2019)
- National Higher Education Blended Teaching Training Course, Guangzhou (03/2019)
- Blended Teaching Workshop for "Foundations of Online Education", Kunming (01/2019)
- National Higher Education Blended Teaching Training Course, Shenzhen (12/2018)
- 5th Smart Teaching Design and Rain Classroom Training Workshop, Shenzhen (11/2018)
- 4th Smart Teaching Design and Rain Classroom Training Workshop, Beijing (10/2018)

Media Appearance

- New Year Greetings for 2021, Firsthand Report, Shenzhen TV (01/01/2021)
- The Challenges of Online Education, 1919 Business News, Shenzhen TV (11/03/2019)
- Returned Overseas Scholars, Approaching Business and Politics, Phoenix TV (12/03/2017)

Supervision

Postdoc

- Completed: Dr. Linqi Ye (2021), Dr. Jun Jiang (2020), Dr. Deshan Meng (2020)
Dr. Xuanbin Si (2017), Dr. Feng Xu (2017)

PhD Students

- In Progress: Mr. Bo Xia (2021)
- Awarded: Mr. Zhuo Chen (2024), Miss Tiantian Zhang (2024), Miss Xiaojuan Cheng (2019)

Master Students

- Awarded (55): Mr. Hongzhi Shang, Miss Yunjie Su, Mr. Yuxing Wang, **Mr. Zhecheng Yuan**^{**} (2023)
Miss Guoxin Shi, Mr. Yunhui Zeng (2022)
Mr. Chengqian Gao, Mr. Xianzhuang Li, Mr. Yang Liu, Mr. Shilei Jiang (2022)
Miss Wenhui Liao, Mr. Wantong Lu, Miss Yiyang Zhang, **Mr. Li Zhong**^{**} (2021)
Mr. Rongxiao Tang (2021), Mr. Chenhui Li, **Miss Haimei Zhao**[†] (2020)
Miss Yanbin Niu, Miss Jiamei Yang, **Mr. Yantao Yu**^{*}, Mr. Kaiyu Zhou (2020)

Mr. Hao Yu, Mr. Dong Wang (2019)
 Mr. Daochang Chen, Mr. Chenjue Wang, Mr. Zhen Wang (2019)
 Mr. Yuanlong Qin, Mr. Tao Meng, Mr. Yinghao Ren, **Miss Tiantian Zhang**^{*#} (2018)
 Miss Xin Li, **Miss Qiuhui Tong**^{*}, Mr. Jian Xu (2017)
 Mr. Yunchang He, Mr. Pengtao Huang, Miss Yuxin Zhang, Miss Na Zhao (2016)
 Mr. Yan Ji, **Mr. Fei Wang**^{*}, Mr. Shiquan Yang (2015)
 Mr. Jianqiang Dong, Mr. Chunyang Wang, Mr. Zhibo Yang, Miss Yanmin Zhu (2014)
 Mr. Hequn Liu, Mr. Tianle Ma (2013)
 Mr. Wei Chen, Mr. Ze Huang, Mr. Cheng Li, Ms. Xiaoli Ma (2012)
 Miss Xiuyun Qu, Miss Xinzhu Yang (Co-Advisor, 2009)
 Mr. Bohan Liu, Mr. Jian Wang, Mr. Tao Zhang (Co-Advisor, 2008)

^{*}Award for Master's Thesis Excellence, Tsinghua University
[#] Award for Outstanding Master's Graduate, Tsinghua University/Beijing City
[‡] National Postgraduate Scholarship, Ministry of Education

Research Funding

Chief Investigator

- "Online Performance Augmentation and Multi-Task Transfer Learning for Defect Detection", Science and Technology Innovation 2030 – "Next Generation AI" Major Project, National Key R&D Program of China, No. 2020AAA0108303, RMB 2.84M (Sub-Project), 2020 – 2023.
- "The Management and Practice of Live Online Teaching for Graduate Students", Graduate Education Innovation Grants, Tsinghua University, No. 202007J049, RMB 30K, 2020 – 2021.
- "Visual Analysis of Learning Behavior Data Based on Smart Teaching Techniques", Education Science Research Institute of Shenzhen, No. YBZZ18006, RMB 20K, 2018 – 2020.
- "Discipline Oriented Postgraduate English Education", Graduate Education Innovation Grants, Tsinghua University, RMB 30K, 2018 – 2019.
- "Experimental and Online Course Platforms for Big Data Master's Program", Graduate Education Innovation Grants, Tsinghua University, RMB 30K, 2016 – 2017.
- "User Behavior Analysis for Online Education Platforms", Research Center for Online Education, Ministry of Education, P.R. China, No. 2016YB111, RMB 60K, 2016 – 2017.
- "Ubiquitous Robot: Technical Framework and Conceptual Design", National High-Tech Research and Development Program (863 Program), No. 2015AAXX46201, RMB 900K, 2015 – 2016.
- "GPU-Accelerated Data Mining Platform", Academic Partnership Program, NVIDIA, 2011 – 2012.
- "Ensemble Algorithms Based on Dynamic Model Credibility", National Natural Science Foundation of China, No. 60905030, RMB 180K, 2010 – 2012.
- "Parameter Tuning Methods for Evolutionary Algorithms", Research Foundation for Returned Overseas Scholars, Ministry of Education, P.R. China, RMB 25K, 2009 – 2011.
- "Evolutionary Algorithms Based on Statistical Models", Research Seed Grants Program, Graduate School at Shenzhen, Tsinghua University, RMB 50K, 2008 – 2010.

