

DONGHUA UNIVERSITY ENGLISH-TAUGHT MASTER'S DEGREE PROGRAMS

College of Computer Science and Technology

NAME OF THE PROGRAM

Computer Science and Technology

计算机科学与技术

RESEARCH DIRECTIONS:

- Data Engineering 数据工程
- Image Processing and Pattern Recognition 图像处理与模式识别
- Computer Network and Information Security 计算机网络与信息安全
- Distributed Systems 分布式计算机系统

TYPE OF THE DEGREE: Academic Degree

DEGREE CONFERRED: Master of Engineering

SCHOOLING: 3 years

1. BRIEF INTRODUCTION
2. PROGRAM OBJECTIVES
3. CURRICULUM
4. SUPERVISOR INFORMATION

1、 BRIEF INTRODUCTION

The school of computer science and technology was founded in June 2004 at Donghua University. The history of this school can be dated back to 1983 when Computer application major was first established in Donghua University. The school started its master's degree program in computer application in 1986, and was one of the earliest.

Based on the national and local medium- and long-term science and technology development plan, the school aims at the industrialization of high-tech and strategic emerging industries, as well as the technological innovation of the textile industry, actively carrying out the application research and basic research combining industry, academia, and research. Significant achievements have been made in theoretical research and engineering applications. Currently, the school's research results mainly focus on the fields of data science, smart healthcare, textile and clothing, image processing, the Internet of Things, and information security. A number of influential research projects have been completed, including the National High-Tech Research and Development Program (863 Program), key projects of the Ministry of Science and Technology, intelligent manufacturing projects of the Ministry of Industry and Information Technology, National Natural Science Foundation projects, and key projects of the Ministry of Education.

Our global focus manifests itself in several ways: our active participation and hosting of international conferences and activities, our keep on growing internationally oriented academic programs, our overseas study programs in the U.S.A and in Austrilia, 60% of our faculty who have overseas education background, students and scholars who come here from many countries.

2、 PROGRAM OBJECTIVES

Master the theoretical knowledge, application technology, and engineering methods of computer science and technology. Possess good scientific literacy, innovative spirit, and teamwork ability, and have the ability to independently engage in computer science-related research and apply computer science theory, methods, and technology to solve practical engineering problems.

We have a solid, theoretical understanding of computer technology with plenty of attention for the wide range of its applications. With full consideration of our strength on data engineering and artificial intelligence and the urgent need of industry, special attentions are paid to the rapid growing Artificial intelligence , Machine intelligence and Cloud and edge computing area.

3、 CURRICULUM

1. The 1st & 2nd semesters: courses study
2. November of the 3rd semester: thesis proposal submission and report
3. November of the 5th semester: thesis draft and Pre-defense
4. December of the 5th semester: concealed evaluation on the thesis
5. January of the 6th semester: oral defense on thesis

Main Courses

1. **Analyzing Operating System 操作系统分析**

This course goes deep into the kernel of Linux, analyzes the design and implementation of the kernel, and lets the students learn the core subsystems of the kernel, including the services provided by the kernel, the way of service, and the realization of the service. At the same time, it provides the students with practical guidance and the understanding of the operating system kernel in practice.

Students are required to familiarize themselves with the design and implementation of the kernel of Linux system, to master kernel compilation methods and module installation methods, to write process synchronizer, system call program, and interrupt handler.

2. **Artificial Intelligence & Its Applications 人工智能及应用**

"Artificial Intelligence and Its Applications" is a comprehensive and in-depth course designed to cultivate students' theoretical foundations and practical application skills in the field of artificial intelligence. The course covers fundamental concepts, development history, core technologies such as machine learning, deep learning, natural language processing, computer vision, diverse application domains (healthcare, finance, education, intelligent manufacturing), as well as ethical considerations and societal impacts. Through theoretical study and practical case analysis, students gain a profound understanding of the working principles of artificial intelligence and learn to apply relevant technologies to solve real-world problems. The course also emphasizes ethical discussions to foster students' sensitivity to the societal implications of AI applications. Through the study of this course, students will establish a solid foundation in artificial intelligence, preparing them for future developments in the field.

3. **Cloud Computing 云计算**

As one of the hottest topics in the field of information technology in recent years, the cloud computing model has received close attention from industry and academia since its introduction, and has become one of the most important trends in the development of network and computer technology. This course places equal emphasis on theory and practice, basic knowledge learning and cutting-edge research exploration, and combines

teaching with thematic discussions. On the basis of introducing the basic knowledge of cloud computing, the focus is on enabling students to learn and understand key technologies, infrastructure, and various mainstream solutions of cloud computing. It also combines the latest research frontiers such as multi-cloud computing to conduct thematic learning and exploration, guiding students to conduct more in-depth research and exploration. The main contents of the course include: overview of cloud computing, key technologies of cloud computing, cloud service system, mainstream solutions of cloud computing, open source cloud computing and big data processing platform, multi-cloud computing, edge computing and serverless computing.

4. Business Intelligence 商务智能

This course aims to familiarize students with the basic theories and methods of understanding, analyzing, and interpreting business phenomena from big data, as well as to equip them with professional skills in data management and analysis to support business decision-making. Specifically, students will learn to differentiate, design, and evaluate various business intelligence models, identify and transform business problems into data analysis problems, collect, organize, process, and present data results to support problem-solving, and efficiently solve these problems. The course also emphasizes staying updated with cutting-edge issues in the field. Students are required to master theories while focusing on practical skills, and to demonstrate individual abilities while also emphasizing teamwork. They will complete course experiments independently and collaborate on self-selected or designated business intelligence projects.

5. Data Mining 数据挖掘

The course is aimed to introduce students to the basic concepts and techniques of Data Mining, including classification, clustering, association rules mining and outlier analysis. Further, it will help students to develop skills of using recent data mining software for solving practical problems.

6. Deep Learning 深度学习

Through this course, students will learn the principles, implementation methods, and applications of deep learning techniques, and be prepared to participate in the research and development of cutting-edge deep learning techniques. Students will understand algorithms such as multilayer perceptron, backpropagation, optimization algorithms, convolutional neural networks, generative adversarial networks, recurrent neural networks, and long short-term memory networks; they will conduct case studies from healthcare, autonomous driving, sign language reading, music generation, and natural language processing. This course aims to cultivate students' ability to apply deep learning knowledge and skills to future research and work. It requires students to be able to practice in Python and TensorFlow the deep learning theoretical knowledge learned during this course, and to build their own deep learning projects from scratch. Through this course, students will gain the

ability to use Python and TensorFlow to implement a variety of neural network algorithms, analyze algorithms, evaluate results, and improve algorithm performance. Also, students will gain the ability to design and develop specific deep learning projects according to specific artificial intelligence scenarios and applications, meet practical engineering needs, and solve practical problems.

7. Internet of Things 物联网

This course introduces students to Internet of Things (IoT), including the components of IoT device, the trend of IoT, the technologies of IoT, 5G and IoT, the security of IoT, the data processing of IoT, the use of IoT.

8. Database System Implementation 数据库系统实现

This course examines the data structures and algorithms underlying database management systems such as Oracle or PostgreSQL. It covers techniques from both research literature and commercial systems. At the end of this course, students should

- 1) have a good insight into how DBMSs function internally
- 2) understand how to analyse the performance of data-intensive systems
- 3) be familiar with a variety of programming techniques for large-scale data manipulation
apply the insights achieved to build the major components of a mini-DBMS

9. Mobile Internet security technology 移动互联网安全技术

Course Objective: To provide students with a comprehensive understanding of mobile internet security concepts, principles, and best practices, enabling them to protect against modern cyber threats in the mobile environment.

Course Content: Covers mobile device security, secure application development, network security protocols, and threat prevention and response.

Requirements for Thesis Work and Publication of Academic Results

1. The work of the thesis must be completed independently by the master student under the guidance of the supervisor, and the actual working time for the thesis must not be less than one year.
2. The content of the thesis should have innovation and new insights into the research topic, with constructive opinions on the arguments, implementation methods, and results, and should have theoretical significance and practical value in economic construction or in academia.
3. The writing format of the thesis must be in accordance with the requirements specified in the "Unified Requirements for Master's Degree Thesis and Abstract at Donghua University".
4. The evaluation, defense, and application for the degree of the thesis should be carried out in accordance with the "Interim Measures for the Implementation of the Degree Regulations of the People's Republic of China", the "Requirements for Master's Degree Thesis and

Defense Work at Donghua University", and the "Relevant Regulations on the Award of Master's Degree at Donghua University".

5. Before the defense, the graduate student must complete the required credits for their major, and before applying for the degree, they must have published or accepted for publication at least one non-review academic paper related to the content of the thesis in a formally published academic journal. In principle, the paper should be published (or accepted for publication) in a conference or journal recommended by the China Computer Federation (CCF), an international conference proceedings indexed by SCI or EI, or a journal indexed by the school's statistics source. The quality of the published paper will be included in the overall score for the graduation project. Obtaining one national invention patent (ranked top 2) or utility model (ranked top 1) can be considered equivalent to one paper in the statistics source journal.

4、SUPERVISOR INFORMATION

李继云 Jiyun Li



Dr. Li, is a professor in School of computer science and technology at Donghua University, visiting scholar in Indiana University, Bloomington. Her research interests focus on data engineering and application of artificial intelligence in computer aided early detection of Alzheimer's disease and psychological factors inspired decision making models in fashion design. She has published over 60 papers in Expert System with Applications, International Journal of Clothing Science and Technology, Psychology Review, etc., and has been authorized 2 national invention patents.

Research interests:

- Data engineering and machine intelligence
- Artificial intelligence and decision psychology modelling
- Design and implementation of AI model based platform and application

Courses taught:

Operating system principles, business intelligence, computer English and bigdata practice

Honors and awards:

- 1、香港桑麻奖教金
- 2、上海市教学成果奖二等奖 2 项

Major research projects undertaken in recent years:

- 1、“基于海量数据的可信身份认证与数字签名的技术研发”，上海市浦东新区科经委产学研人工智能专项 2020.8.1-2022.7.31
- 2、“基于人工智能的医学影像报告文本结构化及影像关联”，上海市科委 2018.7-2020.6
- 3、“协同创新商务智能系统开发”上海市教委 2015.6-2017.6
- 4、“基于 CRM 的一体化营销平台”企业委托 2014.6-2015.5

- 5、“云安全服务系统研发及产业化”上海市经信委 2012.1-2013.10
- 6、“支撑海量数据的分布式安全数据库管理系统”上海市经信委 2012.1-2014.6
- 7、“在线智能仓储系统”企业委托 2011.6-2012.6
- 8、“网络知识互联结构自主发育模型研究”国家自然科学基金面上项目 2009.1-2011.12
- 9、“Affective fashion style decision making” with Prof. Jerry Busemeyer from Indiana University Bloomington 2008.9-2009.9

Representative papers published in recent years:

