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Associate Professor & Coordinator (MSc in FinTech Programme)
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Academic Qualifications

- Ph.D. in Information Technology, Queensland University of Technology, Australia (2005)
 - M.Sc. in Software Engineering, University of Macau (1997)
 - B.Sc. in Software Engineering, University of Macau (1994)
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Professional Experience

University of Macau

- Coordinator, MSc in FinTech Programme (2025 – Present)
- Associate Professor, Dept. of Computer and Information Science (Aug 2018 – Present)
- Assistant Professor (Sep 2005 – Aug 2018)
- Lecturer (Feb 1998 – Aug 2005)
- Teaching Assistant (Sep 1995 – Jan 1998)
- Research Assistant (Jan 1995 – Aug 1995)

Henry Fok Pearl Jubilee College, University of Macau

- Fellow (Aug 2015 – Present)
 - Associate Master and Chief of Students (Aug 2013 – Jul 2015)
 - Fellow (Sep 2010 – Jul 2013)
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Major Awards and Honors

- Best Paper Award in Theoretical Contribution: “Trend Following with Float-encoding Genetic Algorithm”, *Proceedings of the Advanced Techniques on Data Analytics and Data Visualization Workshop*, held in conjunction

with *Seventh International Conference on Digital Information Management (ICDIM 2012)*, Macau, China, pp. 173-176, IEEE Press.

- Best Student Paper Award, for the paper: "Specification of Composite Trading Activities in Supply Chain Management". *Proceedings of the IEEE International Conference on E-Technology, E-Commerce and E-Services (EEE 2005)*, Hong Kong, China, 2005, pp. 315-322, IEEE Press.
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Teaching Experience

M.Sc. Courses

1. Internet Security and Cryptography
2. Principles and Applications of Artificial Intelligence
3. Advanced Topics in Computer Science I
4. Introduction to Business Process Management
5. Computer Science Seminars
6. Fundamentals of Software Engineering
7. Information Systems Development Methodologies
8. Project Report (MSc in FinTech)

B.Sc. Courses

1. Computers in Modern Society
 2. Programming Science
 3. Algorithms and Data Structure I
 4. Algorithms and Data Structure II
 5. Information Systems Analysis and Design
 6. Artificial Intelligence I
 7. Artificial Intelligence II
 8. Information Security
 9. Advanced Topic in Computer Science (Business Process Management)
 10. Software Engineering Principles
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Completed Supervisions

(PhD)

- Yuqing Wan
- Cheong Se Hang
- Sun Qizhou
- Qiqiao He
- Vincent Zhao

(MSc)

- Completed the supervision of 50+ MSc students (MSc in E-commerce, MSc in FinTech, MSc in Data Science, MSc in Computer Science)
-

Ongoing Supervisions

(PhD)

- Fan Yifan
 - Xiong Yuhan
-

Research

Research Interests

- Financial Technology (FinTech)
- Computational Intelligence
- Data Analytics
- Information Visualization
- Business Process Management

Research Projects

- “Attentive Recurrent Unsupervised Adversarial Domain Adaptation for Time Series Data”, MYRG2022-00162-FST, Funded by the Research Committee of University of Macau, 01/01/2023-31/12/2024, Principal Investigator.

- “Force-directed Algorithms for Visualization of Large-Scale Dynamic Graphs”, MYRG2019-00136-FST, funded by the Research Committee of University of Macau, 01/01/2020 – 31/12/2021, Principal Investigator.
- “Visualising Crowdsourced Health Information”, MYRG2018-00246-FST, funded by the Research Committee of University of Macau, 20/02/2017- 19/02/2019, Principal Investigator.
- “Boundary Node Detection and Unfolding of Complex Non-convex ad hoc Networks”, MYRG2017-00029-FST, funded by the Research Committee of University of Macau, February 2017 – February 2019, Principal Investigator.
- “Segmentation and Distance Calculation for Chart Pattern Matching in Financial Time Series”, MYRG2016-00148-FST, funded by the Research Committee of University of Macau, March 2016 – February 2018, Principal Investigator.
- “Chart Pattern Matching in Financial Time Series”, MYRG2015-00054-FST, funded by the Research Committee of University of Macau, January 2015 – December 2016, Principal Investigator.
- “User Sentiment Measurement on the Mobile platform share and Re-shared perspective of products in Global Social Commerce”, June 2014 – June 2015, Co-researcher, [Sunway University](#), Malaysia.
- “Methods for Composition and Selection of User Defined Strategies for Financial Trading “, MYRG041(Y1-L1)-FST13-SYW, funded by the Research Committee of University of Macau, January 2013 – December 2014, Principal Investigator.
- “Resource Assignment in Business Process Simulation, Performance Monitoring during Process Enactment, and Change Management for Process Improvement”, RG074/09-10S/SYW/FST, funded by the Research Committee of University of Macau, January 2010 – December 2011, Principal Investigator.
- “Hidden Cluster Detection and Visual Data Mining Framework for Infectious Disease Control and Quarantine Management II”, RG073/09-10S/SYW/FST, funded by the Research Committee of University of Macau, January 2010 – December 2011, Principal Investigator.
- “Real-time Data Stream Mining”, funded by the Research Committee of University of Macau, January 2010 – December 2011, Co-Principal Investigator.
- “Elevator Control and Monitoring System”, funded by Macau Hualong Elevator Company Limited, January 2008 – December 2008, Principal Investigator (for Centralized Control System).
- “Hidden Cluster Detection and Visual Data Mining Framework for Infectious Disease Control and Quarantine Management”, RG055/06-07S/SYW/FST, funded by the Research Committee of University of Macau, January 2007 – December 2007, Principal Investigator.
- “Audit Trail Data Management, Intelligent Deadline Escalation, and Exception Prediction in Workflows”, RG056/06-07S/SYW/FST, funded by the Research Committee of University of Macau, January 2007 – December 2007, Principal Investigator.
- “Vdeap: Visualization, Detection and Extraction of Suspicious Physical Access Patterns”, funded by the Research Committee of University of Macau, March 2005 – August 2006, Co-Principal Investigator.