Co-Investigator

- "Ensemble Intelligence for Real-Time Decision Making", Tsinghua University, RMB 15M, 2018 – 2021.
- "Environment Perception and Object Recognition of Service Robots", National Natural Science Foundation of China, No. U1713214, RMB 3M, 2018 – 2021.
- "Vision-Based Robot Simultaneous Localization and Mapping", Shenzhen Science and Technology Innovation Commission, No. JCYJ20170412170602564, RMB 3M, 2017 – 2020.

- "Cyberinfrastructure Techniques for the Big Data Research Environment of Ocean Observatory", Interdisciplinary Research and Innovation Program, Graduate School at Shenzhen, Tsinghua University, RMB 350K, 2014 – 2016.
- "Key Laboratory for Space Robotics and Telescience", Shenzhen Science and Technology Innovation Commission, RMB 3M, 2014 – 2016.
- "Engineering Laboratory for Intelligent Semantic Mining Technologies", Shenzhen Development and Reform Commission, RMB 5M, 2012 – 2015.

Publications

Book Chapter

1. **Yuan, B.** and Gallagher, M. (2007) "Combining Meta-EAs and Racing for Difficult EA Parameter Tuning Tasks". In Lobo et al. eds. *Parameter Setting in Evolutionary Algorithms, Studies in Computational Intelligence*, vol. 54, Springer, pp. 121 – 142.

Journal

2. Xia, B., Yang, Z.H., Xie, M.Z., Chang, Y.Z., **Yuan, B.**, Li, Z.H., Wang, X.Q. and Liang, B. (2024) "Solving Time-Delay Issues in Reinforcement Learning via Transformers". *Applied Intelligence*, Springer.
3. Shi, Y.F., Wei, K., Shen, L., Li, J., Wang, X.Q., **Yuan, B.** and Guo, S. (2024) "Efficient Federated Learning with Enhanced Privacy via Lottery Ticket Pruning in Edge Computing". *IEEE Transactions on Mobile Computing*, IEEE.
4. Zhang, T.T., Lin, Z.C., Wang, Y.X., Ye, D.H., Fu, Q., Yang, W., Wang, X.Q., Liang, B., **Yuan, B.** and Li, X. (2024) "Dynamics-Adaptive Continual Reinforcement Learning via Progressive Contextualization". *IEEE Transactions on Neural Networks and Learning Systems*, IEEE.
5. Zhao, H.M., Zhang, J., Chen, Z., **Yuan, B.** and Tao, D.C. (2024) "On Robust Cross-View Consistency in Self-Supervised Monocular Depth Estimation". *Machine Intelligence Research*, vol. 21(3), Springer, pp. 495 – 513.
6. Zhang, T.T., Wang, X.Q., Liang, B. and **Yuan, B.** (2023) "Catastrophic Interference in Reinforcement Learning: A Solution Based on Context Division and Knowledge Distillation". *IEEE Transactions on Neural Networks and Learning Systems*, vol. 34(12), IEEE, pp. 9925 – 9939.
7. Zhang, T.T., Shen, K.Z., Lin, Z.C., **Yuan, B.**, Wang, X.Q., Li, X. and Ye, D.H. (2023) "Replay-Enhanced Continual Reinforcement Learning". *Transactions on Machine Learning Research*.
8. Liu, Z.X., Liu, L., Wu, B.Z., Li, L.Q., Wang, X.Q., **Yuan, B.** and Zhao, P.L. (2023) "Dynamics Adapted Imitation Learning". *Transactions on Machine Learning Research*.
9. Ye, L.Q., Wang, X.Q., Liu, H.D., Liang, B. and **Yuan, B.** (2023) "Bipedal Walking Control by Using Acceleration Factor". *Nonlinear Dynamics*, vol. 111, Springer, 16049 – 16062.
10. Tan, J.B., Zheng, H.L., Meng, D.S., **Yuan, B.**, Wang, X.Q. and Liang, B. (2023) "Confidence Set-Based Analysis of Minimal Detectable Fault under Hybrid Gaussian and Bounded Uncertainties". *Automatica*, vol. 155, Article: 111141, Elsevier.
11. Liao, W.H., Zhang, Q., **Yuan, B.**, Zhang, G.Q. and Lu, J. (2023) "Heterogeneous Multidomain Recommender System Through Adversarial Learning". *IEEE Transactions on Neural Networks and Learning Systems*, vol. 34(11), IEEE, pp. 8965 – 8977.
12. Zhang, Q., Liao, W.H., Zhang, G.Q., **Yuan, B.** and Lu, J. (2023) "A Deep Dual Adversarial Network for Cross-Domain Recommendation". *IEEE Transactions on Knowledge and Data Engineering*, vol. 35(4), IEEE, pp. 3266 – 3278.