- 1、Jiyun Li, Song B, Qian C. Diagnosis of Alzheimer’s Disease by Feature Weighted-LSTM: A Preliminary Study of Temporal Features in Brain Resting-State fMRI Journal of Integrative Neuroscience, 2022, 21(2): 56.(SCI)
- 2、Jiyun Li, Gao Y, Qian C. C-GZS: Controllable Person Image Synthesis Based on Group-Supervised Zero-shot Learning[C]//The 29th International Conference on Multimedia Modeling (MMM). 2022.
- 3、Jiyun Li, Hai Y, Qian C. Alzheimer’s Disease Detection through Spontaneous Speech Using Attention Augmented Convolutional Neural Network[C]//The 12th International Workshop on Computer Science and Engineering (WCSE). WCSE, 2022: 285-290.
- 4、Jiyun Li, Xu D, Qian C. Preventing Multistage Discriminative Event-based Model From Catastrophic Forgetting: A HAT Trick[C]//The 2nd International Conference on Frontiers of Electronics, Information and Computation Technologies (ICFEICT). ELSP, 2022.
- 5、Jiyun Li, Wen G, Qian C. Multi-modal Brain Network Fusion Based on Random Walk-Grassmann Model[C]//2022 3rd International Conference on Computer Vision, Image and Deep Learning & International Conference on Computer Engineering and Applications (CVIDL & ICCEA). IEEE, 2022: 129-134.
- 6、Jiyun Li, Huang Peng, Task-Oriented Feature Representation for Spontaneous Speech of AD Patients, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 2021: 13064 LNBI--46-57
- 7、Jiyun Li, Lu W, Qian C. A Multiple stage Discriminative Event Based Model for Alzheimer’s Disease Progression Timeline Estimation[C]//2020 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT). IEEE, 2020: 339-344.
- 8、Hafiz Muhammd Ali Bhatti, Jiyun Li*, Shahbaz Siddeeq, Abdul Rehman, Arslan Manzoo ,“Multi-detection and Segmentation of Breast Lesions Based on Mask RCNN-FPN”, 2020 IEEE International Conference on Bioinformatics and Biomedicine(BIBM),2698-2704
- 9、Jiyun Li Y, Wang X M, Qian Chen, Semantic Label Prediction of Mammography Based on CC and MLO Views, 2020 IEEE 6th International Conference on Computer and Communications, ICC 2020, 1461-1465
- 10、王亦凡, 李继云, 基于异构图嵌入学习的相似病案推荐, 计算机系统应用, 2020, 29 (10) : 228-234
- 11、Jiyun Li Y, Li K H, Study on Medical Imaging Reports Tagging Extraction Based on Bi-LSTM + CRF, ACM International Conference Proceeding Series 10.1145/3386164.3389082
- 12、Jiyun Li, Hong Y L, Label generation system based on generative adversarial network for medical image, 10.1145/3357254.3357256,2019:78-82
- 13、Jiyun Li, Cognitive characteristics based autonomous development of clothing style Advances in Intelligent Systems and Computing, 2019: Volume:849 Pages:87-92

- 14、 Qian C, Di J, Jiyun Li. Detecting Mild Cognitive Impairment in Alzheimer’s Disease using Speech Acoustics Only: A Two-Stage Deep Metric Learning Approach[C]//2022 IEEE International Conference on Bioinformatics and Biomedicine (BIBM). IEEE, 2022.
- 15、 Li Sun, Shan Sun, Tianlei Wang, Jiyun Li*, Jingsheng Lin”Parallel ADR Detection Based on Spark and BCPNN”, Tsinghua Science and Technology » 2019, Vol. 24 (2): 195-206 (SCI、 EI)
- 16、 Jiyun Li, Caiqi Sun, Juntao Lv, “TCMF:Trust-based Context-aware Matrix Factorization for Collaborative Filtering” ICTAI 2014:815-821 (EI)
- 17 、 Jiyun Li, Pengcheng Feng, Juntao Lv, ICAMF: Improved context-aware matrix factorization for collaborative filtering. ICTAI 2013:1113-1118 (EI)
- 18、 Jiyun Li, Pengcheng Feng, Juntao Lv, An Improved Slope One Algorithm for Collaborative Filtering. 9th international conference on Natural computation. ICNC 2013:1113-1118 (EI)
- 19 、 Jiyun Li, Xin Li. “Selecting Materialized Views Based on Top-k Query Algorithm for Lineage Tracing”, Third Global Congress on Intelligent Systems, 46-49(2012) (EI)
- 20、 Jiyun Li, Yilei Li. “Cognitive model based fashion style decision making”. Expert Syst. Appl. 39(5): 4972-4977 (2012). (SCI、 EI).
- 21 、 Jared M Hotaling, Jerome R. Busemeyer and Jiyun Li. “Theoretical Developments in Decision Field Theory: Comment on Tsetsos, Usher, and Chater”, Psychological Review, Vol.117, No.4, 1294-1298.(2010) (SCI)
- 22、 Jiyun Li, Jiaxun Chen. “A mannequin modeling method based on section templates and silhouette control”. International Journal of Clothing Science and Technology, 21(5): 300 – 310(2009). (SCI、 EI).
- 23、 Jiyun Li, Xiaodong Zhong and Yilei Li. “A Psychological Decision Making Model Based Personal Fashion Style Recommendation System”, Lecture Notes in Electrical Engineering 102, 57-64(2011). (EI)
- 24、 Jiyun Li, Jerome R Busemeyer. “Combine the Objective Features with the Subjective Feelings in Personal Multi-alternative Decision Making Modeling”. Lecture Notes in Computer Science, Volume 5819/2009: 194-202 (2009). (EI)

Patents:

- 1、 基于人体部件模板和体形轮廓的三维虚拟人体自动生成方法，2013年01月被授权，中国，ZL 2007 1 0037585.4
- 2、 一种 E-DRM 通用适配器系统，中国，ZL 2012 1 0091012.0

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Professor, doctoral supervisor, vice president of Fudan University Alumni Association IT Homecoming Association, editorial board member of Computer Research and Development, editorial board member of Journal of Donghua University (Natural Science Edition), editorial board member of Journal of Yanshan University, senior member of Chinese Computer Society, member of Database Committee of Chinese Computer Society, member of Theoretical Computer Committee of Chinese Computer Society Member of Privacy Protection Professional Committee of China Association for Confidentiality, member of Industrial

Internet Service Professional Committee of China Big Data Industry Alliance, member of the 14th Council of Shanghai Society of Mechanical Engineering, data scientist of Shanghai Key Laboratory of Data Science, member of Big Data Standardization Expert Committee of Shanghai Institute of Industrial Technology, and chief scientist of Yinfeng Robot Co., Ltd. He once served as the deputy dean and dean of the School of Information Science and Engineering of Yanshan University, the dean of the School of Computer Science and Technology of Donghua University, and the deputy director of the database professional committee of Shanghai Computer Society. He has published more than 100 academic papers, published 3 monographs, participated in the research work of one National Natural Science Foundation project and several provincial natural science foundation projects as the main participant, and undertaken one key science and technology research project of the Ministry of Education, one special task of key projects of the National "Eleventh Five Year" Science and Technology Support Plan, and two national natural science foundation projects as the host, Two subprojects of the national "13th Five Year Plan" key R&D projects, one special project for the innovative development of Shanghai's industrial Internet, in addition, he has undertaken and won many horizontal projects, and won some provincial and ministerial awards for scientific and technological progress.

Research Areas:

Database Theory, Big Data and Artificial Intelligence, Industrial Internet, Digital Twin and Metauniverse

Main Courses Taught:

Data Structure, Computing Theory and Algorithm Complexity

Main research results:

[1] Jiawei Wu, Guohua Liu. Modeling the Uncertain Data in the K-anonymity Privacy Protection Model[C]. 2011 Seventh International Conference on Computational Intelligence and Security (CIS), 2011: 657-661. (EI)

[2] Jieyuan Li, Guohua Liu. On the Representation and Querying of Sets of Possible Worlds in the K-anonymity Privacy Protecting Model[C]. 2011 Seventh International Conference on Computational Intelligence and Security (CIS). 2011: 662-664. (EI)

[3] Bingchun Liu, Guohua Liu. The Classification of K-anonymity Data[C]. 2011 Seventh International Conference on Computational Intelligence and Security (CIS), 2011: 1374-1378. (EI)

[4] 辛婷婷, 刘国华. K-匿名隐私保护模型下的 Top-k 查询[J]. 计算机科学与探索, 2011, 5(8): 751-759.

[5] 严秋玲, 孙莉, 王梅, 乐嘉锦, 刘国华. 列存储数据仓库中启发式查询优化机制[J]. 计算机学报, 2011, 34(10): 2018-2026. (EI)

[6] 张琦, 王梅, 乐嘉锦, 刘国华. 列存储数据仓库查询执行中重用缓冲区调度算法[J]. 计算机研究与发展, 2011, 48(10): 1942-1950. (EI)

[7] Yanfei Zuo, Guohua Liu, Xiaoli Yue, Wei Wang, Honghua Wu. Similarity Matching over Uncertain Time Series[C]. 2011 Seventh International Conference on Computational Intelligence and Security (CIS), 2011: 1357-1361. (EI)

[8] 宋金玲, 刘国华, 黄立明, 李玉香, 贺礼智, 王丹丽. k-匿名隐私保护模型中 k 值的优化选择算法[J]. 小型微型计算机系统, 2011, 32(10): 1987-1993.

[9] 吴佳伟, 刘国华, 王梅. K-匿名隐私保护模型中不确定性数据的建模问题研究[J]. 计算机工程与科学, 2011, 33(9): 7-12.

[10] 万涛, 刘国华. k-匿名数据中的数据依赖问题研究[J]. 计算机工程, 2012, 38(20): 38-10.

