

# DEBO CHENG

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## SUMMARY STATEMENT

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I am currently a Research Fellow at the Industrial AI Research Centre, University of South Australia (UniSA). I earned my PhD from UniSA on September 14, 2021. My expertise lies in Machine Learning, Data Science, and Causal Inference, with a particular focus on developing data-driven causal inference techniques. My work aims to enhance evidence-based decision-making processes and deliver innovative solutions to complex, real-world problems.

My current research centers on the impact of latent variables in causal inference, estimating causal effects in graph data, fairness, and recommendation systems. Additionally, I investigate the use of causal inference techniques to explain large language models (LLMs) and address fairness issues in generative models. These research efforts are grounded in mathematical models and supported by data science, machine learning and causal inference methods, including natural language processing (NLP).

I have developed strong expertise in my field and the skills for independent and collaborative research, and have demonstrated outstanding achievements as an early career researcher (ECR). I have published (or accepted) over **60 peer-reviewed papers**, which have received >2,500 citations with h-Index is 16 (Google Scholar) and i-10 index is 25. Two of my journal articles are recognised as **ESI highly cited papers** (top 1% by citations for field and publication year in the Web of Science), and PhD work has been published in top tier journals (Q1) and A/A\* conferences. I have been invited to serve as journal guest editor and reviewer for top ranked journals and conferences in AI, machine learning and data analytics.

My Google Scholar homepage: <https://scholar.google.com/citations?user=BYDoIPOAAAAJ&hl=en&oi=ao>. My ORCID: <https://orcid.org/0000-0002-0383-1462>.

## EDUCATION

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**Ph.D., University of South Australia, Australia** *October, 2017- September, 2021*

Field of study: Artificial Intelligence, Data Science, Causal Inference and Data Mining

Dissertation: *Towards efficient and unbiased causal effect estimation from observational data*

**M.S., Guangxi Normal University, China** *September 2013 - July 2016*

Field of study: Artificial Intelligence, Data Science, Data Mining and Machine Learning

Dissertation: *Sparse Learning and its application in Data Mining*

**B.S., Yichun University, China** *September 2009 - July 2013*

Field of study: Information Science, Mathematics and Software Engineering

## MY REFEREES

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- Professor Jiuyong Li, [Jiuyong.Li@unisa.edu.au](mailto:Jiuyong.Li@unisa.edu.au) , Professor of Computer Science UniSA STEM
- Professor Lin Liu, [Lin.Liu@unisa.edu.au](mailto:Lin.Liu@unisa.edu.au) , Professor of Computer Science UniSA STEM
- Associate Professor Thuc Le, [Thuc.Le@unisa.edu.au](mailto:Thuc.Le@unisa.edu.au) , Associate Professor of Computer Science UniSA STEM

## WORK EXPERIENCE

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*May 2021 - November 2022*, postdoc researcher, Industrial AI Research Centre, UniSA STEM.

## AWARDS AND HONORS

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- IJCAI-ECAI2022 (CORE ranking A\* conference in Computer Science), travel grant USD \$1,000, 2022
- The 10th China Youth Science and Technology Innovation Award (**Only 99 awardees** in this year in China), 2016. (The Award is awarded *every two years*, and **less than 1,200 people** have won awards in China from 2004 to 2020.)
- Best Paper Award in the 10th International Conference on Advanced Data Mining and Applications, as the 1st author of the paper “kNN Algorithm with Data-Driven k Value”
- China National Scholarship, China, 2015 (**Only 2.122%** of postgraduate students received the scholarship)
- Outstanding reviewer of international journals *Nerocomputing* (2017), *Pattern Recognition Letters* (2017), and *Journal of King Saud University: Computer and Information Sciences* (2017)
- Third Prize of National Postgraduate Mathematic Contest in Modeling, China, 2014
- “Academic Star” of Graduate Technology Festival in Guangxi Normal University, 2015
- Excellent Post-graduate Honor of Guangxi Normal University, 2015
- Second Prize of Imagine Cup in Guangxi Normal University, 2014

## INVITED TALK

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- “*Causal effect estimations from observational data with hidden variables*”, The 5th South Lake Forum for International Young Scientists, Huazhong Agricultural University (a top tier university in China), July 03, 2020
- “*Local search for efficient causal effect estimation*”, Invited talk, School of Informatics, Huazhong Agricultural University, July 29, 2021

## SERVICES

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**Session Chair**, I organized the session on uncertainty in IJCAI-ECAI2022 as a session chair.