13. Zhong, L., Fang, Z., Liu, F., **Yuan, B.**, Zhang, G.Q. and Lu, J. (2023) "Bridging the Theoretical Bound and Deep Algorithms for Open Set Domain Adaptation". *IEEE Transactions on Neural Networks and Learning Systems*, vol. 34(8), IEEE, pp. 3859 – 3873.
14. Zhang, Y.Y., Liu, F., Fang, Z., **Yuan, B.**, Zhang, G.Q. and Lu, J. (2022) "Learning from a Complementary-Label Source Domain: Theory and Algorithms". *IEEE Transactions on Neural Networks and Learning Systems*, vol. 33(12), IEEE, pp. 7667 – 7681.
15. Wang, Y.X., Zhang, T.T., Chang Y.Z., Wang, X.Q., Liang, B. and **Yuan, B.** (2022) "A Surrogate-Assisted Controller for Expensive Evolutionary Reinforcement Learning". *Information Sciences*, vol. 616, Elsevier, pp. 539 – 557.
16. Ye, L.Q., Liu, H.D., Wang, X.Q., Liang, B. and **Yuan, B.** (2022) "Design and Control of a Robotic System with Legs, Wheels, and a Reconfigurable Arm". *IET Cyber-Systems and Robotics*, vol. 4(4), Wiley, pp. 313 – 321. ***Top Downloaded Article**
17. Ye, L.Q., Tian, B.L., Liu, H.D., Zong, Q., Liang, B. and **Yuan, B.** (2022) "Anti-Windup Robust Backstepping Control for an Underactuated Reusable Launch Vehicle". *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, vol. 52(3), IEEE, pp. 1492 – 1520.
18. Wang, Y.X. and **Yuan, B.** (2021) "From Big Data Based Price Discrimination to Privacy Leakage: Ethical Analysis and Reflections on Privacy Issues from the Perspective of Hardware and Software". *Science Economy Society*, vol. 39(3), pp. 72 – 81.
19. Chen, D.C., Hu, W.Z., **Yuan, B.**, Zhang, R. and Wang J.Q. (2021) "Next-Item Recommendation with Deep Adaptable Co-Embedding Neural Networks". *IEEE Signal Processing Letters*, vol. 28, IEEE, pp. 1220 – 1224.
20. **Yuan, B.**, Song, X.G., Li, Q., Peng, Y.Y. and Song, S.Y. (2020) "Live Online Teaching for Graduate Students: Theory and Practice". *Modern Educational Technology*, vol. 30(6), pp. 114 – 119.
21. Cheng, X.J., Lu, J.W., **Yuan, B.** and Zhou, J. (2020) "Identity-Preserving Face Hallucination via Deep Reinforcement Learning". *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 30(12), IEEE, pp. 4796 – 4809.
22. **Yuan, B.**, Song, X.G., Li, Q., Peng, Y.Y. and Song, S.Y. (2019) "A Pilot Study on Discipline Oriented General Graduate English Education". *Tsinghua Journal of Education*, vol. 40(sup.), pp. 38 – 40.
23. Cheng, X.J., Lu, J.W., **Yuan, B.** and Zhou, J. (2019) "Face Segmentor-Enhanced Deep Feature Learning for Face Recognition". *IEEE Transactions on Biometrics, Behavior, and Identity Science*, vol. 1(4), IEEE, pp. 223 – 237.
24. Xu, F., Tan, J.B., Wang, Y., Wang, X.Q., Liang, B. and **Yuan, B.** (2019) "Robust Fault Detection and Set-Theoretic UIO for Discrete-Time LPV Systems with State and Output Equations Scheduled by Inexact Scheduling Variables". *IEEE Transactions on Automatic Control*, vol. 64(12), IEEE, pp. 4982 – 4997.
25. **Yuan, B.**, Zhao, H.M., Zhang, C.P. and Li, X.M. (2018) "Visual Analysis of Postgraduate English Learners Based on Rain Classroom". *Modern Educational Technology*, vol. 28(5), pp. 68 – 74.
26. Meng, T. and **Yuan, B.** (2018) "Parallel Edge-Based Visual Assessment of Cluster Tendency on GPU". *International Journal of Data Science and Analytics*, vol. 6(4), Springer, pp. 287 – 295.
27. Zhang, T.T. and **Yuan, B.** (2018) "Density-Based Multiscale Analysis for Clustering in Strong Noise Settings with Varying Densities". *IEEE Access*, vol. 6, IEEE, pp. 25861 – 25873.
28. Tong, Q.H., Li, X. and **Yuan, B.** (2018) "Efficient Distributed Clustering Using Boundary Information". *Neurocomputing*, vol. 275, Elsevier, pp. 2355 – 2366.