- [11]陈爱东, 刘国华, 肖瑞, 万小妹, 石丹妮. 均匀分布下不确定数据的关联规则变粒度查询[J]. 计算机工程与科学, 2013, 35(10): 79-88.
- [12]林丙春, 刘国华, 王梅. 针对 k-匿名数据的判定树构造算法[J]. 武汉大学学报: 理学版, 2011, 57(6): 494-498.
- [13]侯士江, 张玉江, 刘国华. 基于位置敏感哈希分割的空间 K-匿名共匿算法[J]. 计算机科学, 2013, 40(8): 115-118.
- [14]丁祥武, 余文兵, 刘国华. VPM: 列存储系统中基于带值路径的物化技术[J]. 计算机研究与发展, 2012, 49(10): 2086-2094. (EI)
- [15]Haibin Liu, Guohua Liu, Ying Wang, Dingjia Liu. A Novel Behavioral Similarity Measure for Artifact-Oriented Business Processes[M]. Technology for Education and Learning. Springer Berlin Heidelberg, 2012: 81-88. (EI)
- [16]王颖, 刘国华, 刘海滨, 赵丹枫. Artifact 的有效性问题的研究[J]. 计算机集成制造系统, 2012, 18(8): 1726-1734. (EI)
- [17]王颖, 刘国华, 高尚, 赵丹枫, 刘海滨. ArtiFlow 中 Artifact 生命周期的可满足性问题[J]. 小型微型计算机系统, 2012, 33(006): 1176-1182.
- [18]赵丹枫, 刘国华, 张大伟, 王颖, 刘海滨. A-Stein: 以数据为中心的业务流程管理原型系统[J]. 计算机研究与发展, 2011, 48 (suppl.2): 400-404.
- [19]刘海滨, 刘国华, 黄立明, 宋金玲. 以业务单据为中心的业务流程模型聚类及相似性查询方法[J]. 计算机集成制造系统, 2013, 19(8): 1810-1821. (EI)
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- [21]王颖, 刘国华, 黄震. XAr/T-net: 一种用于以业务单据为中心的业务流程建模方法[J]. 计算机集成制造系统, 2013, 19(8): 1935-1941.
- [22]吴红花, 刘国华. 不确定时间序列的规约方法[J]. 计算机工程, 2012, 38(21): 33-35.
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- [24]高尚, 金顺福, 刘国华, 王颖, 刘海滨. 基于时间 Petri 网的 Artifact 有效性的验证[J]. 燕山大学学报, 2012, 35(6): 556-560.
- [25]王柠, 刘国华, 石丹妮. 基于指纹和推导模型的泄密信息检测方案[J]. 燕山大学学报, 2013, 36(6): 511-518.
- [26]孙莉, 李静, 刘国华. 列存储数据查询中的连接策略优化方法[J]. 计算机研究与发展, 2013, 50(8): 1647-1656.
- [27]刘海滨, 刘国华, 王颖, 赵丹枫. 面向 Artifact 的业务流程行为相似性度量方法[J]. 小型微型计算机系统, 2013, 34(003): 475-479.
- [28]陈爱东, 刘国华, 费凡, 周宇, 万小妹, 负慧. 满足均匀分布的不确定数据关联规则挖掘算法[J]. 计算机研究与发展, 2013, 50(Suppl): 186-195.
- [29]Yilong Liu, Guohua Liu. Finding the Provenance of K-anonymous Data and Adding It to Association-Rule Mining[C]. 2012 Eighth International Conference on Computational Intelligence and Security (CIS), 2012: 117-122. (EI)
- [30]Haibin Liu, Guohua Liu, Danfeng Zhao, Jinling Song. A Clustering Approach for Artifact-Centric Business Process Models[J]. Journal of Computational Information Systems. 2012, 8(16), 6601-6609. (EI)
- [31]张君宝, 刘国华, 王碧颖, 王梅, 王羽婷, 石丹妮, 翟红敏. k-匿名数据上的聚集查询及其性质[J]. 计算机工程与科学, 2014, 36(1), 176-185.

Main Research Projects:

1. Uncertainty data management and availability from k-anonymity privacy protection model, NSFC project
2. National key R&D program (subproject) of research and application demonstration of digital control technology in the whole process printing and dyeing process
3. National key R&D plan project (sub project) of research on key technologies of cyberspace sand table and R&D of network sand table platform
4. Industrial Internet Platform for Textile and Garment Industry Shanghai Economic and Information Commission

Papers and patents in recent years:

1. 《隐私保护数据发布中不确定数据的管理方法—数据发布篇》, 专著, 科学出版社
2. 《隐私保护数据发布中不确定数据的管理方法—数据管理篇》, 专著, 科学出版
3. 云存储环境下文本文档的篡改检测方法, 发明专利, ZL201410315438.9

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王梅 Mei Wang



Professor, Master's Supervisor. Received a doctor's degree from Fudan University in 2008.

Postdoctor in National University of Singapore in 2008 ~ 2009.

Research fellow in UCSB in 2020.

Main Courses Taught:

Data Structure, Discrete Math, Implementation of Database Systems

Research areas:

database, big data, AI and deep learning

Main Research Projects:

1. Research on AI diagnosis and treatment model of tumor and the interpretability with enhanced causal reasoning, National key R&D Plan, 2020.01 ~ 2022.12, participated.
2. High performance distributed Dameng big data management platform for heterogeneous architecture, Shanghai Municipal Commission of Economy and Information Technology, 2018.01~ 2020.12, host.
3. Research on image semantic extraction based on uncertain visual model, National Natural Science Foundation of China, 2012.01~ 2014.12, host.
4. Research on Key Technologies of Unstructured Data Retrieval in Community Networks, Shanghai Natural Science Foundation, 2011.04~ 2014.03, host.
5. Research on the key technology of data opening and sharing application, Shanghai scientific and technological innovation action plan, 2016.07~ 2019.06, participated.
6. Large scale general database management system, National Science and Technology Major Project, 2010.01~ 2012.06, participated.

Main papers published:

- 1 Mei Wang, Zhihua Lin R, Ruihua Li, Ye Li, Jianwen Su. Disease Progress with Imprecise Lab Test Results, 2022, Artificial Intelligence in Medicine.
2. Mei Wang, Zhihua Lin, Jianwen Su. Predicting Disease Progress with Imprecise Lab Test

Result. 27th KDD workshop on applied Data Science in Health, 2021. arXiv: 2107.03620. (Best Paper Award)

3. Mei Wang, Haihan Yao, Yanxia Qin. Medical Report Generation with Multi-Attention for Abnormal Keyword Description and History Report. 27th KDD workshop on Document Intelligence, 2021.

4. Mei Wang, Jianwen Su, Haiqin Lu. Impact of Medical Data Imprecision on Learning Results. 26th KDD workshop on applied Data Science in Health, 2020. arXiv: 2007.12375.

5. Lihao Liu, Mei Wang, Yijie Dong, Weiliang Zhao, Jian Yang, Jianwen Su. Semantic Tree Driven Thyroid Ultrasound Report Generation by Voice Input. The 6th International Conf on Health Informatics and Medical Systems. Springer Nature, Transactions on Computational Science & Computational Intelligence, 2020.

6. Shan Ye, Mei Wang, Yijie Dong. Historical Report Assist Medical Report Generation, 14th International Conference on Health Informatics, 2020 (最佳学生论文提名).

7. Limin Wang, Mei Wang. A Value-Attribute Mapping Method Based on Inverted Index, CBD 2018.

8. Dehua Chen, Qiao Pan, Mei Wang. A deep-learning based ultrasound text classifier for predicting benign and malignant thyroid nodules. ICGI 2017.

9. Yue Li, Qian Hao, Mei Wang. An Ontology-Based Data Organization Method, CBD 2017.

10. Mei Wang, Meng Xiao, Sancheng Peng, Guohua Liu. A hybrid index for temporal big data, Future Generation Computer Systems, v72: 264-272, 2017.7.

11. H. Xue, M. Wang. A document-relation associated query system based on distributed middleware. Proceedings of 5th International Conference on Computer Science and Network Technology, ICCSNT 2016.

12. H. Xie, M. Wang*, J. J. Le, L. Sun. Calculation results characteristics extract and reuse strategy based on hive. Computer Research and Development, v 52, n 9, p 2014-2024, September 1, 2015.

13. M. Wang, M. Xiao. SHB+-Tree: A segmentation hybrid index structure for temporal data. 15th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2015.

14. M. Wang, X. L. Xia, J.J Le, X. D Zhou. Effective automatic image annotation via integrated discriminative and generative models. Information Sciences, v 262, p 159-171, March 20, 2014.

15. M. Wang, X. C. Lu, J. J. Le. Column-oriented join order optimization in column store systems. Computer Research and Development, v 50, n 7, p 1473-1483, July 2013.

16. M. Wang, J. L. Zhou, J. J. Le. A data reusing strategy in column-store data warehouse. Chinese Journal of Computers, v 36, n 8, p 1626-1635, August 2013.

17. M. Wang, W. Mao, H. Goh. Music search engine with virtual musical instruments playing interfaceSource. Advances in Multimedia Modeling - 19th International Conference, MMM 2013.

18. M. Wang, F. Li, M. Wang. Collaborative visual modeling for automatic image annotation via sparse model coding: Neurocomputing, v 95, p 22-28, October 15, 2012

19. M. Wang, H. T. Tao, G. Y. Hao, X. D. Zhou, W. Wang, L. L, B. L. Shi. PictureBook: A text-and-image summary system for web search result. Proceedings of the 2008 IEEE 24th International Conference on Data Engineering, ICDE 2008.

20. M. Wang, X. D. Zhou, T. S. Chua. Automatic image annotation via local multi-label classification Proceedings of the International Conference on Content-based Image and

Video Retrieval, CIVR 2008.

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教授，博士。2001年毕业于上海交通大学计算机软件与理论专业。

2007-2008 年在美国德州大学奥斯汀分校进行博士后研究，2018-2019 年美国北德州大学计算机科学学院访问学者，主持和参与了国家自然科学基金、教育部科学技术研究重点项目、高等学校全国优秀博士学位论文作者专项资金等课题，发表 SCI、EI 期刊论文、会议论文 50 多篇。现任国家自然科学基金面上项目评审专家、上海市科学技术委员会专家， Science of Computer Programming、Expert Systems、计算机学报、浙大学学报（工学版）、华东理工大学学报等期刊审稿人，中国计算机学会（CCF）软件工程专委会委员，CCF 系统软件专委会委员，中国人工智能学会自然计算及数字智能城市专业委员会委员。

Awards:

- Third Prize of Anhui Provincial Science and Technology Progress Award
- First Prize of Science and Technology Promotion Award of Shanghai Inspection and Quarantine Bureau

Research Areas:

Image Processing, AI

Main Courses Taught:

Compilation Principle

Main Research Projects:

- “Creating of Computer Aided Individualized 3D Human Model and Its Application in Burn Area Assessment”, co-PI, ¥630,000, General program of NSFC, 2003-2007.
- “Non Negative Matrix Decomposition Algorithm Based on Constraints and Its Application in Automatic Fiber Identification”, PI, ¥810,000, General program of NSFC, 2004-2008.

Representative papers published as the first author in recent years:

(1) Li Yao, Naigang Zhang, Ao Gao, Yan Wan 。 Research on Fabric Defect Detection Technology Based on EDSR and Improved Faster RCNN. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics).2022.

(2) 姚砺,张幼安,张梦雪,万燕. 关节轴角先验对 3 维人体重建结果的影响.《中国图象图形学报》,2021.

(3) Li Yao,Y Wan, H Ni, B Xu. Action unit classification for facial expression recognition using active learning and SVM. Multimedia Tools and Applications. 2021.

(4) Li Yao, Z Feng, T Zhu, Yan Wan. Research of Pedestrian Re-identification Method Based on Video Surveillance. ICIIBMS 2019 - 4th International Conference on Intelligent Informatics and Biomedical Sciences.2019.

(5) Li Yao, Y Zhao, J Fan, M Liu, J Jiang, Yan Wan. Research and Application of License Plate Recognition Technology Based on Deep Learning. Journal of Physics: Conference Series.2019。

Selected Publications:

- (1) Li Yao, Naigang Zhang, Ao Gao, Yan Wan 。 Research on Fabric Defect Detection Technology Based on EDSR and Improved Faster RCNN. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics).2022.
- (2) Li Yao, Youan Zhang, Mengxue Zhang, Yan Wan. Influence of joint axis angle prior on 3d human reconstruction, Journal of Image and Graphics, 2021.
- (3) Li Yao, Y Wan, H Ni, B Xu. Action unit classification for facial expression recognition using active learning and SVM. Multimedia Tools and Applications, 2021.
- (4) Li Yao, Z Feng, T Zhu, Yan Wan. Research of Pedestrian Re-identification Method Based on Video Surveillance. ICIIBMS 2019 - 4th International Conference on Intelligent Informatics and Biomedical Sciences.2019.
- (5) Li Yao, Y Zhao, J Fan, M Liu, J Jiang, Yan Wan. Research and Application of License Plate Recognition Technology Based on Deep Learning. Journal of Physics: Conference Series.2019.