Publications

- [Google Scholar](#)
- [dblp](#)
- [ResearchGate](#)

University of Macau staff is/are indicated with italic. University of Macau students is/are indicated with underline.

Refereed Journal Papers

2026

1. Qi-An Huang, *Yain-Whar Si*. "A trust-based privacy-preserving data retrieval scheme in edge-cloud computing". *IEEE Transactions on Dependable and Secure Computing*, vol. 23, no. 3, pp. 6151-6166, May-June 2026. (SCIE:Q1)
2. Qi-Qiao He, Xueyuan Gong, *Yain-Whar Si*. "Collaborative learning with normalization augmentation for domain generalization in time series classification". *Applied Soft Computing*, 114554 (2026), Elsevier. (SCIE:Q1)
3. Xiongfei Zhao, Lai-Un Ieng, *Yain-Whar Si*, "A Disruptive Blockchain-Based Remittance Network Model for Financial Institutions", *Blockchain: Research and Applications*, 100428 (2026), Elsevier. (ESCI:Q1)

2025

1. Qizhou Sun, *Yain Whar Si*. "Deep Q network with action retention for going long and short selling". *Applied Soft Computing*, Elsevier, 178, 113252, (2025). (SCIE:Q1)
2. Qi-An Huang, *Yain-Whar Si*. "Certificateless and Revocable Bilateral Access Control for Privacy-Preserving Edge-Cloud Computing", *IEEE Internet of Things Journal*, 12 (8), 10333-10348. (SCIE:Q1)
3. Qizhou Sun, YuFan Xie, *Yain-Whar Si*. "Attention-Based Behavioral Cloning for algorithmic Trading", *Applied Intelligence*, 55, 74 (2025), Springer. (SCIE:Q2)
4. Qi-Qiao He, Xueyuan Gong, *Yain-Whar Si*. "Collaborative learning with normalization augmentation for domain generalization in time series classification". *The Journal of Supercomputing*, 81, 114 (2025), Springer. (SCIE:Q2)

5. Xiongfei Zhao, Hou-Wan Long, Zhengzhe Li, Jiangchuan Liu, **Yain-Whar Si**, “Mitigating Blockchain Extractable Value threats by Distributed Transaction Sequencing Strategy”, *Digital Communications and Networks*, Elsevier, Volume 11, Issue 5, 2025, Pages 1394-1409, ISSN 2352-8648. (SCIE:Q1)
6. Zhuowen Zheng, Zhiquan Liu, **Yain-Whar Si**, Xiaochen Yuan, Junwei Duan, Xiaofan Li, Xinyuan Zhang, Xueyuan Gong, “Quality adaptive class center for lightweight large-scale face recognition”, *Information Sciences*, Elsevier, Volume 732, 2026,122944, ISSN 0020-0255. (SCIE:Q1)
7. Kahim Wong, Jicheng Zhou, Kemou Li, **Yain-Whar Si**, Xiaowei Wu, Jiantao Zhou, “FontGuard: A Robust Font Watermarking Approach Leveraging Deep Font Knowledge”, *IEEE Transactions on Multimedia*, vol. 27, pp. 7876-7890, (2025). (SCIE:Q1)
8. Jinhui Zheng, Zhiquan Liu, **Yain-Whar Si**, Jianqing Li, Xinyuan Zhang, Xiaofan Li, Haozhi Huang, Xueyuan Gong, “RVAFM: Re-parameterizing vertical attention fusion module for handwritten paragraph text recognition”, *Information Fusion*, Elsevier, Volume 125, 2026, 103491, ISSN 1566-2535. (SCIE:Q1)
9. Xueyuan Gong, Zhiquan Liu, **Yain-Whar Si**, Xiaochen Yuan, Ke Wang, Xiaoxiang Liu, Cong Lin, Xinyuan Zhang, “FastFace: Fast-converging Scheduler for Large-scale Face Recognition Training with One GPU”, *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 35, no. 11, pp. 11271-11281, Nov. 2025. (SCIE:Q1)