29. Cheng, X.J., Lu, J.W., Feng, J.J., **Yuan, B.** and Zhou, J. (2018) "Scene Recognition with Objectness". *Pattern Recognition*, vol. 74, Elsevier, pp. 474 – 487.
30. Xu, F., Tan, J.B., Wang, X.Q., Puig, V., Liang, B. and **Yuan, B.** (2018) "Mixed Active/Passive Robust Fault Detection and Isolation Using Set-Theoretic Unknown Input Observers". *IEEE Transactions on Automation Science and Engineering*, vol. 15(2), IEEE, pp. 863 – 871.
31. Huang, S.P., Meng, D.S., She, Y., Wang, X.Q., Liang, B. and **Yuan, B.** (2018) "Statics of Continuum Space Manipulators with Nonconstant Curvature via Pseudorigid-Body 3R Model". *IEEE Access*, vol. 6, IEEE, pp. 70854 – 70865.
32. Meng, D.S., Lu, W.N., Xu, W.F., She, Y., Wang, X.Q., Liang, B. and **Yuan, B.** (2018) "Vibration Suppression Control of Free-Floating Space Robots with Flexible Appendages for Autonomous Target Capturing". *Acta Astronautica*, vol. 151, Elsevier, pp. 904 – 918.
33. Li, X.M., Zhang, C.P. and **Yuan, B.** (2017) "An Experimental Study on the Application of Rain Classroom—Elucidating the Fundamental Rules of the Connectivism Learning Theory". *Modern Educational Technology*, vol. 27(5), pp. 40 – 45.
34. Tong, Q.H., Li, X. and **Yuan, B.** (2017) "A Highly Scalable Clustering Scheme Using Boundary Information". *Pattern Recognition Letters*, vol. 89, Elsevier, pp. 1 – 7.
35. Si, X.B., Feng, J.J., **Yuan, B.** and Zhou, J. (2017) "Dense Registration of Fingerprints". *Pattern Recognition*, vol. 63, Elsevier, pp. 87 – 101.
36. Chen, B.C., Mak, A., Lin, F.Q., **Yuan, B.**, Liu, W.H. and Wang, H.Y. (2017) "Implementation of Radio Frequency Identification Middleware with Database". *Transactions of the Institute of Measurement and Control*, vol. 39(4), SAGE, pp. 455 – 465.
37. Xu, F., Tan, J.B., Wang, X.Q., Puig, V., Liang, B., **Yuan, B.** and Liu, H.D. (2017) "Generalized Set-Theoretic Unknown Input Observer for LPV Systems with Application to State Estimation and Robust Fault Detection". *International Journal of Robust and Nonlinear Control*, vol. 27, Wiley, pp. 3812 – 3832.
38. Wang, L.T., Hu, X.L., **Yuan, B.** and Lu, J.F. (2015) "Active Learning via Query Synthesis and Nearest Neighbour Search". *Neurocomputing*, vol. 147, Elsevier, pp. 426 – 434.
39. **Yuan, B.** (2014) "On the Gap between Graduate Course Study and Research Ability Development". *Academic Degrees & Graduate Education*, vol. 2014(4), pp. 25 – 28.
40. Cui, K., Lyu, Q., Xu, N., Liu, Q., Zhang, J., Xing, W., Bai, L., Liao, M., He, J., **Yuan, B.**, Chen, D., Xie, W. and Zhang, Y. (2014) "Characterization of the microRNA Pool and the Factors Affecting Its Regulatory Potential". *Integrative Biology*, vol. 6(12), Royal Society of Chemistry, pp. 1141 – 1152.
41. **Yuan, B.** and Liu, W.H. (2012) "Measure Oriented Training: A Targeted Approach to Imbalanced Classification Problems". *Frontiers of Computer Science*, vol. 6(5), Springer, pp. 489 – 497.
42. Shang, S., **Yuan, B.**, Deng, K., Xie, K.X., Zheng, K. and Zhou, X.F. (2012) "PNN Query Processing on Compressed Trajectories". *GeoInformatica*, vol. 16(3), Springer, pp. 467 – 496.
43. Tu, Q., Lu, J.F., **Yuan, B.**, Tang, J.B. and Yang, J.Y. (2012) "Density-Based Hierarchical Clustering for Streaming Data". *Pattern Recognition Letters*, vol. 33(5), Elsevier, pp. 641 – 645.
44. Lin, F.Q., Chen, B.C., **Yuan, B.**, Liu, W.H., Li, X.Y., Mak, A. and Wang H.Y. (2010) "Composition and Implementation of RFID Lightweight Middleware". *Computer Engineering*, vol. 36(17), pp. 77 – 80.
45. **Yuan, B.**, Orlowska, M. and Sadiq, S. (2008) "Extending a Class of Continuous Estimation of Distribution Algorithms to Dynamic Problems". *Optimization Letters*, vol. 2(3), Springer, pp. 433 – 443.