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章昭辉 Zhaohui Zhang



Dr. Zhaohui Zhang is a professor and doctoral supervisor at Donghua University. He is a senior member of the Chinese Society of Artificial Intelligence, a member of the Special Committee of Network Information Service of the Chinese Society of Automation, and a director of the Shanghai Society of Artificial Intelligence. His research interests include network computing, big data, and artificial intelligence. He has presided over more than ten projects of National Natural Science Foundation of China, Ministry of Education and provincial key projects. As a key member, he has participated in many projects, such as the National Key R&D Project, the National 863 Major Project, the CNGI Major Project of the National Development and Reform Commission, the National Science and Technology Support Program Project, the International Cooperation Key Project of the Ministry of Science and Technology, the Integrated Project of the National Natural Science Foundation of China Major Research Program, and the Shanghai Major Science and Technology Research Project. He has won one second prize of National Science and Technology Progress Award, one first prize of Wu Wenjun Artificial Intelligence Technology Invention Award of China Artificial Intelligence Society, one first prize of Shanghai Science and Technology Progress Award, one first prize of Shanghai Technology Invention Award, and one first prize of Science and Technology Progress Award of Ministry of Education. He has been granted more than 40 invention patents, formulated 19 industry standards, and registered 6 software Copyrights. He has published more than 80 academic papers and one book supported by the Publication Fund of the Chinese Academy of Sciences.

Main research areas:

The theories of big data trusted computing and artificial intelligence, as well as the application research of Internet transaction risk prevention and control technology and systems.

Courses Taught:

Algorithm Design and Analysis (Undergraduate), System Analysis and Modeling (Master's), Artificial Intelligence (Doctoral)

Research Projects (Recent 5 years) :

- [1]Project of Shanghai "Science and Technology Innovation Action Plan" in the high-tech Field, No. 22511100702: Research on the full life cycle privacy and security computing technology of digital chain fusion, 2022.9-2024.8, PI
- [2]National Natural Science Foundation of China (No. 61472004) : Behavior adaptation model and method for large-scale network service system based on stochastic Petri nets, 2015.1-2018.12, PI
- [3]General Project of Shanghai Natural Science Foundation (No. : 19ZR1401900) : Progressive intelligent detection model and method of online transaction fraud risk, 2019.7.1-2022.6.30, PI
- [4]Key Project of Shanghai "Science and Technology Innovation Action Plan" (No. : 19511101302) : Multi-source and multi-dimensional big data Computing security technology and risk control application Demonstration, 2019.09-2021.08, PI
- [5]An insurance company project (horizontal) : Research on intelligent credit anti-fraud technology, 2018.10-2019.4, PI
- [6]National Key Research and Development Program (No. : 2018YFB2100800) : Research on basic theory and key technologies of group situation identification and service computing for smart cities, 2019.7-2022.6, Project backbone
- [7]Data exploration and platform support technology of Shanghai "Science and Technology Innovation Action Plan" (No. : 16511100903) : Risk Control Cloud ", 2016.7-2018.6, the first participant
- [8]National Natural Science Foundation of China (No. 61602109), Research on key technologies of optimal allocation of complex service applications in multi-cloud environment, 2017.1-2019.12, first participant

Papers (Recent 5 years) :

- [1]Zhaohui Zhang*, Yifei Tang, Peng Zhang, et al. An Adaptive Drilling Sampling Method and Evaluation Model for Large-Scale Streaming Data, the 24th International Conference on Web Information Systems Engineering (WISE 2023), Melbourne, Australia, October 25–27, 2023, pp.813-825
- [2]Peng Zhang, Zhaohui Zhang*, Chaochao Hu, Pengwei Wang. A Dynamic Drilling Sampling Method and Evaluation Model for Large-Scale Streaming Data. The 35th International Conference on Software Engineering and Knowledge Engineering(SEKE2023), July 1 to 10, 2023, Larkspur Landing South San Francisco Hotel, USA and KSIR Virtual Conference Center, USA, pp 435-442
- [3]Zhaohui Zhang, Ziming Wei and Lina Ma. UBRMTC: User Behavior Recognition Model With Transaction Character, IEEE Transactions on Computational Social Systems, 2023, 1-13, doi: 10.1109/TCSS.2023.3257227
- [4]Zhaohui Zhang, Jiawei Hu,Lina Ma, et al. BVFB: Training Behavior Verification Mechanism for Secure Blockchain-Based Federated Learning, Computing and Informatics, 2022,Vol.41(6): 1401-1424
- [5]Xiao Liu, Zhaohui Zhang*, Ziming Wei, et al. Smooth Intervention Model of Individual Interactive Behavior, Journal of Software, 2021,32(6):1733-1747

- [6]Lizhi Wang, ZhaoHui Zhang*, et al. A Deep-forest based approach for detecting fraudulent online transaction, *Advances in Computers: AI and Cloud Computing*, 2021, vol120: 1-38
- [7]HUANG Mian, WANG Li-Zhi, ZHANG Zhao-Hui*. Improved deep forest model for detection of fraudulent online transaction. *Computing and Informatics*, 2020, 39(5):1082-1098.
- [8]Zhaohui Zhang, Ligong Chen, Qiuwen Liu, et al. A Fraud Detection Method for Low-Frequency Transaction, *IEEE Access*, 8(1): 25210-25220, 2020
- [9]Zhaohui Zhang, Lijun Yang, Ligong Chen, et al. A Generative Adversarial Network–Based Method for Generating Negative Financial Samples, *International Journal of Distributed Sensor Networks*, 16(2):1-12, 2020, DOI: 10.1177/1550147720907053
- [10]Zhaohui Zhang, Qiuwen Liu, Ligong Chen, et al. A Peak Prediction Method for Subflow in Hybrid Data Flow, *Scientific Programming*, vol.2020:1-13, 2020
- [11]Ligong Chen, Zhaohui Zhang*, Qiuwen Liu, et al. A Method for Online Transaction Fraud Detection Based on Individual Behavior, *Proceedings of the ACM Turing Celebration Conference - China (ACM TURC '19)*. ACM, New York, NY, USA, 2019, Article 119, 8 pages. DOI: <https://doi.org/10.1145/3321408.3326647>
- [12]Ying Meng, Zhaohui Zhang*, Wenqiang Liu, et al. 2019. A novel method based on entity relationship for online transaction fraud detection. In *Proceedings of the ACM Turing Celebration Conference - China (ACM TURC '19)*. ACM, New York, NY, USA, 2019, Article 121, 10 pages. DOI: <https://doi.org/10.1145/3321408.3326649>
- [13]Xinxin Zhou, ZhaoHui Zhang*, et al. A Model Based on Siamese Neural Network for Online Transaction Fraud Detection, *The 2019 International Joint Conference on Neural Networks (IJCNN)*, Budapest, Hungary, 2019
- [14]ZhaoHui Zhang, Lina Ge, et al. Behavior Reconstruction Models for Large-scale Network Service Systems. *Peer-to-Peer Networking and Applications*, 2019(12):502-513, DOI: 10.1007/s12083-017-0625-x
- [15]Zhaohui Zhang, Jian Chen, Ligong Chen et al. A Scalable Method of Maintaining Order Statistics for Big Data Stream. *Computers, Materials & Continua*, 2019, 60(1): 117-132
- [16]ZhaoHui Zhang, Xinxin Zhou, et al. A Model Based on Convolutional Neural Network for Online Transaction Fraud Detection. *Security and Communication Networks*, 2018:1-9 DOI: 10.1155/2018/5680264 Haijian Wang, Zhaohui Zhang *, Pengwei Wang. A Situation Analysis Method for Specific Domain Based on Multi-source Data Fusion. *Lecture Notes in Computer Science*, 2018, 10954: 160-171
- [17]Xiaobo Zhang, Zhaohui Zhang *, Lizhi Wang, Xinxin Zhou, Pengwei Wang. A Novel Method to Improve Hit Rate for Big Data Quick Reading. *3rd International Conference on Computer Science and Information Engineering (ICCSIE 2018)*, Xi'an, China, 21-22, Oct 2018, pp.105-113
- [18]Zhang Zhao-hui, Cui Jun. An Agile Perception Method for Behavior Abnormality in Large-scale Network Service Systems. *Chinese Journal of Computers*, 2017, 40(2):503-519 (in Chinese))

Authorized invention patents (authorized in recent 5 years) :

- [1]Zhang ZhaoHui; Jiang Chang-jun; Wang Pengwei; Chen Jian. A Multi-objective Optimization Container Scheduling method, Patent number: ZL 201910327503.2, 2023.08.04
- [2]Zhang ZhaoHui; Chang-jun jiang; Wang pengwei; Yang Li-jun. A Negative Sample Adversarial Generation Method with Noise learning, Patent Number: ZL 202010045213.1, 2023.7.11

- [3]Zhang Zhaohui; Jiang Chang-jun; Wang Pengwei; Xin-xin zhou. A twin of the neural network based network fraud detection system, patent number: ZL 201910327627.0 2023.6.23
- [4]ZhangZhaoHui; Jiang Chang-jun; Wang Pengwei; Yang Lijun. A generated against network based financial fraud detection method of transaction data. Patent number: ZL 201910525239.3, 2023.6.23
- [5]Zhang Zhaohui; Chang-jun jiang; Wang pengwei; Wang Li-zhi. A Deep Detection Method of transaction Fraud Based on representation Learning, Patent Number: ZL 201910327470.1, 2023.6.2
- [6]Zhang Zhaohui et al. With periodic properties of multi-factor interactive behavior anomaly detection methods, patent number: ZL 202110228567.4, 2022.11
- [7]Zhang Zhaohui et al. Individual behavior modeling and fraud detection method for low-frequency transactions, Patent number: ZL 202010045152.9, 2022.11
- [8]Zhang Zhaohui et al. User behavior with trade character recognition method, patent number: ZL 202110228431.3, 2022.10
- [9]Zhang Zhaohui; Jiang Chang-jun; Wang pengwei; Xiaobo. A non-relational database dynamic hybrid index method, patent number: ZL 201910327502.8 2022.08.26
- [10]Zhang Zhaohui et al. User identity identification method based on degree of caution, patent number: ZL 202110228566 X, 2022.7
- [11]ZhangZhaoHui, etc. A Prediction Method of Hybrid Data Flow Based on dynamic time window, Patent number: 202010045151.4, 2022.6
- [12]Zhang Zhaohui, Xu Fujuan, Liu Ke, Yang Ruping. Drilling Data Sampling Method and its application in Big Data Value Risk Assessment. Patent no. : ZL 202110813235.2 2022.05.20
- [13]Zhang Zhaohui et al. A Transaction Fraud Detection Method Based on Heterogeneous Relational network Attention mechanism, Patent number: ZL 202010045141.0, 2022.5
- [14]Zhang Zhaohui, Jiang Changjun, Wang Pengwei, Liu Qiuwen. A Peak Prediction Method for Hybrid data flow, Patent number: ZL201910525350.2, 2021.11
- [15]Zhang Zhaohui, Jiang Changjun, Wang Pengwei, Wang Haijian. A Situation analysis system of internal and external data fusion, Patent number: ZL201711200078.8, 2021.7
- [16]Jiang Changjun, Zhang ZhaoHui, Wang Pengwei, Zhang Xiaobo. A method of large data quickly read DLK patent no. : ZL 201811054777.0, 2021.10
- [17]Zhang ZhaoHui, Ge Li-na. A Behavior reconfiguration Approach for large-scale Network Service Systems. China, Patent number: ZL 201710149872.8, 2020.4
- [18]Zhang Zhaohui, Cui Jun. A behavior anomaly detection method for large-scale network service system. China, the patent number: ZL201610290206.1, 2019.10
- [19]Zhang Zhaohui, Cui Jun. An anomaly warning method for large-scale network service system. China, patent number: ZL201610288807.9 2019.5.3
- [20]Zhang Zhaohui, Zheng Lutao. A Minimal Spanning workflow Net Method for Determining the evolution Domain. China, Patent number: ZL201410567556.9, 2017
- [21]ZhangZhaoHui jian-fei zhang. A method and system for multi-level metadata transmission on demand with low cost. China, Patent number: ZL201410642052.9, 2018
- [22]Zhang Zhaohui, Zheng Lutao. An Interactive Online Evolution Approach for Dynamic Message Structures. China, Patent number: ZL201510164649.1, 2018