2024

1. Xiongfei Zhao, Gerui Zhang, Hou-Wan Long, **Yain-Whar Si**, “Minimizing block incentive volatility through Verkle tree-based dynamic transaction storage”, *Decision Support Systems*, Volume 180, 2024, 114180, Elsevier. (SCIE:Q1)
2. QiAn Huang, **Yain-Whar Si**, “Blockchain-based Autonomous Decentralized Trust Management for Social Network”, *The Journal of Supercomputing*, Springer, 80, 14725–14751 (2024). (SCIE:Q2)
3. Jiamu Xu, Xiaoxiang Liu, Xinyuan Zhang, **Yain-Whar Si**, Xiaofan Li, Zheng Shi, Ke Wang, Xueyuan Gong, “X2-Softmax: Margin adaptive loss function for face recognition”, *Expert Systems with Applications*, Elsevier, Volume 249, Part C, 2024, 123791. (SCIE:Q1)
4. Hong Hin Cheong, Weimin Zuo, Jiarui Chen, Chon Wai Un, **Yain-Whar Si**, Koon Ho Wong, Hang Fai Kwok, Shirley W.I. Siu. “Identification of Anticancer Peptides from the Genome of *Candida albicans*: in Silico Screening, in Vitro and in Vivo Validations”. *Journal of Chemical Information and Modeling*, 64(15), 6174-6189, (2024). (SCIE:Q1)

2023

1. Qizhou Sun, Xueyuan Gong, **Yain-Whar Si**. “Transaction-aware Inverse Reinforcement Learning for Trading in Stock Markets”, *Applied Intelligence*, 53, 28186–28206 (2023), Springer. (SCIE:Q1)

2. Xiongfei Zhao, Gerui Zhang, **Yain-Whar Si**. “An efficient dynamic transaction storage mechanism for sustainable high-throughput Bitcoin”. *The Journal of Supercomputing*, Springer, 2023. <https://doi.org/10.1007/s11227-023-05237-9>, (SCIE: Q2)
3. Qiping Wang, Raymond Yiu Keung Lau, **Yain-Whar Si**, Haoran Xie, Xiaohui Tao. Blockchain-Enhanced Smart Contract for Cost-Effective Insurance Claims Processing. *Journal of Global Information Management (JGIM)*. 31(7), 1-21. (SSCI: Q1)

2022

1. Qizhou Sun and **Yain-Whar Si**. “Supervised actor-critic reinforcement learning with action feedback for algorithmic trading”, *Applied Intelligence*, Springer, 2022, <https://doi.org/10.1007/s10489-022-04322-5> (SCIE:Q1)
2. Xueyuan Gong, **Yain-Whar Si**, Yongqi Tian, Cong Lin, Xinyuan Zhang, Xiaoxiang Liu. “KDCTime: Knowledge Distillation with Calibration on InceptionTime for Time-series Classification”, *Information Sciences*, Elsevier, 2022. <https://doi.org/10.1016/j.ins.2022.08.057> (SCIE:Q1)
3. Qi-Qiao He, Shirley Weng In Siu, **Yain-Whar Si**. “Attentive recurrent adversarial domain adaptation with Top-k pseudo-labeling for time series classification”, *Applied Intelligence*, Springer, 2022, <https://doi.org/10.1007/s10489-022-04176-x> (SCIE:Q1)
4. Jun Wu, Xiongfei Zhao, Hang Yuan, **Yain-Whar Si**. “CDGAT: A graph attention network method for credit card defaulters prediction”, *Applied Intelligence*, Springer, 2022, <https://doi.org/10.1007/s10489-022-03996-1>. (SCIE: Q1)
5. Qi-Qiao He, Shirley Weng In Siu, **Yain-Whar Si**. “Instance-based deep transfer learning with attention for stock movement prediction”, *Applied Intelligence*, Springer, 2022, <https://link.springer.com/article/10.1007/s10489-022-03755-2>. (SCIE: Q1)
6. Liyang Liu, **Yain-Whar Si**. “1D Convolutional Neural Networks for Chart Pattern Classification in Financial Time Series”, *The Journal of Supercomputing*, Springer, 2022, <https://link.springer.com/article/10.1007/s11227-022-04431-5>. (SCIE: Q2)
7. Se-Hang Cheong, Kim-Hou Ng, **Yain-Whar Si**. “An image classification approach for hole detection in wireless sensor networks”, *The Journal of Supercomputing*, Springer, 2022. <https://doi.org/10.1007/s11227-021-04276-4> (SCIE: Q2)
8. Qi-Qiao He, Cuiyu Wu, **Yain-Whar Si**. “LSTM with particle swarm optimization for sales forecasting”, *Electronic Commerce Research and Applications*, Volume 51, 2022, 101118, Elsevier, <https://doi.org/10.1016/j.elerap.2022.101118>. (SCIE: Q1)
9. Se-Hang Cheong, Kuai-Un Mok, **Yain-Whar Si**. “Hole Detection in Wireless Sensor Network with Force-directed Algorithm and Contour Tracing”, *International Journal of Sensor Networks*, Inderscience, 2022. (SCIE: Q4)