**Associate Editor**, [Plos one](#) (impact factor (if) 2.74), January 01, 2023 - present.

**Associate Editor**, [Scientific Programming](#) (if 1.672), December 01, 2021 - present.

**Special Issue Editor**, [Mathematics](#) (if 2.592), Special Issue “[Advances in Data Mining, Machine Learning and Causal Inference and Their Applications](#)”, start from September 26, 2022.

**Special Issue Editor**, *Pattern Recognition Letters*, “Explainable Representation Learning for Multi-view/modal Data (ERLMD)”.

**Reviewer of international Journals**

**JCR Q1**

- IEEE Transactions on Neural Networks and Learning Systems (TNNLS, if 14.255)
- IEEE Transactions on Cybernetics (if 19.118)
- IEEE Transactions on Knowledge and Data Engineering (TKDE, if 9.235)
- IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (if 2.565)
- Pattern Recognition (PR, if 8.518)
- Information Processing and Management (IPM, if 7.466)
- Neural Networks (if 7.8)

- International Journal of Medical Informatics (if 4.73)
- Artificial Intelligence in Medicine (if 7.011)
- ACM Transactions on Knowledge Discovery from Data (TKDD, if 4.157)
- Wiley interdisciplinary reviews-Data Mining and Knowledge Discovery (if 7.558)
- Frontiers in Public Health (if 6.461)
- Frontiers in Genetics (if 4.772)
- Journal of King Saud University-Computer and Information Sciences (if 8.839)
- Industrial Marketing Management (if 10.3)
- IEEE Transactions on Computational Social Systems (if 4.5)

#### **Program Committee member international Conferences**

##### **CORE Rank A\***

- KDD2018, KDD2019, KDD2020
- AAAI2020 (Sub-reviewer), AAAI2021, AAAI2022 (top 15%), AAAI2023, AAAI2024, AAAI2025
- IJCAI2021, IJCAI2022, IJCAI2023, IJCAI2024
- ACM Multimedia 2021
- ICML2022, ICML2023, ICML2024
- Neurips2022, Neurips2023, Neurips2024
- ICLR2024, ICLR2025
- ICDM2021, ICDM2022 (Sub-reviewer), ICDM2024

## **PUBLICATIONS**

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### **Journals**

1. **Debo Cheng**, Jiuyong Li, Lin Liu, Jiji Zhang, Jixue Liu, Thuc Duy Le: Local search for efficient causal effect estimation[J]. IEEE Transactions on Knowledge & Data Engineering, 35(9): 8823-8837 (2023). (CORE ranking A\*, if 8.9)
2. **Debo Cheng**, Jiuyong Li, Lin Liu, Kui Yu, Thuc Duy Le, Jixue Liu: Towards precise causal effect estimation from data with hidden variables[J]. IEEE Transactions on Neural Networks and Learning Systems, 34(9): 6108-6120 (2023). (CORE ranking A\*, if 10.2)
3. **Debo Cheng**, Jiuyong Li, Lin Liu, Thuc Duy Le, Jixue Liu, Kui Yu: Discovering ancestral instrumental variables for causal inference from observational data[J]. IEEE Transactions on Neural Networks and Learning Systems, 1-13, 2023. (CORE ranking A\*, if 10.2)
4. **Debo Cheng**, Jiuyong Li, Lin Liu, Jixue Liu, Thuc Duy Le: Causal effect estimation by graphical causal models: A Survey[J]. ACM Computing Surveys, 56(5): 127:1-127:37 (2024). (JCR Q1, if 23.8)
5. **Debo Cheng**, Jiuyong Li, Lin Liu, Thuc Duy Le, Jixue Liu, Kui Yu: Sufficient Dimension Reduction for Average Causal Effect Estimation[J]. Data Mining and Knowledge Discovery, 36(3): 1174-1196 (2022). (JCR Q1, if 2.8)
6. **Debo Cheng**, Shichao Zhang, Xingyi Liu, Ke Sun, Ming Zong: Feature Selection by Combining Subspace Learning with Sparse Representation. *Multimedia Systems*.23.3 (2017): 285-291. (JCR Q2, if: 2.603)