Standards (recent 5 years):

- [1]Jiang Changjun, Zhang Zhaohui, Ding Zhijun, Yu Jian, Yan Chungang, Zhang Yaying. The Technology Standards of Data Resource Distribution Map and In-situ Virtual Data Center, Cloud Computing Strategic Alliance Technical Standards HB/T-2020-0001, 2020-09-01
- [2]Jiang Changjun, Zhang Zhaohui, Ding Zhijun, Yu Jian, Yan Chungang, Zhang Yaying. The Technology Standards of Dynamic Scheduling Framework and Workflow for Online Tasks in Information Service Platform of Large Scale Network, Cloud Computing Strategic Alliance Technical Standards HB/T-2020-0003, 2020-09-01
- [3]Jiang Changjun, Zhang Zhaohui, Ding Zhijun, Yu Jian, Yan Chungang, Zhang Yaying. The Technology Standards of Distributed Processing Structure and Workflow of Massive Real-time Data in Information Service Platform of Large Scale Network, Cloud Computing Strategic Alliance Technical Standards HB/T-2020-0002, 2020-09-01
- [4]Jiang Changjun, Zhang Zhaohui, Ding Zhijun, Yu Jian, Yan Chungang, Zhang Yaying. The Technology Standards of Cabin Generation and Management System, Cloud Computing Strategic Alliance Technical Standards HB/T-2020-0005, 2020-09-01
- [5]Jiang Changjun, Zhang Zhaohui, Ding Zhijun, Yu Jian, Yan Chungang, Zhang Yaying. The Technology Standards of Framework and Workflow of Cabin Computing System, Cloud Computing Strategic Alliance Technical Standards HB/T-2020-0006, 2020-09-01
- [6]Jiang Changjun, Zhang Zhaohui, Ding Zhijun, Yu Jian, Yan Chungang, Zhang Yaying. The Technology Standards of Credible System Platform Indicators, Cloud Computing Strategic Alliance Technical Standards HB/T-2020-0004, 2020-09-01

Awards:

- [1] State Science and Technology Progress Award, Second Prize. Network transaction payment system risk control key technology and application, 2016
- [2] Shanghai Science and Technology Invention Award, First Prize. Big data computing and analysis and security trusted key technology and application, 2020
- [2] Wu Wenjun Artificial Intelligence Technology Invention Award. China Artificial Intelligence Society, First Prize, Key technologies and applications of intelligent diagnosis and treatment of internet trading risk, 2019
- [3] Shanghai Science and Technology Progress Award, First Prize. Behavior analysis technology and application of risk prevention and control of internet payment system, 2015
- [4] Science and Technology Progress Award of Ministry of Education, First Prize. Research on information grid technology and its application in traffic information service, 2007

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周军锋 Junfeng Zhou



Junfeng Zhou is a professor and PhD supervisor of the school of computer science and technology of Donghua University. He got his PhD degree from Renmin University of China in 2009. During the past few years, he has been supported by grants from NSFC and NSFS. By now, he has published more than 30 papers on high quality conferences and journals, such as SIGMOD, ICDE, VLDB Journal and TKDE. His research interests include query processing on large-scale graphs, such as reachability queries processing and cohesive subgraphs mining.

Publications:

1. Junfeng Zhou, Jeffrey Xu Yu, Yaxian Qiu, Xian Tang, Ziyang Chen, Ming Du. Fast Reachability Queries Answering based on RCN Reduction. *IEEE Transactions on Knowledge and Data Engineering*, Early Access, 2021.8.30, DOI: 10.1109/TKDE.2021.3108433 (CCF A)
2. Junfeng Zhou, Jeffrey Xu Yu, Na Li, Hao Wei, Ziyang Chen, Xian Tang: Accelerating reachability query processing based on DAG reduction. *VLDB Journal*. 2018, 27(2): 271-296 SCI, CCF A 类期刊
3. Junfeng Zhou, Shijie Zhou, Jeffrey Xu Yu, Hao Wei, Ziyang Chen, Xian Tang: DAG Reduction: Fast Answering Reachability Queries. *SIGMOD Conference 2017*: 375-390 CCF A 类会议
4. Junfeng Zhou, Wei Wang, Ziyang Chen, Jeffery Xu Yu. Top-Down XML Keyword Query Processing. *TKDE*. 2016, 28(5): 1340-1353. SCI, CCF A 类期刊
5. Junfeng Zhou, Zhifeng Bao, Wei Wang, Jinjia Zhao, Xiaofeng Meng. Efficient Query Processing for XML Keyword Queries based on the IDList Index. *VLDB Journal*. 2014, 23(1):25-50. SCI, CCF A 类期刊
6. Junfeng Zhou, Zhifeng Bao, Wei Wang, Tok Wang Ling, Ziyang Chen, Xudong Lin, Jingfeng Guo. Fast SLCA and ELCA Computation for XML Keyword Queries Based on Set Intersection. *ICDE 2012*: 905-916. CCF A 类会议
7. 杜明, 宋嘉祎, 周军锋: 规模受限的影响力社区搜索. *电子学报*. 2022,8. 已录用
8. Jing Bai, Junfeng Zhou, Ming Du, Ziyang Chen: Index-based top $k\alpha$ -maximal-clique enumeration over uncertain graphs. *J. Supercomput.* 78(17): 19372-19400 (2022)
9. Xiaozhe Li, Xuan Wang, Junfeng Zhou, Ming Du: buTCS: An Optimized Algorithm for Estimating the Size of Transitive Closure. *IEEE Access* 9: 116528-116539 (2021)
10. Jing Bai, Junfeng Zhou, Ming Du, Peng Zhong: Efficient (k, α) -Maximal-Cliques Enumeration Over Uncertain Graphs. *IEEE Access* 9: 149338-149348 (2021)
11. Xian Tang, Junfeng Zhou, Yaxian Qiu, Xiang Liu, Yunyu Shi, Jingwen Zhao: One Edge at a Time: A Novel Approach Towards Efficient Transitive Reduction Computation on DAGs. *IEEE Access* 8: 38010-38022 (2020)
12. Ming Du, Anping Yang, Junfeng Zhou, Xian Tang, Ziyang Chen, Yanfei Zuo: HT: A Novel Labeling Scheme for k -Hop Reachability Queries on DAGs. *IEEE Access* 7: 172110-172122 (2019)
13. 陈子阳, 陈伟, 贾勇, 周军锋. 基于 KST 索引的最大连通 Steiner 分量查询算法. *计算机学报*, 2020, 43(07): 1215-1229
14. 陈子阳, 陈伟, 李娜, 周军锋. 面向大图的可达性查询处理算法. *计算机学报*, 2019, 42(03): 582-595
15. 杜明, 杨云, 周军锋, 陈子阳, 杨安平. 标签约束可达查询的高效处理方法. *计算机研究与发展*, 2020, 57(09): 1949-1960
16. 杜明, 郑凯文, 陈子阳, 周军锋. TFP: 高效的最快路径查询处理方法. *清华大学学报(自然科学版)*, 2020, 60(08): 656-663
17. Junfeng Zhou, Ziyang Chen, Jingrong Zhang. SEJoin: an optimized algorithm towards efficient approximate string searches. *ACMSIGIR 2011*.
18. Junfeng Zhou, Guoxiang Lan, Ziyang Chen, Xian Tang. Fast SLCA Computation based on Stable Match. *J. Comput. Sci. Technol. (JCST)*. 2013, 28 (2): 366-381. SCI, CCF B 类期刊
19. Junfeng Zhou, Tok Wang Ling, Zhifeng Bao, Xiaofeng Meng. Related Axis: The Extension to XPath Towards Effective XML Search. *J. Comput. Sci. Technol. (JCST)*. 2012, 27(1): 195-212. SCI, CCF B 类期刊
20. Junfeng Zhou, Xiaofeng Meng, Ling Tok Wang. Efficient Processing of Partially Specified Twig Pattern Queries. *中国科学 F 辑: 信息科学*. 2009, 52(10):1830-1847. SCI, CCF B 类期刊

21. Junfeng Zhou, Xingmin Zhao, Wei Wang, Ziyang Chen, Jeffrey Xu Yu. Top-Down Keyword Query Processing on XML Data, CIKM 2013: 2225-2230. CCF B 类会议
22. Junfeng Zhou, Zhifeng Bao, Ziyang Chen, and Tok Wang Ling. Fast Result Enumeration for Keyword Queries on XML Data. DASFAA 2012: 95-109. CCF B 类会议
23. Junfeng Zhou, Zhifeng Bao, Ziyang Chen, Guoxiang Lan, Xudong Lin, and Tok Wang Ling. Top-Down SLCA Computation based on List Partition. DASFAA 2012: 172-184. CCF B 类国际会议
24. Junfeng Zhou, Zhifeng Bao, Tok Wang Ling, Xiaofeng Meng. MCN: A New Semantics towards Effective XML Keyword Search. DASFAA 2009: 511-526. CCF B 类国际会议
25. 周军锋, 王博, 田姗姗, 陈子阳, 郭景峰. TDTMS: 一种面向 XML 数据的结果子树构建算法. 计算机学报. 2013, 36(8):1714-1728. EI
26. 周军锋, 孟小峰. XML 关键字查询处理研究. 计算机学报. 2012, 35(12): 2459-2478. EI
27. 周军锋, 孟小峰, 蒋瑜, 谢敏. F-Index: 一种加速 Twig 查询处理的扁平结构索引. 软件学报. 2007, 18(6):1429-1442. EI
28. Junfeng Zhou, Jinjia Zhao, Bo Wang, Xingmin Zhao, Ziyang Chen. Efficient MSubtree Results Computation for XML Keyword Queries. WAIM 2013: 472-477. EI, CCF C 类会议
29. Junfeng Zhou, Guoxiang Lan, Ziyang Chen, Xian Tang, Jingfeng Guo. Top-Down SLCA Computation Based on Hash Search. WAIM 2012: 272-283. EI, CCF C 类会议
30. 周军锋, 陈伟, 费春苹, 陈子阳. BiRch: 一种处理 k 步可达性查询的双向搜索算法[J]. 通信学报. 2015, 36(8):50~60. EI
31. Junfeng Zhou, Ziyang Chen, Xian Tang, Zhifeng Bao, Tok Wang Ling. Fast Result Enumeration for Keyword Queries on XML Data. JCSE. 2012, 6(2): 127-140. EI
32. 周军锋, 汤显, 郭景峰. 一种优化的协同过滤推荐算法. 计算机研究与发展. 2004, 41(10), 1842-1847. EI, NDBC2004 优秀论文
33. 周军锋, 田姗姗, 蓝国翔, 陈子阳, 郭景峰. TDCOL: 列式存储的 XML 关键字查询处理策略. 计算机科学与探索. 2012, 6(9): 829-843. 核心
34. 周军锋, 李义国, 郭景峰. 面向 PSTP 查询的高效处理算法. 计算机科学与探索. 2010, 4(11): 1039-1048. 核心
35. 周军锋, 魏蕊, 郭景峰. 面向更新的扩展 Dewey 编码. 计算机科学与探索. 2010, 4(10): 918-926. 核心