2021

1. Jiarui Chen, ***Yain-Whar Si***, Chon-Wai Un, Shirley Weng In Siu. “Chemical toxicity prediction based on semi-supervised learning and graph convolutional neural network”, *Journal of cheminformatics*, 13, 93 (2021). <https://doi.org/10.1186/s13321-021-00570-8>. (SCIE: Q1)
2. Bei Luo, Raymond Y. K. Lau, Chunping Li, ***Yain-Whar Si***. “A critical review of state-of-the-art chatbot designs and applications”, *Wiley Interdisciplinary Reviews – Data Mining and Knowledge Discovery*, Volume 12, Issue 1/e1434, Wiley, 2021. <https://doi.org/10.1002/widm.1434> (SCIE: Q1)
3. Yue-Hui Lai, Se-Hang Cheong, Hui Zhang, ***Yain-Whar Si***. “Coverage hole detection in WSN with force-directed algorithm and transfer learning”, *Applied Intelligence*, Springer, 2021. <https://doi.org/10.1007/s10489-021-02714-7> (SCIE: Q1)
4. Se-Hang Cheong, ***Yain-Whar Si***, Raymond K. Wong. “Online Force-directed algorithms for visualization of dynamic graphs”, *Information Sciences*, Volume 556, 223-255, Elsevier, 2021. (SCIE: Q1)
5. ***Yain-Whar Si***, Weng-Hong Yung. “Unraveling Iterative Control Structures from Business Processes”, *Journal of Computer Science and Technology*, 36, 158-190 (2021), Springer. (SCIE: Q3)
6. lat-Long Lei, Phoey Lee Teh, ***Yain-Whar Si***. “Direct least squares fitting of ellipses segmentation and prioritized rules classification for curve-shaped chart patterns”, *Applied Soft Computing*, Volume 107, 107363, Elsevier, 2021. (SCIE: Q1)
7. Yuechu Zheng, ***Yain-Whar Si***, Raymond Wong. “Feature Extraction for Chart Pattern Classification in Financial Time Series”, *Knowledge and Information Systems*, Springer, 2021. (SCIE: Q2)
8. Li Sun, Patrick Cheong-lao Pang, ***Yain-Whar Si***. “Roles of information propagation of Chinese microblogging users in epidemics: a crisis management perspective”, *Internet Research*, Emerald, Vol. 31, No. 2, pp. 540-561, 2021. (SCIE: Q1)

2020

1. Jiawei Lu, ***Yain-Whar Si***. “Clustering-Based Force-Directed Algorithms for 3D Graph Visualization”, *The Journal of Supercomputing*, 76, 9654–9715, Springer, 2020. (SCIE: Q2)
2. Yuqing Wan, Raymond Yiu Keung Lau, ***Yain-Whar Si***, “Mining subsequent trend patterns from financial time series”, *International Journal of Wavelets, Multiresolution and Information Processing*, 18(03), 2050010, World Scientific, 2020. (SCIE: Q4)

2019

1. Weilong Hu, ***Yain-Whar Si***, *Simon Fong*, Raymond Yiu Keung Lau. “A formal approach to candlestick pattern classification in financial time series”, *Applied Soft Computing*, Volume 84, Elsevier, 2019. (SCIE: Q1)

2. Xueyuan Gong, Simon Fong, **Yain-Whar Si**. "Fast Fuzzy Subsequence Matching Algorithms on Time-series", *Expert Systems with Applications*, 116: 275-284, Elsevier, 2019. (SCIE: Q1)
3. Se-Hang Cheong, **Yain-Whar Si**. "Force-directed algorithms for schematic drawings and placement: A survey", *Information Visualization*, 19(1), 65-91, Sage, 2019. (SCIE: Q3)

2018

1. Se-Hang Cheong, **Yain-Whar Si**. "CWBound: Boundary Node Detection Algorithm for Complex Non-convex Mobile ad hoc Networks", *The Journal of Supercomputing*, 74(10):5558-5577, Springer, 2018. (SCIE: Q2)
2. Jiajun Zhu, Yuqing Wan, **Yain-Whar Si**. "A Language for Financial Chart Patterns", *International Journal of Information Technology & Decision Making*, 17(05):1537-1560, World Scientific, 2018. (SCIE: Q2)
3. **Yain-Whar Si**, Veng-lan Chan, Marlon Dumas, Defu Zhang. "A Petri Nets Based Generic Genetic Algorithm Framework for Resource Optimization in Business Processes", *Simulation Modelling Practice and Theory*, 86:72-101, Elsevier, 2018. (SCIE: Q2)
4. Jingyuan Liu, **Yain-Whar Si**, Defu Zhang, Ligang Zhou. "Trend Following in Financial Time Series with Multi-objective Optimization", *Applied Soft Computing*, 66:149-167, Elsevier, 2018. (SCIE: Q1)
5. Xueyuan Gong, Simon Fong, **Yain-Whar Si**. "Fast Multi-subsequence Monitoring on Streaming Time-series Based on Forward-propagation". *Information Sciences*, 450:73-88, Elsevier, 2018. (SCIE: Q1)
6. Se-Hang Cheong, **Yain-Whar Si**. "Boundary Node Detection and Unfolding of Complex Non-Convex ad hoc Networks", *ACM Transactions on Sensor Networks*, 14(1), ACM, 2018. (SCIE: Q2)
7. Defu Zhang, **Yain-Whar Si**, Furong Ye, Qisen Cai. "A Hybrid Swarm Algorithm Based on ABC and AIS for 2L-HFCVRP", *Applied Soft Computing*, 64:468-479, Elsevier, 2017. (SCIE: Q1)
8. Se-Hang Cheong, **Yain-Whar Si**, Leong-Hou U. "Saving Lives: Design and Implementation of Lifeline Emergency Ad Hoc Network", *International Journal of Pervasive Computing and Communications*, Volume 14, Issue 2, pp. 90-110, 2018. (ESCI, Scopus)

2017

1. Se-Hang Cheong, **Yain-Whar Si**. "Accelerating the Kamada-Kawai Algorithm for Boundary Detection in a Mobile ad hoc Network", *ACM Transactions on Sensor Networks*, 13(1): 3:1-3:29, ACM, 2017. (SCIE: Q2)
2. Yuqing Wan, **Yain-Whar Si**. "A Formal Approach to Chart Patterns Classification in Financial Time Series", *Information Sciences*, 411:151-175, Elsevier, 2017. (SCIE: Q1)