7. Guixian Zhang, Debo Cheng, Guan Yuan, Shichao Zhang: SRGNN: Learning Fair Representations via Rebalancing Graph Structure[J]. *Inf. Process. Manag.* 61(1): 103570 (2024). (**I have equally contribution for this work**, JCR Q1, if: 8.6)
8. Shichao Zhang, Debo Cheng<sup>#</sup>, Zhenyun Deng, Ming Zong, and Xuelian Deng. A novel kNN algorithm with data-driven k parameter computation. *Pattern Recognition Letters* 109 (2018): 44-54. (<sup>#</sup>**Corresponding author**, JCR Q2, if 4.757)
9. Chengyu Li, Debo Cheng<sup>#</sup>, GuiXian Zhang, Shichao Zhang: Contrastive learning for Fair Graph Representations via Counterfactual Graph Augmentation. (<sup>#</sup>**Corresponding author**, Accepted by Knowledge-Based Systems, JCR Q1)
10. Rongyao Hu, Xiaofeng Zhu, Debo Cheng, Wei He, Yan Yan, Jingkuan Song, Shichao Zhang: Graph Self-representation method for Unsupervised Feature Selection. *Neurocomputing*. 2017, 220: 130-137. (**I have equally contribution for this work**, JCR Q1, if 5.779)
11. Wei He, Xiaofeng Zhu, Debo Cheng, Rongyao Hu, Shichao Zhang: Unsupervised Feature Selection for Visual Classification via Feature-Representation Property. *Neurocomputing*. 2017, 236: 5-13. (**I have equally contribution for this work**, JCR Q1, if 5.779)
12. Guixian Zhang, Debo Cheng, Shichao Zhang: FPGNN: Fair Path Graph Neural Network for Mitigating Discrimination[J]. *World Wide Web*[J]. 26(5): 3119-3136 (2023). (JCR Q2, if 3.0).
13. Shichao Zhang, Debo Cheng, Ming Zong, Lianli Gao: Self-representation Nearest Neighbor Search for Classification. *Neurocomputing*. 2016, 195: 137-142. (JCR Q1, if 5.779)
14. Shichao Zhang, Debo Cheng, Rongyao Hu, and Zhenyun Deng. Supervised feature selection algorithm via discriminative ridge regression. *World Wide Web*, 2018, 21, no. 6: 1545-1562. (SCI, JCR Q2, if 3.00).
15. Guixian Zhang, Debo Cheng, Guan Yuan, Shichao Zhang, Jiuyong Li, Lin Liu: Disentangled Contrastive Learning for Fair Representations of Graphs. *Neural Networks* 181: 106781 (2025), (JCR Q1)
16. Shichao Zhang, Xuelong Li, Ming Zong, Xiaofeng Zhu, Debo Cheng: Learning k for kNN Classification. *ACM Transactions on Intelligent Systems and Technology*. 2017, 8(3): 43:1-19. (JCR Q1, if 10.489)
17. Rongyao Hu, Debo Cheng, Wei He, Guoqiu Wen, Yonghua Zhu, Jilian Zhang, Shichao Zhang: Low-rank Feature Selection for Multi-view regression. *Multimedia Tools and Applications* 76.16 (2017): 17479-17495. (JCR Q2, if 2.577)
18. Shihong Xu, Debo Cheng, William Skinner; Susana Brito e Abreu: Application of ToF-SIMS to predict contact angles of pyrite particles. *Minerals Engineering*, 147 (2020): 106168. (JCR Q2, if 5.779)
19. Chen Li, Yang Cao, Ye Zhu, Debo Cheng, Chengyuan Li, Yasuhiko Morimoto: Ripple Knowledge Graph Convolutional Networks For Recommendation Systems, accepted at Machine Intelligence Research[J]. 21(3): 481-494 (2024).
20. Zhenyun Deng, Xiaoshu Zhu, Debo Cheng, Ming Zong, Shichao Zhang: Efficient kNN Classification Algorithm for Big Data. *Neurocomputing*. 2016, 195: 143-148. (JCR Q2, if 5.779)
21. Rongyao Hu, Jie Cao, Debo Cheng, Wei He, Yonghua Zhu, Qing Xie, Guoqiu Wen: Self-representation Dimensionality Reduction for Multi-model classification. *Neurocomputing*. 2017, 253: 154-161. (JCR Q2, if 5.779)
22. Shichao Zhang, Yonggang Li, Debo Cheng, Zhenyun Deng, Lifeng Yang: Efficient subspace clustering based on self-representation and grouping effect. *Neural Computing and Applications*.