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陈德华 Dehua Chen



I am a professor in the Department of Computer Software and Theory, and a supervisor of doctoral students. He is currently the vice chairman of Shanghai Computer Open Systems Association and the vice director of Database Special Committee of Shanghai Computer Society. He is leading the research projects of National Key R&D Program, Major Basic Research of Shanghai Science and Technology Commission, Science and Technology Innovation Action Plan of Shanghai Science and Technology Commission, Big Data Special Project of Shanghai Economic and Information Commission, Smart City Construction Special Project of Shanghai Economic and Information Commission, and participating in the research projects of National Natural Science Foundation of China, Nuclear High Foundation R&D Program of Ministry of Science and Technology, and Artificial Intelligence Special Fund of Shanghai Economic and

Information Commission. His research results have been published in international high-level academic journals and top international academic conferences on medical information and data mining, including TCBB, BMC Bioinformatics and BIBM. He has applied for more than 10 invention patents and received 5 authorizations. He has taught several main courses in computer science such as "Database System Principles", "Database Application Course Design", "Software Engineering", "Database Performance Tuning", "Data Warehousing and Data Mining", etc. He has participated in many teaching and reform projects in the university and college.

Research Areas:

Intelligent medicine, data science, deep learning interpretability, multi-omics analysis (imaging multi-omics, biological multi-omics, etc.)

Main Courses Taught:

Database system principle, database performance tuning, data warehouse and data mining, database application course design

Main Research Projects:

● List of presided scientific projects.

1. National Key R&D Program Project, Causal Reasoning Enhanced Tumor AI Diagnosis and Treatment Model and Interpretability Research, 2020.1-2022.12 (under research)
2. Shanghai Big Data Special Project, Diabetes Aided Diagnosis and Deep Application Demonstration Based on Big Data of Ruijin Hospital, 2018/7-2020/6
3. Shanghai Science and Technology Innovation Action Plan, Research on Multi-Center Multi-Path Clinical Big Data Analysis and Processing (Approval No. 15511106900) 2015.7-2017.7.
4. Shanghai Science and Technology Development Fund Project "Research on Data Autonomy Open Application Technology" (Approval No. 16JC1400802) 2016.7-2019.7

● List of participating scientific research projects.

1. Shanghai Smart City Special Project, Construction and Deep Application of Clinical Big Data Platform Based on Ruijin Hospital (Approval No. XX-XXFZ-01-14-6349) 2015.1-2016.12.
2. Shanghai Information Development Special Project, Big Data Security Reinforcement, 2016/7 to 2018/7
3. Shanghai Municipal Economic and Information Commission special project for the development of artificial intelligence, R&D and industrialization of intelligent clinical auxiliary decision-making products for specialized diseases, 2018/1-2019/12
4. Shanghai Municipal Science and Technology Commission Science and Technology Action Plan Project, Text structuring and image correlation of medical image reports based on artificial intelligence, 2018/1 to 2019/12
5. Shanghai Municipal Commission of Information Technology Development Special Project, High Performance Distributed Data Processing Technology for Heterogeneous Architecture, 2018/7-2020/6

Publications:

- 1、 Dehua Chen, Hongjin Zhao, Jianrong He, Qiao Pan, Weiliang Zhao, An Causal XAI Diagnostic Model for Breast Cancer Based on Mammography Reports. BIBM 2021(CCF-B)
- 2、 Wenqi Li, Dehua Chen, Jiajin Le, Coronary Heart Disease Prediction Based on Combined Reinforcement Multitask Progressive Networks. BIBM 2020(CCF-B)

- 3、 Dehua Chen, Meihuaju Huang, Weimin Li. Knowledge-Powered Deep Breast Tumor Classification with Multiple Medical Reports, IEEE/ACM transactions on computational biology and bioinformatics. 2019.11 (SCI 二区、CCF-B)
- 4、 Dehua Chen, Ying Mao, Jianqiao Zhou. Constructing Medical Image Domain Ontology with Anatomical Knowledge, 2019 IEEE International Conference on Bioinformatics and Biomedicine ,BIBM2019. (CCF-B)
- 5、 Chen Dehua ; Qian Guangjun ; Pan Qiao, Breast Cancer Classification with Electronic Medical Records Using Hierarchical Attention Bidirectional Networks, 2018 IEEE International Conference on Bioinformatics and Biomedicine ,BIBM2018. (CCF-B)
- 6、 Yingkang Han, Dehua Chen, Yishu Luo, Yijie Dong, Lymphoma Ultrasound Image Segmentation with Self-Attention Mechanism and Stable Learning. ICANN (1) 2022: 207-218
- 7、 Dehua Chen, Liping Zhang, Wei Zhang, Kun Shao, Weiliang Zhao, Xiaokang Zhou, Deep Personalized Prediction of MPA-AUC with Attentive Interactions in Kidney Transplantation. SmartWorld/SCALCOM/UIC/ATC/IOP/SCI 2021.(CCF-C)
- 8、 Dehua Chen, Amir Jalilifard, Adriano Veloso, Nivio Ziviani, Modeling Pharmacological Effects with Multi-Relation Unsupervised Graph Embedding. IJCNN 2020(CCF-C)
- 9、 Dehua Chen; Yunying Wu; Jiajin Le; Qiao Pan, Context-aware end-to-end relation extracting from clinical texts with attention-based bi-tree-GRU, the 28th International Conference on Inductive Logic Programming (UCS-ILP 2018), 2018.9.2-2018.9.4, Ferrara, Italy, 21-35. (CCF-C)
- 10、 Chen Dehua ; Qian Guangjun ; Shi Cheng ; Pan Qiao , Breast Cancer Malignancy Prediction Using Incremental Combination of Multiple Recurrent Neural Networks, 24th International Conference on Neural Information Processing (ICONIP 2017), 2017.11.14-2017.11.18, Guangzhou, China, 43-52. (CCF-C)
- 11、 Chen Dehua; Shi Cheng; Wang Mei; Pan Qiao, Thyroid Nodule Classification Using Hierarchical Recurrent Neural Network with Multiple Ultrasound Reports. 24th International Conference on Neural Information Processing (ICONIP 2017), 2017.11.14-2017.11.18, Guangzhou, China. (CCF-C)
- 12、 Dehua Chen,Suna Yin,Jiajing Le,Mei Wang,Qiao Pan,Lifeng Zhu. A link prediction model for clinical domain time-series knowledge graphs[J].Computer Research and Development , 2017.12.1, 54(12): 2687-2697.
- 13、 Chiyuan Tian, Dehua Chen, Mei Wang, etc. A structured approach to pathology reports based on dependency syntax analysis[J]. Computer Research and Development, 2016, 52(12):2669-2680.

Licensed Patents:

1. Method for structuring breast ultrasound reports based on domain ontology License year 2022.11
2. Structured processing method for unstructured Chinese breast ultrasound text License year 2019.3
3. A structured processing method for Chinese pathology text License year 2018.2
4. A UUID-based session merging method in Web log preprocessing License year month 2017.9
5. A method for identifying separate user accounts in broadband networks License year month 2017.6

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潘乔 Qiao Pan



Qiao Pan received his B.S., M.S., and Ph.D. degrees in communications and information systems from Xidian University in 2000, 2004, and 2008, respectively. In 2008, he joined Donghua University, where he has been an associate professor since 2012. His current research interests include data mining, machine learning, bioinformatics and artificial intelligence generated content (AIGC). In recent years, among his graduate students, many of them have received national scholarships and excellent paper awards through scientific research. He serves as a member of the Computer Science and Technology Academic Committee of China Computer Federation (CCF), Shanghai Computer Science and Technology Academic Committee, and Shanghai Computer Open System Association.

Research interests:

机器学习, 人工智能, 大数据与云计算 (智慧医疗、商务智能和量化金融等应用中大规模数据的分析)

Recent research projects hosted/participated in:

1. 智慧城市专项 《基于瑞金医院的临床大数据平台建设及深度应用》
2. 科技创新行动计划 《多中心多病种临床大数据分析处理研究》
3. 科技发展基金项目 《数据自治开放应用技术研究》
4. 人工智能创新发展专项 《面向专病的智能临床辅助决策产品研发与产业化》
5. 科技创新专项 《基于人工智能的医学影像报告文本结构化及影像关联》
6. 金融创新专项 《金融期权数据量化策略研究》

Main Research Projects:

1. National Key R&D Program Project, Causal Reasoning Enhanced Tumor AI Diagnosis and Treatment Model and Interpretability Research, 2020.1-2022.12
2. Shanghai Big Data Special Project, Diabetes Aided Diagnosis and Deep Application Demonstration Based on Big Data of Ruijin Hospital, 2018/7-2020/6
3. Shanghai Municipal Economic and Information Commission special project for the development of artificial intelligence, R&D and industrialization of intelligent clinical auxiliary decision-making products for specialized diseases, 2018/1-2019/12
4. Shanghai Municipal Science and Technology Commission Science and Technology Action Plan Project, Text structuring and image correlation of medical image reports based on artificial intelligence, 2018/1 to 2019/12
5. Shanghai Municipal Commission of Information Technology Development Special Project, High Performance Distributed Data Processing Technology for Heterogeneous Architecture, 2018/7-2020/6

Papers:

1. Qiao Pan, Xinyu Yu, Xinyu Li, Kun Shao. Postoperative MPA-AUC_{0-12h} Prediction for Kidney Transplant Recipients based on Few-shot Learning. The 34th International Conference on Software Engineering and Knowledge Engineering, SEKE, KSIR Virtual Conference Center, USA, 2022
2. Pan Q, Huang C, Chen D. A method based on multi-standard active learning to recognize entities in electronic medical record[J]. Mathematical Biosciences and Engineering, 2021, 18(2):1000-1021.
3. Qiao Pan, Ke Ding, Dehua Chen, Multi Classification prediction of Alzheimers disease based on fusing multi-modal features. 21st IEEE International Conference on Data Mining,

ICDM2021, Auckland, New Zealand, 2021

4. Qiao Pan; Goldy Indra Kumara; Jiahuan Chu; Multi Classification of Alzheimer's Disease using Linear Fusion with TOP-MRI Images and Clinical Indicators, The 32nd International Conference on Software Engineering & Knowledge Engineering(SEKE 2020), Pittsburgh, USA, 2020.