3. Yuqing Wan, **Yain-Whar Si**. "Adaptive Neuro Fuzzy Inference System for Chart Pattern Matching in Financial Time Series", *Applied Soft Computing*, 57:1-18, Elsevier, 2017. (SCIE: Q1)
4. Yuqing Wan, **Yain-Whar Si**. "A Hidden Semi-Markov Model for Chart Pattern Matching in Financial Time Series", *Soft Computing*, 1-20, Springer, 2017. (SCIE: Q2)
5. Ligang Zhou, **Yain-Whar Si**, Hamido Fujita. "Predicting the Listing Statuses of Chinese-listed Companies Using Decision Trees Combined with an Improved Filter Feature Selection Method", *Knowledge-Based Systems*, 128:93-101, Elsevier, 2017. (SCIE: Q1)
6. Defu Zhang, Sifan Cai, Furong Ye, **Yain-Whar Si**, Trung Thanh Nguyen. "A Hybrid Algorithm for a Vehicle Routing Problem with Realistic Constraints", *Information Sciences*, 394: 167-182, Elsevier, 2017. (SCIE: Q1)
7. Hongteng Wu, Stephen C. H. Leung, **Yain-Whar Si**, Defu Zhang, Adi Lin. "Three-stage Heuristic Algorithm for Three-dimensional Irregular Packing Problem". *Applied Mathematical Modelling*, 41: 431-444, Elsevier, 2017. (SCIE: Q1)

2016

1. Xueyuan Gong, **Yain-Whar Si**, Simon Fong, Robert P. Biuk-Aghai. "Financial Time Series Pattern Matching with Extended UCR Suite and Support Vector Machine". *Expert Systems with Applications*, 55 (2016): 284-296, Elsevier, 2016. (SCIE: Q1)
2. Yuqing Wan, Xueyuan Gong, **Yain-Whar Si**. "Effect of segmentation on financial time series pattern matching", *Applied Soft Computing*, Volume 38, January 2016: 346-359, Elsevier, 2016. (SCIE: Q1)
3. **Yain-Whar Si**, Kin-Kuan Hoi, Robert P. Biuk-Aghaia, Simon Fong, Defu Zhang. "Run-Based Exception Prediction for Workflows", *The Journal of Systems & Software*, Volume 113, March 2016: 59-75, Elsevier, 2016. (SCIE: Q1)
4. Can Huang, Defu Zhang, **Yain-Whar Si**, Stephen C. H. Leung. "Tabu search for the real-world carpooling problem". *Journal of Combinatorial Optimization*, 32(2): 492-512, Springer, 2016. (SCIE: Q3)
5. Defu Zhang, Yuxin Che, Furong Ye, **Yain-Whar Si**, Stephen C. H. Leung. "A hybrid algorithm based on variable neighbourhood for the strip packing problem". *Journal of Combinatorial Optimization*, 32(2): 513-530, Springer, 2016. (SCIE: Q3)

2015

1. Robert P. Biuk-Aghai, Muye Yang, Patrick Cheong-lao Pang, Wai Hou Ao, Simon Fong, **Yain-Whar Si**. "A map-like visualisation method based on liquid modelling", *Journal of Visual Languages and Computing*, Volume 31, Part A, December 2015, 87-103, Elsevier, 2015. (SCIE: Q3)
2. Bili Chen, Yangbin Lin, Wenhua Zeng, Defu Zhang, **Yain-Whar Si**. "Modified differential evolution algorithm using a new diversity maintenance strategy for

multi-objective optimization problems". *Applied Intelligence*, 43(1): 49-73, Springer, 2015. (SCIE: Q2)

3. Zhen You, **Yain-Whar Si**, Defu Zhang, Xiangxiang Zeng, Stephen C. H. Leung, Tao Li. "A decision-making framework for precision marketing". *Expert Systems with Applications*, 42(7): 3357-3367, Elsevier, 2015. (SCIE: Q1)

2014

1. **Yain-Whar Si**, Marlon Dumas, Ka-Leong Chan. "Evaluation of trade-offs between workflow escalation strategies", *Concurrent Engineering-Research and Applications*, 22(1): 77-88, SAGE Publications, 2014. (SCIE: Q4)
2. Shaohui Hong, Defu Zhang, Hoong Chuin Lau, Xiangxiang Zeng, **Yain-Whar Si**. "A hybrid heuristic algorithm for the 2D variable-sized bin packing problem". *European Journal of Operational Research*, 238(1): 95-103, Elsevier, 2014. (SCIE: Q1)
3. *Robert P. Biuk-Aghai*, Cheong-lao Pang, **Yain-Whar Si**. "Visualizing large-scale human collaboration in Wikipedia", *Future Generation Computer Systems*, Vol. 31, 120-133, Elsevier, 2014. (SCIE: Q1)

2013

1. **Yain-Whar Si**, Jiangling Yin. "OBST-based segmentation approach to financial time series", *Engineering Applications of Artificial Intelligence*, 26(10), 2581-2596, Elsevier, 2013. (SCIE: Q1)
2. *Robert P. Biuk-Aghai*, Roy Chi Kit Chan, **Yain-Whar Si**, *Simon Fong*. "Visualizing Recent Changes in Wikipedia", *Science China Information Sciences*, 65(5): 1-15, Springer, 2013. (SCIE: Q3)