2018, 29, 51–59.(JCR Q2, if 5.102)

23. Wei He, Xiaofeng Zhu, **Debo Cheng**, Rongyao Hu, Shichao Zhang: Low-rank Unsupervised Graph Feature Selection via Feature Self-representation. *Multimedia Tools and Applications*. 2017, 76(9): 12149-12164. (JCR Q2, if 2.577)
24. Wenting Ye, Chen Li, Wen Zhang, Jiuyong Li, Lin Liu, **Debo Cheng**<sup>#</sup>, Zaiwen Feng: Predicting Drug-Target Interactions by Measuring Confidence with Consistent Causal Neighborhood Interventions. (**#Corresponding author**, Accepted by Methods, 2024)
25. Shichao Zhang, Yonggang Li, **Debo Cheng**, Wei He, Guoqiu Wen, Qing Xie: Spectral clustering based on hypergraph and self-representation. *Multimedia Tools and Applications*. 2017, 1-18. (JCR Q2, if 2.577)
26. Shichao Zhang, Lifeng Yang, Zhenyun Deng, **Debo Cheng**, Yonggang Li: Leverage Triple Relational Structures via Low-rank Feature Reduction for Multi-output Regression. *Multimedia Tools and Applications*. 2016, 1-17. (JCR Q2, if 2.577)
27. Yonghua Zhu, Zhi Zhong, Wenfei Cao, **Debo Cheng**: Graph Feature Selection for Dementia Diagnosis. *Neurocomputing*. 2016, 195: 19-22. (JCR Q2, if 5.779)
28. Zhenyun Deng, Shichao Zhang, Lifeng Yang, Ming Zong, **Debo Cheng**: Sparse Sample Self-representation for Subspace Clustering. *Neural Computing and Applications*. 2016, 1-7. (JCR Q2, if 5.102)
29. Yonghua Zhu, Xuejun Zhang, Guoqiu Wen, Wei He, **Debo Cheng**: Double sparse-representation feature selection algorithm for classification. *Multimedia Tools and Applications*, 2017, 1-15. (JCR Q2, if 2.577)

## Conferences

1. **Debo Cheng**, Ziqi Xu, Jiuyong Li, Lin Liu, Jixue Liu, Thuc Duy Le, Instrumental Variable Estimation for Causal Inference in Time Series with Time-Dependent Latent Confounders. Proceedings of the AAAI Conference on Artificial Intelligence. AAAI 2024: 11480-11488 (CORE ranking A\*, Acceptance rate: 23.75%)
2. **Debo Cheng**, Jiuyong Li, Lin Liu, Jiji Zhang, Jixue Liu, Thuc Duy Le: Ancestral instrument method for causal inference without complete knowledge[C]. IJCAI 2022, pages: 4843-4849. (One of the top conferences in Artificial Intelligence, CORE ranking A\*, Acceptance rate: 15%)
3. **Debo Cheng**, Ziqi Xu, Jiuyong Li, Lin Liu, Thuc Duy Le, Jixue Liu: Causal Inference with Conditional Instruments using Deep Generative Models[C]. Proceedings of the AAAI Conference on Artificial Intelligence. 2023, 37(6): 7122-7130. (CORE ranking A\*)
4. **Debo Cheng**, Ziqi Xu, Jiuyong Li, Lin Liu, Jixue Liu, Thuc Duy Le, Conditional Instrumental Variable Regression with Representation Learning for Causal Inference. (Accepted by ICLR2024, CORE ranking A\*)
5. Ziqi Xu, **Debo Cheng**<sup>#</sup>, Jiuyong Li<sup>#</sup>, Lin Liu, Jixue Liu, Kui Yu: Causal Effect Estimation with Variational AutoEncoder and the Front Door Criterion (**#Corresponding author**, Accepted by ICLR2024, CORE ranking A\*)
6. **Debo Cheng**, Yang Xie, Ziqi Xu, Jiuyong Li, Lin Liu, Jixue Liu, Yinghao Zhang, Zaiwen Feng: Disentangled Latent Representation Learning for Tackling the Confounding M-Bias Problem in Causal Inference. ICDM 2023: 51-60. (CORE ranking A\*, Acceptance rate: 9.36%)
7. Ziqi Xu, **Debo Cheng**<sup>#</sup>, Jixue Liu, Jiuyong Li<sup>#</sup>, Lin Liu, and Ke Wang: Disentangled Representation for Causal Mediation Analysis[C]. Proceedings of the AAAI Conference on Artificial Intelligence, 37(9), 10666-10674. (**#Corresponding author**, CORE ranking A\*)