5. Qiao Pan, ShiYu Wang, Dehua Chen, Prediction of Alzheimer's Disease Based on Bidirectional LSTM, Journal of Physics: Conference Series, v 1187, n 5, May 8, 2019, 2018 International Symposium on Power Electronics and Control Engineering(ISPECE),Guangzhou, China, 2019

6. Qiao Pan, Chunru Yu, Dehua Chen, Lan Xiang. "Joint Extraction of Entities and Relations of Breast Ultrasound Report Based on Deep Learning" ,The 20th IEEE International Conference on High Performance Computing and Communications (HPCC) , Guangzhou, China, 2018 .

7. Qiao Pan, Li Hang, Dehua Chen and Kaiqi Sun, "Sentiment Analysis of Medical Comments Based on Character Vector Convolutional Neural Networks", The 22th IEEE Symposium on Computers and Communications (IEEE ISCC) , Natal, Brazil, June 25-28, 2018

In the research field, the main focus is on cutting-edge research and applications in the fields of computer science and artificial intelligence, including but not limited to machine learning, deep learning, natural language processing, computer vision, data mining, and related areas.

As for requirements for international students: Firstly, a passion for research is essential, along with a strong research background and enthusiasm, demonstrating the ability to independently conduct research. Secondly, a solid foundation in computer science and proficient programming skills are necessary, including familiarity with commonly used programming languages and tools. Thirdly, a keen interest and a certain level of understanding in the field of artificial intelligence, along with relevant background knowledge, are required. Finally, possessing a spirit of teamwork and excellent communication skills to actively participate in the research activities of the research group is also essential.

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燕彩荣 Cairong Yan



副教授 硕士生导师 计算机应用技术系 系主任。分别于 2000、2003、2006 年毕业于西安交通大学，获得计算机科学与技术专业本科、硕士和博士学位。2004 至 2006 年在西安交通大学计算机科学与技术系担任讲师，2006 年 8 月通过人才引进到东华大学任教至今。一直从事智能信息检索与挖掘，以及分布式并行计算方面的教学与科研工作，主持一项国家自然科学基金项目“面向大数据的实体解析方法及关键技术研究”，在数据质量管理 and 价值发现，以及资源管理与优化等方面积累了丰富的研究经验，并取得了一些阶段性的成果。担任中国计算机学会、中国自动化学会、中国人工智能学会专委委员。

Research direction:

1. Recommender systems
2. Big data analysis and mining
3. Distributed parallel computing

Courses taught: 操作系统原理（上海市重点课程），Linux 系统（上海市精品课程），大数据技术（东华大学一流课程）

Papers published in recent years:

1. Cairong Yan, Kang Yan, Yanting Zhang, Yongquan Wan, Dandan Zhu. Attribute-guided Fashion Image Retrieval by Iterative Similarity Learning. Proc. ICME 2022. (CCF B)
2. Cairong Yan, Haixia Han, Yanting Zhang, Dandan Zhu, Yongquan Wan. Dynamic clustering based contextual combinatorial multi-armed bandit for online recommendation. Knowledge-Based Systems, 2022 (257). (SCI 2 \square)
3. Zijian Wang, Yanting Zhang, Haibo Shi, Lei Cao, Cairong Yan, Guangwei Xu. Recurrent spiking neural network with dynamic presynaptic currents based on backpropagation. International Journal of Intelligent Systems, vol. 37, no. 3, pp. 2242-2265, 2022. (SCI 2 \square)
4. Cairong Yan, Xiaoke Li, Yizhou Chen, Yanting Zhang. JointCTR: A joint CTR prediction framework combining feature interaction and sequential behavior learning. Applied Intelligence, 2022. (SCI 2 \square)
5. Yanting Zhang, Zijian Wang, Ruoning Song, Cairong Yan, Yonggang Qi. Detection-by-tracking of traffic signs in videos. Applied Intelligence, 2022. (SCI 2 \square)
6. Cairong Yan, Junli Xian, Yongquan Wan, Pengwei Wang. Modeling implicit feedback based on bandit learning for recommendation. Neurocomputing, vol. 447, no. 8, pp. 244-256, 2021. (SCI 2 \square)
7. Cairong Yan, Yizhou Chen, Yongquan Wan, Pengwei Wang. Modeling low- and high-order feature interactions with fm and self-attention network. Applied Intelligence, vol. 51, no. 6, pp. 3189-3201, 2021. (SCI 2 \square)
8. Cairong Yan, Haixia Han, Zijian Wang, Yanting Zhang. Two-Phase Multi-armed Bandit for Online Recommendation. Proc. DSAA 2021. (CCF C)
9. Cairong Yan, Anan Ding, Yanting Zhang, Zijian Wang. Learning fashion similarity based on hierarchical attribute embedding. Proc. DSAA 2021. (CCF C)
10. Cairong Yan, Yiwei Wang, Yanting Zhang, Zijian Wang, Pengwei Wang. Modeling long- and short-term user behaviors for sequential recommendation with deep neural networks. Proc. IJCNN 2021. (CCF C)
11. Cairong Yan, Shuai Liu, Yanting Zhang, Zijian Wang, Pengwei Wang. A multi-task learning approach for recommendation based on knowledge graph. Proc. IJCNN 2021. (CCF C)
12. Yongquan Wan, Yizhou Chen, Cairong Yan, Bofeng Zhang. Similarity-based Sales Forecasting Using Improved ConvLSTM and Prophet'. Intelligent Data Analysis, vol. 25, no. 2, pp. 383-396, 2021. (CCF C)
13. Yongquan Wan, Lihua Zhu, Cairong Yan, Bofeng Zhang. Attribute interaction aware matrix factorization method for recommendation. Intelligent Data Analysis, vol. 25, no. 2, pp. 1115-1130, 2021 (CCF C)
14. Cairong Yan, Qinglong Zhang. Merging visual features and temporal dynamics in sequential recommendation. Neurocomputing, vol. 362, no. 10, pp. 11-18, 2019 (SCI 2 \square)
15. 燕彩蓉, 周灵杰, 张青龙, 李晓林. 因子分解机模型的宽度和深度扩展研究. 软件学报, 2019, 30(3): 822-844. (CCF 中文 A)
16. 燕彩蓉, 张青龙, 赵雪, 黄永锋. 基于广义高斯分布的贝叶斯概率矩阵分解方法. 计算机研究与发展. 2016, 53(12): 2793-2800. (CCF 中文 A)
17. Cairong Yan, Yan Huang, Qinglong Zhang, Yan Wan. NSPD: An N-stage Purchase Decision Model for E-commerce Recommendation. Proc. APWeb-WAIM, pp. 149-164, 2018. (CCF C)

18. Cairong Yan, Qinglong Zhang, Xue Zhao, Yongfeng. Huang. An Intelligent Field-Aware Factorization Machine Model. Proc. DASFAA 2017. (CCF B)

Honors and awards:

1. 纺织服装行业电子商务新模式研究. 2018 年纺织行业信息化成果奖(解决方案奖)一等奖.
2. 创新创业教育背景下“人工智能+新工科”的教学模式研究与实践. 2019 年中国纺织工业联合会教学成果奖三等奖.
3. “Linux 系统”翻转课堂教学研究与实践. 2017 年中国纺织工业联合会教学成果奖三等奖.

Recent research projects hosted/participated in:

1. 国家自然科学基金, “面向大数据的实体解析方法及关键技术研究”
2. 教育部在线教育研究中心在线教育基金(全通教育), “基于社会网络的学习资源推动机制研究”
3. 国家自然科学基金项目, “多云环境下复杂服务应用的优化分解关键技术研究”
4. 上海市科技创新行动计划项目, “面向互联网金融风控的大数据分析核心算法模型”

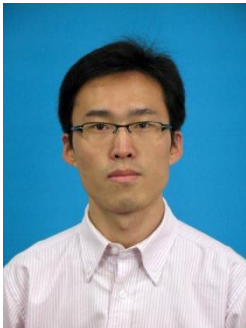
Works in recent years:

1. 燕彩蓉, 潘乔. 机器学习: 因子分解机模型与推荐系统. 科学出版社, 2019.3 月.
2. 燕彩蓉. Linux 系统与大数据应用(第 2 版). 高等教育出版社, 2019 年 9 月.
3. 燕彩蓉, 李继云. Linux 系统与大数据应用(第 1 版). 高等教育出版社, 2016 年 4 月.

International exchange and cooperation:

访问学者, 美国 佛罗里达大学 电子与计算机工程系, 合作导师: Dr. Xiaolin (Andy) Li (李晓林), 2011 年 8 月-2012 年 7 月.

王鹏伟 Pengwei Wang



Associate Professor, Master's Supervisor

Research Area:

Cloud computing and edge computing, service computing, data mining and analysis, intelligent risk control of network finance

Teaching courses:

- [1] Introduction to Software Engineering
- [2] Cloud Computing (English, graduate)
- [3] Service Computing and Cloud Computing (Graduate)

Main papers published:

3. Pengwei Wang, Zhen Chen, MengChu Zhou, Zhaohui Zhang, et al., Cost-Effective and Latency-minimized Data Placement Strategy for Spatial Crowdsourcing in Multi-Cloud Environment, IEEE Transactions on Cloud Computing, 2023, 11(1): 868-878.
4. Pengwei Wang, Jin Xu, MengChu Zhou, Aiiad Albeshri. Budget-constrained Optimal Deployment of Redundant Services in Edge Computing Environment. IEEE Internet of Things Journal, 2023, 10(11): 9453-9464.
5. Wenqiang Liu, Pengwei Wang*, Ying Meng, Caihui Zhao, Zhaohui Zhang. Cloud Spot Instance Price Prediction using kNN Regression. Human-centric Computing and Information Sciences, 2020, 10, Article 34, DOI: 10.1186/s13673-020-00239-5.
6. Pengwei Wang, Caihui Zhao, Wenqiang Liu, Zhen Chen, Zhaohui Zhang, Optimizing Data Placement for Cost effective and High Available Multi-Cloud Storage, Computing and Informatics, 2020, 39(1-2): 51-89.