2012

1. Ka I Pun, **Yain-Whar Si**, Kin-Chan Pau. "Key Performance Indicators for Traffic Intensive We-enabled Business Processes", *Business Process Management Journal*, 18(2), 250-283, Emerald, 2012. (ESCI, SCOPUS)
2. *Simon Fong*, **Yain-Whar Si**, Jackie Tai. "Trend Following Algorithms in Automated Derivatives Market Trading", *Expert Systems with Applications*, 39 (2012), 11378-11390, Elsevier, 2012. (SCIE: Q1)

2011 – 2005

1. *Simon Fong*, Jackie Tai, **Yain-Whar Si**. "Trend Following Algorithms for Technical Trading in Stock Market". *Journal of Emerging Technologies in Web Intelligence (JETWI)*, 3(2), 136-145, May 2011, Academy Publisher, 2011. (ProQuest)
2. Iok-Fai Leong, **Yain-Whar Si**, *Robert P. Biuk-Aghai*. "Critical Path Based Approach for Predicting Temporal Exceptions in Resource Constrained

- Concurrent Workflows”, *International Journal of Information Technology and Web Engineering (IJITWE)*, 5(3), 27-48, IGI Global, 2010. (ESCI, EI, SCOPUS)
3. **Yain-Whar Si**, Sio-Fan Lou. “Fuzzy Adaptive Agent for Supply Chain Management”. *Web Intelligence and Agent Systems*, 7(2), 173-194, IOS Press, 2009. (ESCI, SCOPUS)
 4. **Yain-Whar Si**, David Edmond, Marlon Dumas, Chan U. Chong. “Strategies in Supply Chain Management for the Trading Agent Competition”. *Electronic Commerce Research and Applications*, 6(4), 369-382, Elsevier, 2007. (SCIE: Q2)
 5. **Yain-Whar Si**, David Edmond, Marlon Dumas, Arthur H. M. ter Hofstede. “Specification and execution of composite trading activities”. *Electronic Commerce Research*, 7(3-4), 221-263, Springer Netherlands, 2007. (SSCI: Q3)
 6. **Yain-Whar Si**, David Edmond, Arthur H. M. ter Hofstede, Marlon Dumas. “Orchestrating Interrelated Trading Activities”. *International Journal of Business Process Integration and Management (IJBPIIM)*, 1(1), 12-25, Inderscience Publishers, 2005. (SCOPUS, ProQuest)

Refereed Conference Papers

1. Hou-Wan Long, On-In Ho, Qi-Qiao He, **Yain-Whar Si**, (2025). “Transfer Learning in Financial Time Series with Gramian Angular Field” (Student Abstract). Proceedings of the AAAI Conference on Artificial Intelligence, 39(28), 29418–29420. <https://doi.org/10.1609/aaai.v39i28.35272>
2. Kahim Wong, Jicheng Zhou, Haiwei Wu, **Yain-Whar Si**, **Jiantao Zhou**, AD-CD-Net: Robust Document Image Forgery Localization via Adaptive DCT Feature and Hierarchical Content Disentanglement, Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2025, pp. 19280-19289.
3. Hou-Wan Long, Xiongfei Zhao, **Yain-Whar Si**, “Dynamic Mining Interval to Improve Blockchain Throughput,” *2023 IEEE International Conference on Big Data (BigData)*, Sorrento, Italy, 2023, pp. 46-55, doi: 10.1109/BigData59044.2023.10386281.
4. Xiongfei Zhao and **Yain-Whar Si**, “Challenges of Blockchain adoption in financial services in China’s Greater Bay Area”, *The Fifth International Conference on Blockchain Computing and Applications (BCCA2023)*, Kuwait, Kuwait, 2023, pp. 68-75, doi: 10.1109/BCCA58897.2023.10338862.
5. Xiongfei Zhao and **Yain-Whar Si**, “NFTCert: NFT-Based Certificates With Online Payment Gateway,” *2021 IEEE International Conference on Blockchain (Blockchain)*, Melbourne, Australia, 2021, pp. 538-543, doi: 10.1109/Blockchain53845.2021.00081.
6. Xiongfei Zhao and **Yain-Whar Si**, “Dynamic Transaction Storage Strategies for a Sustainable Blockchain,” *2021 IEEE International Conference on Services Computing (SCC)*, 2021, pp. 309-318, doi: 10.1109/SCC53864.2021.00044.
7. Qi-Qiao He, Patrick Cheong-lao Pang, **Yain-Whar Si**. “Multi-source Transfer Learning with Ensemble for Financial Time Series Forecasting”, *2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)*, Melbourne, Australia, 2020, pp. 227-233, doi: 10.1109/WIIAT50758.2020.00034.
8. Mei Zhao, **Yain-Whar Si**. “Trend Following with Contrarian Strategy and Firefly Optimization Algorithm”, *2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)*, Melbourne, Australia, 2020, pp. 818-824, doi: 10.1109/WIIAT50758.2020.00126.
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Refereed Book Chapters