8. Qinfeng Chen, Boquan Wei, Debo Cheng<sup>#</sup>, Jiuyong Li, Lin Liu, Shichao Zhang: A Novel Shadow Variable Catcher for Addressing Selection Bias in Recommendation Systems. (<sup>#</sup>**Corresponding author**, Accepted by ICDM2024, CORE ranking A\*)
9. Debo Cheng, Ziqi Xu, Jiuyong Li, Lin Liu, Jixue Liu, Thuc Duy Le: Learning Conditional Instrumental Variable Representation for Counterfactual Predictions. ECML/PKDD (1) 2023: 525-540 (CORE ranking A)
10. Debo Cheng, Jiuyong Li, Lin Liu, Jixue Liu, Kui Yu, Thuc Duy Le: Causal query in observational data with hidden variables. 24th *European Conference on Artificial Intelligence* (ECAI2020), pages: 2551-2558. (CORE ranking A)
11. Debo Cheng, Shichao Zhang, Zhenyun Deng, Yonghua Zhu, Ming Zong: kNN Algorithm with Data-Driven k Value. International conference of *Advanced Data Mining and Applications*, (ADMA 2014), pages: 499-512. (**Best Paper Award**, CORE ranking B)
12. Wenting Ye, Chen Li, Yang Xie, Wen Zhang, Bowen Wang, Hongyu Zhang, Debo Cheng<sup>#</sup>, Zaiwen Feng<sup>#</sup>: Causal Intervention for Measuring Confidence in Drug-Target Interaction Prediction. BIBM 2023: 395-400 (<sup>#</sup>**Corresponding author**, acceptance rate: 19.5%)
13. Jun Yan, Debo Cheng<sup>#</sup>, Ming Zong, Zhenyun Deng: Improved Spectral Clustering Algorithm Based on Similarity Measure. International conference of *Advanced Data Mining and Applications* (ADMA2014): 641-654. (<sup>#</sup>**Corresponding author**, CORE ranking B)
14. Haoran Zhao, Yinghao Zhang, Debo Cheng<sup>#</sup>, Chen Li, Zaiwen Feng<sup>#</sup>, Matching Using Sufficient Dimension Reduction for Heterogeneity Causal Effect Estimation[C]. 2022 IEEE 24th Int Conf on High Performance Computing & Communications; 8th Int Conf on Data Science & Systems, IEEE, 2022: 9-16. (<sup>#</sup>**Corresponding author**, CORE ranking B, Acceptance rate: 17.6%)
15. Xiaojing Du, Qingfeng Chen<sup>#</sup>, Debo Cheng<sup>#</sup>, Qian Huang, Junyue Cao, Zhenyun Deng and Shichao Zhang: Stable Causal Feature Selection based on Direct Causal Effect Estimation[C]. 2022 IEEE 24th Int Conf on High Performance Computing & Communications; 8th Int Conf on Data Science & Systems, IEEE, 2022: 1593-1600. (<sup>#</sup>**Corresponding author**, CORE ranking B, Acceptance rate: 17.6%)
16. Jing Chen, Debo Cheng, Jiacheng Jiang, Zhongyi Yu, Shichao Zhang. SEM-FCNET: Semantic feature enhancement and fully convolutional network model for remote sensing object detection. ICIIP 2023: 855-859.
17. Chen Li, Ye Zhu, Yang Cao, Jinli Zhang, Annisa Annisa, Debo Cheng, Kenta Maruyama and Yasuhiko Morimoto: Mining Area Skyline Objects from Map-based Big Data using Apache Spark Framework. (Accepted by ADMA2024)
18. Wentao Gao, Ziqi Xu, Jiuyong Li, Lin Liu, Jixue Liu , Thuc Duy Le, Debo Cheng, Yanchang Zhao, Yun Chen. TSI: A multi view representation learning approach for time series forecasting. (Accepted by Australasian Joint Conference on Artificial Intelligence 2204)
19. Guixian Zhang, Debo Cheng, Ludan He, Jiuyong Li, Guan Yuan, Shichao Zhang: Multi-Views Graph Neural Network for Fair Representation learning. APWeb/WAIM (3) 2024: 208-223
20. Mengqi Jiang, Shichao Zhang, Debo Cheng, Leyuan Zhang, Guixian Zhang: Multi-Head Similarity Feature Representation and Filtration for Image-Text Matching. ADMA (2) 2023: 629-643. (**I have equally contribution for this work**)
21. Zhirong Huang, Shichao Zhang, Debo Cheng, Rongjiao Liang and Mengqi Jiang: Multi-Branch Residual Fusion Network for Imbalanced Visual Regression. APWeb-WAIM (1) 2023: 392-406. (**I have equally contribution for this work**)