46. **Yuan, B.**, Orłowska, M. and Sadiq, S. (2007) "On the Optimal Robot Routing Problem in Wireless Sensor Networks". *IEEE Transactions on Knowledge and Data Engineering*, vol. 19(9), IEEE, pp. 1252 – 1261.
47. Gallagher, M. and **Yuan, B.** (2006) "A General-Purpose Tunable Landscape Generator". *IEEE Transactions on Evolutionary Computation*, vol. 10(5), IEEE, pp. 590 – 603.
48. Lu, J.F., **Yuan, B.** and Yang, J.Y. (1999) "A Genetic Design for Feedforward Neural Network". *Journal of Nanjing University of Science and Technology*, vol. 23(6), pp. 486 – 489.

Conference

49. Xia, B., Luo, Y.F., Chang, Y.Z., **Yuan, B.**, Li, Z.H. and Wang, X.Q. (2024) "Conditional Diffusion Model for Decision-Making Under Random Frame Dropping". In *Proceedings of 2024 IEEE International Conference on Robot and Human Interactive Communication*, IEEE, Pasadena, USA.
50. Chen, Z., Zhao, H.M., Wang, C.Y., **Yuan, B.** and Li, X. (2024) "Dual Mapping of 2D StyleGAN for 3D-Aware Image Generation and Manipulation (Student Abstract)". In *Proceedings of the 38th AAAI Conference on Artificial Intelligence*, AAAI, pp. 23458 – 23459, Vancouver, Canada.
51. Chen, Z., Zhao, H.M., **Yuan, B.** and Li, X. (2024) "STViT: Improving Self-Supervised Multi-Camera Depth Estimation with Spatial-Temporal Context and Adversarial Geometry Regularization (Student Abstract)". In *Proceedings of the 38th AAAI Conference on Artificial Intelligence*, AAAI, pp. 23460 – 23461, Vancouver, Canada.
52. Zhang, L.R., Zhang, Q., Shen, L., **Yuan, B.**, Wang, X.Q. and Tao, D.C. (2023) "Evaluating Model-Free Reinforcement Learning Toward Safety-Critical Tasks". In *Proceedings of the 37th AAAI Conference on Artificial Intelligence*, AAAI, pp. 15313 – 15321, Washington, D.C., USA.
53. Shi, Y.F., Shen, L., Wei, K., Sun, Y., **Yuan, B.**, Wang, X.Q. and Tao, D.C. (2023) "Improving the Model Consistency of Decentralized Federated Learning". In *Proceedings of the 40th International Conference on Machine Learning*, PMLR 202:31269 – 31291, Honolulu, USA.
54. Yuan, Z.C., Xue, Z.R., **Yuan, B.**, Wang, X.Q., Wu, Y., Gao, Y. and Xu, H.Z. (2022) "Pre-Trained Image Encoder for Generalizable Visual Reinforcement Learning". In *Proceedings of the 36th Conference on Neural Information Processing Systems*, pp. 13022 – 13037, New Orleans, USA.
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