1. Xueyuan Gong, Simon Fong, **Yain-Whar Si**, Robert P. Biuk-Agha, Raymond K. Wong, and Athanasios V. Vasilakos. "Normalized Cross-Match: Pattern Discovery Algorithm from Biofeedback Signals". In: Cao H., Li J., Wang R. (eds) *Trends and Applications in Knowledge Discovery and Data Mining. PAKDD 2016. Lecture Notes in Computer Science, vol 9794*. Springer, Cham.
2. Phoey-Lee Teh, Lim Paul Huah, **Yain-Whar Si**. "The Intention to Share and Re-Shared among the Young Adults towards a Posting at Social Networking Sites". *Proceedings of the 2nd World Conference on Information Systems and Technologies (WorldCIST'14)*, pp. 13-21, Springer, 2014.
3. Veng-lan Chan, **Yain-Whar Si**. "Generic Evolutionary Framework for Simulating Business Processes", *Proceedings of the 2011 International Conference on u- and e- Service, Science and Technology, Communications in Computer and Information Science Series, Vol 264*, pp. 31-41, Springer, 2011.
4. lok-Fai Leong, **Yain-Whar Si**, Robert P. Biuk-Aghai. "Predicting Temporal Exceptions in Concurrent Workflows". In G. Alkhatib (Ed.), *Models for Capitalizing on Web Engineering Advancements: Trends and Discoveries* (pp. 196-218). Hershey, PA: Information Science Publishing. doi:10.4018/978-1-4666-0023-2.ch011, 2012.
5. Robert P. Biuk-Aghai, **Yain-Whar Si**, Simon Fong, Peng-Fan Yan. "Individual Movement Behaviour in Secure Physical Environments: Modeling and Detection of Suspicious Activity". *Behaviour Computing: Modeling, Analysis, Mining and Decision*, Longbing Cao, Phillip S. Yu (eds), pp. 241-253, Springer, 2012.
6. **Yain-Whar Si**, Weng-Lon Lei, Chi-Chong Chiu. "Strategy Modeling and Classifier Training for Share Trading", in Zhang, Y.; Cuzzocrea, A.; Ma, J.; Chung, K.-i.; Arslan, T.; Song, X. (eds.), *Database Theory and Application, Bio-Science and Bio-Technology*, Communications in Computer and Information Science Series, Vol 118, pp. 56-67, Springer, 2010.
7. **Yain-Whar Si**, Kan-lon Leong, Robert P. Biuk-Aghai, Simon Fong. "Hidden Cluster Detection for Infectious Disease Control and Quarantine Management", in Mao Lin Huang, Quang Vinh Nguyen and Kang Zhang (eds.), *Visual Information Communication*, chapter 10, pp. 159-172, Springer, 2009.

Edited Books

1. Proceedings of the Student Workshop of 2009 IEEE International Conference on e-Business Engineering, October 23, 2009, ISBN 979-99937-1-004-1, University of Macau.
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Services

University, Faculty/Unit Services

- Coordinator, MSc in Financial Technology (2025- Present)
- Fellow, Henry Fok Pearl Jubilee College, (2010 – Present)
- Member, Internal Advisory Committee, Department of Computer and Information Science, Faculty of Science and Technology (2015 – Present)
- Course Portfolio Examiner, Department of Computer and Information Science, Faculty of Science and Technology (2015 – Present)
- RC Liaison Officer, Faculty of Science and Technology, (2015 – Present).
- Academic Council Member, Faculty of Science and Technology, (2005 – Present).
- Mentor, Faculty Mentorship Programme, (2005, 2006, 2007, 2008, 2009, 2014)
- Senate Member, University of Macau, (2005/2006 Academic Year)

Team Leader (Supervisor) for Participating in International Competitions by UM Students

- The Tenth Annual Trading Agent Competition (2009), TAC Market Design Tournament, Team Members: Mr. Lam Heng Leong, Leo, Mr. U Ka Hou, Jason, Mr. Alexandre Lok.
- The Tenth Annual Trading Agent Competition (2009), TAC/Ad Auctions Tournament, 8th position among 15 entrants, Team Members: Mr. Cheong Se Hang, Mr. Wong Ka Chon, Mr. Liu Yao Heng.
- The Seventh Annual Trading Agent Competition (2006), Trading Agent Competition for Supply Chain Management (TACSCM), 4th position in Second Final Round, 23 entrants, Team Members: Ms. Lou Sio Fan, Ada.
- The Fifth Annual Trading Agent Competition (2004), Trading Agent Competition for Supply Chain Management (TACSCM), 3rd position among 29 entrants, Team Members: Mr. Chan U Chong, Jacky.
- The Fifth Annual Trading Agent Competition (2004), TAC Classic, 6th position among 12 entrants, Team Members: Mr. Lei Man Kin.