22. Zhongyi Yu, Shichao Zhang, **Debo Cheng**, Guixian Zhang, Jing Chen. MC-Net: Multi-feature Fusion and Cross-level Information Interaction Net for Traffic Sign Detection. ICTAI 2023: 841-848.
23. Penghui Xi, Shichao Zhang, **Debo Cheng**, Zhenyun Deng, Guixian Zhang: LRGAD: Local Information Recognition for Attribute Graph Anomaly Detection. ICTAI 2023: 997-1001.
24. Tingting Xu, Yinghao zhang, Jiuyong Li, Lin Liu, Ziqi Xu, **Debo Cheng**<sup>#</sup>, Zaiwen Feng: A data-driven approach to finding K for K nearest neighbor matching in average causal effect estimation. WISE 2023: 723-732. (**#Corresponding author**)
25. Guangtong Zhou, Selasi Kwashie, Michael Bewong, Vincent M. Nofong, **Debo Cheng**, Keqing He, Zaiwen Feng: FastAGEDs: Fast Approximate Graph Entity Dependency Discovery. WISE 2023: 451-465.
26. Ziqi Xu, Jixue Liu, **Debo Cheng**, Jiuyong Li, Lin Liu, and Ke Wang: Disentangled Representation with Causal Constraints for Counterfactual Fairness [C]. Pacific-Asia Conference on Knowledge Discovery and Data Mining, 2023: 471-482.
27. Zongqian Wu, Peng Zhou, Guoqiu Wen, Yingying Wan, Junbo Ma, **Debo Cheng**, Xiaofeng Zhu. Information Augmentation for Few-shot Node Classification. IJCAI 2022, pages: 3601-3607. (CORE ranking A\*)
28. Hailong Chu, Weiming Wu, Wolfgang Mayer, **Debo Cheng**, Hongyu Zhang, Zaiwen Feng<sup>#</sup>, Dynamic Semantic Modeling of Structural Data Sources[C]. 2022 IEEE 24th Int Conf on High Performance Computing & Communications; 8th Int Conf on Data Science & Systems, IEEE, 2022: 74-81. (CORE ranking B, Acceptance rate: 17.6%)
29. Zhenlong Xu, Ziqi Xu, Jixue Liu, **Debo Cheng**, Jiuyong Li, Lin Liu, and Ke Wang. Assessing the Fairness of Classifiers with Collider Bias, PAKDD2022, pages: 262-276. (CORE ranking B)
30. Chen Li, Ye Zhu, Yang Cao, Jinli Zhang, Annisa Annisa, **Debo Cheng**, Kenta Maruyama and Yasuhiko Morimoto: Advancing Aspect-Based Sentiment Analysis through Deep Learning Models (Accepted by ADMA2024)
31. Chen Li, Yang Cao, Ye Zhu, Jinli Zhang, Annisa Annisa, **Debo Cheng**, Huidong Tang, Shuai Jiang, Kenta Maruyama and Yasuhiko Morimoto: An Enhanced Distributed Algorithm for Area Skyline Computation based on Apache Spark[C]. International Conference on Knowledge Science, Engineering and Management, 2023: 35-43.
32. Jiao Luo, Yitao Zhang, Ying Wang, Wolfgang Mayer, Ningpei Ding, Xiaoxia Li, Yuan Quan, **Debo Cheng**, Hong-Yu Zhang and Zaiwen Feng: A Reinforcement Learning-based Approach for Knowledge Graph Continuous Construction[C]. International Conference on Knowledge Science, Engineering and Management, 2023: 418-429.
33. Shichao Zhang, Yonggang Li, **Debo Cheng**, Zhenyun Deng: Hypergraph Spectral Clustering via Sample Self-representation. The 2nd International Conference on *Fuzzy Systems and Data Mining*(FSDM)2016, 293:334-240. (EI, International conference)
34. Shichao Zhang, Ming Zong, Ke Sun, Yue Liu, **Debo Cheng**: Efficient kNN Algorithm Based on Graph Sparse Reconstruction. International conference of *Advanced Data Mining and Applications* (ADMA2014) 2014: 356-369. (EI, international conference)