External Services

Journals and Books

- Reviewer, *Physica A: Statistical Mechanics and its Applications*, Elsevier.
- Reviewer, *IEEE Access*, IEEE.
- Reviewer, *Information Sciences*, Elsevier.
- Reviewer, *Distributed and Parallel Databases*, Springer.
- Reviewer, *Applied Soft Computing*, Elsevier.
- Reviewer, *Soft Computing*, Springer.
- Reviewer, *Crime, Law and Social Change*, Springer.
- Reviewer, *Information Processing in Agriculture*, Elsevier.
- Reviewer, *Future Generation Computer Systems*, Elsevier.
- Reviewer, *Artificial Intelligence Review*, Springer.
- Reviewer, *Applied Intelligence*, Springer.
- Reviewer, *Information Systems Frontiers*, Springer.
- Reviewer, *Neural Processing Letters*, Springer.
- Reviewer, *Computing*, Springer.
- Reviewer, *International Journal of Machine Learning and Cybernetics*, Springer.
- Reviewer, *Innovations in Systems and Software Engineering*, Springer.
- Reviewer, *Journal of Systems and Software*, Elsevier.
- Reviewer, *International Journal of Wavelets, Multiresolution and Information Processing*, World Scientific.
- Reviewer, *International Journal of Information Technology & Decision Making*, World Scientific.
- Reviewer, *Concurrent Engineering: Research and Applications*, Sage.
- Reviewer, *Facta Universitatis, Series: Mathematics and Informatics*, University of Niš, Serbia and Faculty of Sciences and Mathematics, Niš, Serbia.
- Reviewer, *Journal of Engineering and Computer Innovations*, Academic Journals.
- Reviewer, *Encyclopedia of E-Business Development and Management in the Digital Economy, E-Business Research (AEBR) Book Series*, IGI Global.
- Reviewer, *International Journal of E-Business Development (IJED)*, the World Academic Publishing.

Conferences

- Program Committee, 2022 6th International Conference on Intelligent Systems, Metaheuristics & Swarm Intelligence, ISMSI 2022.
- Program committee, 2021 IEEE Services – 6th International Workshop on Emerging Computing Paradigms & Context in Business Process Management (CCBPM), 2021.
- Program Committee, IEEE International Conference on e-Business engineering (ICEBE 2021).
- Program Committee, 22nd International Conference on Web Information Systems Engineering, WISE 2021.

- Program Committee, The 2021 17th International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD 2021).
- Program Committee, IEEE International Conference on e-Business engineering (ICEBE 2020).
- Program Committee, The 2018 14th International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD 2020).
- Program Committee, IEEE International Conference on e-Business engineering (ICEBE 2019).
- Program Committee, The 2018 14th International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD 2018).
- Program Committee, IEEE International Conference on e-Business engineering (ICEBE 2018), Big Data for e-Business Track.
- Program Committee, the 19th International Conference on Web Information Systems Engineering (WISE 2018).
- Program Committee, the 2017 13th International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD 2017).
- Program Committee, the 18th International Conference on Web Information Systems Engineering (WISE 2017).
- Program Committee, IEEE International Conference on e-Business engineering (ICEBE 2017), Big Data Track.
- Program Committee, the 2017 International Conference on Progress in Informatics and Computing (PIC-2017).
- Reviewer, International Conference on Cloud Computing and Big Data, (CCBD 2016).
- Program Committee, IEEE International Conference on e-Business engineering (ICEBE 2016).
- Program Committee, The 17th International Conference on Web Information System Engineering, (WISE 2016).
- Program Committee, IEEE International Conference on e-Business engineering (ICEBE 2015)
- Program Committee, the 2014 11th International Conference on Natural Computation (ICNC 2015) and the 2015 12th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD 2015).
- Program Committee, the 2014 10th International Conference on Natural Computation (ICNC 2014) and the 2014 11th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD 2014).
- Program Committee, 2nd International Workshop on Cloud and Context for Business Process Management.
- Program Committee, Asia Pacific conference on Business Process Management 2014 (AP-BPM 2014).
- Program Committee, 2014 IEEE International Conference on e-Business engineering, (ICEBE 2014).
- Program Committee, 2013 International Conference on Big Data and Cloud Computing.
- Program Committee, Context for Business Process Management Workshop (CBPM'13)

- Reviewer, the 9th International Conference on Information, Communications and Signal Processing (ICICS 2013)
- Program Committee, 2013 IEEE International Conference on e-Business Engineering, (Data and Knowledge Management for e-Business Track), (ICEBE 2013).
- Workshop Co-chairs, Advanced Techniques on Data Analytics and Data Visualization, Seventh International Conference on Digital Information Management (ICDIM 2012).
- Program Committee, the 10th International Conference on Advances in Mobile Computing & Multimedia (MoMM-2012).
- Program Committee, 2012 IEEE International Conference on e-Business Engineering (ICEBE 2012).
- Reviewer, 8th International Conference on Information, Communications and Signal Processing.
- Program Committee, the 9th International Conference on Advances in Mobile Computing & Multimedia (MoMM-2011).
- Workshop Committee, the 5th International Workshop on Service-Oriented Knowledge Management and Business Intelligence (SOKMBI'11), 2011 IEEE International Conference on e-Business Engineering, ICEBE 2011.
- Workshop Committee, the 4th International Workshop on Service-Oriented Knowledge Management and Business Intelligence (SOKMBI'10).
- Reviewer, 2010 IEEE International Conference on Systems, Man, and Cybernetics.
- Program Committee, the 4th International Workshop on Service-Oriented Knowledge Management and Business Intelligence (SOKMBI'10).
- Program Committee, the 8th International Conference on Advances in Mobile Computing & Multimedia (MoMM2010).
- Workshop Co-chairs, Student Workshop of 2009 IEEE International Conference on e-Business Engineering, 2009.
- Program Committee, the Second International Workshop on Business Intelligence Methodologies and Applications (BIMA 2009).
- Reviewer, 3rd IEEE International Conference on Digital Ecosystems and Technologies Conference (IEEE – DEST 2009).
- Reviewer, 2009 IEEE International Conference on Systems, Man, and Cybernetics.
- Program Committee, the First International Workshop on Business Intelligence Methodologies and Applications (BIMA 2008).

Professional Affiliations

- Life Member, Clare Hall, University of Cambridge.