7. Wenqiang Liu, Pengwei Wang*, Ying Meng, Qin Zhao, Caihui Zhao, Zhaohui Zhang. A Novel Model for Optimizing Selection of Cloud Instance Types. *IEEE Access*, Vol.7, pp. 120508-120521, 2019.
8. Pengwei Wang, Zhijun Ding, Changjun Jiang, Mengchu Zhou, and Yuwei Zheng, Automatic Web Service Composition Based on Uncertainty Execution Effects, *IEEE Transactions on Services Computing*, 2016, 9(4): 551-565.
9. Pengwei Wang, Zhijun Ding, Changjun Jiang, and Mengchu Zhou, Constraint-Aware Approach to Web Service Composition, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2014, 44(6): 770-784.
10. Pengwei Wang, Zhijun Ding, Changjun Jiang, and Mengchu Zhou, Automated Web Service Composition Supporting Conditional Branch Structures, *Enterprise Information Systems*, 2014, 8(1): 121-146.
11. Pengwei Wang, Zhijun Ding, Changjun Jiang, and Mengchu Zhou, Design and Implementation of a Web-Service-based Public-oriented Personalized Health Care Platform, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2013, 43(4): 941-957.
12. Zekun Hu, Pengwei Wang*, Peihai Zhao, and Zhaohui Zhang. A Dichotomous Repair-based Load-Balanced Task Allocation Strategy in Cloud-Edge Environment. The 19th EAI International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom 2023), Corfu Island, Greece, October 4-6, 2023.
13. Zhilian Zhang, Pengwei Wang*, Zhaohui Zhang. A Budget-constrained Service Deployment Strategy based on Cost Allocation in Cloud-Edge Environment. The 29th IEEE International Conference on Parallel and Distributed Systems (ICPADS 2023), Hainan, China, December 17-21, 2023.
14. Jingtian Jia, Pengwei Wang*. Low Latency Deployment of Service-based Data-intensive Applications in Cloud-Edge Environment. The 2022 IEEE International Conference on Web Services (ICWS 2022), Barcelona, Spain, July 11-15, 2022, pp. 57-66.
15. Pengwei Wang, Yajun Zhao, Zhaohui Zhang, "Joint Optimization of Data Caching and Task Scheduling based on Information Entropy for Mobile Edge Computing," The 19th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA 2021), New York, USA, Sept. 30-Oct. 3, 2021.
16. Pengwei Wang, Zhen Chen, Zhaohui Zhang. Suitability-based Task Assignment in Crowdsourcing Markets. In 2020 IEEE International Conference on Services Computing (SCC 2020), pp. 361-369, Beijing, China, Oct. 18-24, 2020.
17. Eryang Cao, Pengwei Wang*, Chungang Yan and Changjun Jiang. A Cloudedge-Combined Data Placement Strategy Based on User Access Regions. The 2020 6th International Conference on Big Data and Information Analytics (BigDIA 2020), Shenzhen, China, pp. 243-250, 2020. (Best Student Paper Award)
18. Wenqiang Liu, Pengwei Wang*, Ying Meng, Guobing Zou, Zhaohui Zhang. A Novel Algorithm for Optimizing Selection of Cloud Instance Types in Multi-cloud Environment. The 25th IEEE International Conference on Parallel and Distributed Systems (ICPADS 2019), Tianjin, China, December 4-6, 2019.

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李悦 Yue Li



2005-2010 University of Limerick, Ireland, PhD in Design,
Implementation and Evaluation of a new hybrid key distribution
protocol for Wireless Sensor
2001-2005 University of Limerick, Ireland, BSc(Hons) in Information
Technology and Telecommunication
01/2011 - present: Lecturer , Donghua Univeristy, Shanghai, China
11/2009 -11/2010: Research Scientist Ningbo Sanxing Electric Co., Ltd,
Ningbo, China

Research Area:

Information Security, Blockchain, Metaverse, Artificial Intelligent

Subjects:

1. 上海市科学技术委员会, 上海市自然科学基金, 16ZR1401100, 躯感网中无监督学习算法研究, 2016-04 至 2019-06, 结题, 参与 Research on Unsupervised Learning Algorithms in Sensory Networks, 2016-2019, Shanghai Municipal Commission of Science and Technology, Shanghai Natural Science Foundation, 16ZR1401100,
2. 横向课题, 基于区块链的联邦学习系统设计与开发, 2019-01 至 2021-12, 主持 Design and development of blockchain based federated learning system, from 2019-01 to 2021-12
3. 横向课题, 基于 AR 的工业巡检平台的设计与开发, 2023-01 至 2024-12, 主持 Design and development of an AR based industrial inspection platform, January 2023 to December 2024

Main papers published:

- (1) Li, Yue L ; Chen, Dehua; Li, Wei; Wang, Gaoli; Smith, Paul ; A Hybrid Authenticated Group Key Agreement Protocol in Wireless Sensor Networks A Hybrid Authenticated Group Key Agreement Protocol in Wireless Sensor Networks, International Journal of Distributed Sensor Networks, 2013, 2013(SCI 期刊)
- (2) Li, Yue L ; Xu, Pengjian; Ruan, Qing; Xu, Wusheng ; Text Adversarial Examples Generation and Defense Based on Reinforcement Learning, Tehnicki Vjesnik, 2021.夏季, 28(4): 1306-1314 (SCI 期刊)

Patents:

- (1) 李悦; 李锋; 许九龄 ; 一种基于点对点的短信加密系统, 2017-6-22, 中国, ZL201710483146.X
- (2) 李锋; 徐光炜; 李悦 ; 王泽南 ; 基于伪 Wigner-Ville 分布的心电图诊断方法, 2019-5-20, 中国, CN201910417738.0

Email: frankyueli@dhu.edu.cn

陶然 (Yan Tao)



RAN TAO received the B.S. degree in Computer Application and the M.S. degree in Computer Technology from Donghua University in 1998 and 2007, respectively. Since 1998, he has been with Donghua University, where he was a Senior Engineer with the School of Computer Science and Technology in 2009. From 2014 to 2015, he was a Visiting Scholar at Old Dominion University, VA, USA. He is the co-author of three books, more than 30 articles, and 6 patents. His research interests include computer vision, data mining, software engineering, and information systems.

Research area:

计算机视觉、数据挖掘、软件工程、信息系统。

Research subject:

视频动作识别与智能分析系统（Video motion recognition and intelligent analysis system）

Papers:

1. XiaoKang XU, Ran TAO, Xiangyang FENG, Ming ZHU. A Lightweight Facial Expression Recognition Network Based on Dense Connections; proceedings of the 16th International Conference on Knowledge Management in Organisations, KMO 2022, July 11, 2022 - July 14, 2022, Hagen, Germany, 2022 [C]. Springer Science and Business Media Deutschland GmbH, 2022: 347-359.
2. Puchun XIE, Ran TAO, Xin LUO, Youqun SHI. YOLOv4-MobileNetV2-DW-LCARM: A Real-Time Ship Detection Network; proceedings of the 16th International Conference on Knowledge Management in Organisations, KMO 2022, July 11, 2022 - July 14, 2022, Hagen, Germany, 2022 [C]. Springer Science and Business Media Deutschland GmbH, 2022: 281-293.
3. Xin LUO, Zhen CHENG, Qing NI, Ran TAO, Youqun SHI. Defect detection algorithm for fabric based on deformable convolutional network [J]. 2022,
4. Jinyang DING, Ran TAO, Xin LUO, Xiangyang FENG. An Asymmetric Parallel Residual Convolutional Neural Network for Pen-Holding Gesture Recognition; proceedings of the 16th International Conference on Knowledge Management in Organisations, KMO 2022, July 11, 2022 - July 14, 2022, Hagen, Germany, 2022 [C]. Springer Science and Business Media Deutschland GmbH, 2022: 321-333.
5. Rui YANG, Ran TAO, Zhaoyang WANG, Xiangyang FENG. Etiquette Action Similarity Evaluation Based on Posture Recognition; proceedings of the 15th International Conference on Knowledge Management in Organizations, KMO 2021, July 20, 2021 - July 22, 2021, Kaohsiung, Taiwan, 2021 [C]. Springer Science and Business Media Deutschland GmbH, 2021: 404-415.
6. Ran TAO, Lili ZHU, Qinqin WEN, Youqun SHI, Xiangyang FENG. The Usability Evaluation Method of E-learning Platform Based on Fuzzy Comprehensive Evaluation; proceedings of the 15th International Conference on Knowledge Management in Organizations, KMO 2021, July 20, 2021 - July 22, 2021, Kaohsiung, Taiwan, 2021 [C]. Springer Science and Business Media Deutschland GmbH, 2021: 292-304.
7. Zijia LIU, Ran TAO, Youqun SHI, Qinglan LUO. A Sentiment Classification Model Based on Deep Learning; proceedings of the 15th International Conference on Knowledge Management in Organizations, KMO 2021, July 20, 2021 - July 22, 2021, Kaohsiung, Taiwan, 2021 [C]. Springer Science and Business Media Deutschland GmbH, 2021: 393-403.
8. Abdur RASOOL, Ran TAO, Kaleem KASHIF, Waqas KHAN, Promise AGBEDANU, Neeta CHOUDHRY. Statistic Solution for Machine Learning to Analyze Heart Disease Data; proceedings of the 12th International Conference on Machine Learning and Computing, ICMLC 2020, February 15, 2020 - February 17, 2020, Shenzhen, China, 2020 [C]. Association for Computing Machinery, 2020: 134-139.
9. Abdur RASOOL, Ran TAO, Marjan KAMYAB, Shoaib HAYAT. GAWA-A feature selection method for hybrid sentiment classification [J]. IEEE Access, 2020, 8(191850-191861).
10. Mohammad Ali HASSANI, Ran TAO, Marjan KAMYAB, Mohammad Hadi MOHAMMADI. An Approach of Predicting Heart Disease Using a Hybrid Neural Network and Decision Tree; proceedings of the 5th International Conference on Big Data and Computing, ICBDC 2020,

May 28, 2020 - May 30, 2020, Virtual, Online, China, 2020 [C]. Association for Computing Machinery, 2020: 84-89.

11. Ran TAO, Jie ZHANG, Ze-Ping LV, You-Qun SHI, Xiang-Yang FENG. A FCM, grey model, and BP neural network hybrid fashion color forecasting method; proceedings of the 14th International Conference on Knowledge Management in Organizations, KMO 2019, July 15, 2019 - July 18, 2019, Zamora, Spain, 2019 [C]. Springer Verlag, 2019: 97-109.

12. Abdur RASOOL, Ran TAO, Kamyab MARJAN, Tayyab NAVEED. Twitter Sentiment Analysis: A Case Study for Apparel Brands; proceedings of the 2018 International Seminar on Computer Science and Engineering Technology, SCSET 2018, December 17, 2018 - December 18, 2018, Shanghai, China, 2019 [C]. IOP Publishing Ltd, 2019: China University of Petroleum; Yanshan University.

13. 叶敏, 陶然. 一种加工类产品设计资料存储及展示方法 [J]. 电脑知识与技术, 2023, 19(01): 137-139. DOI: 10.14004/j.cnki.ckt.2023.0045.

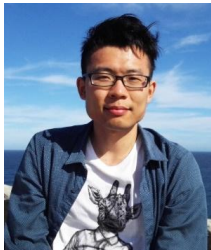
14. 张璐, 陶然, 彭志飞, 丁金洋. 基于改进 AlexNet 的双模态握笔手势识别 [J]. 智能计算机与应用, 2021, 11(06): 51-55+62.

15. 王玺瑞, 陶然. 基于区块链的服装产业协同制造溯源研究 [J]. 智能计算机与应用, 2020, 10(03): 150-154+159.

Requirements for the future international students: interested in computer vision, data mining, software engineering, and information systems are welcome.

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Hongjian WANG received the Ph.D. degree in computer science from University of Technology of Belfort-Montbéliard, France, in 2016. From 2016 to 2019, he was a postdoctoral researcher with Heidelberg University, Germany. In 2021, he was selected into the “Shanghai Pujiang Program”. Currently he is the PI of multiple research projects. He has published more than 30 papers and 10 national patents/PCTs.

Research area:

multi-valued processors and their applications in cryptography, ternary computers, ultrasound CT image reconstruction, optimization algorithms, artificial intelligence

Courses taught:

Undergraduate courses: Multimedia Technology, Database Application Course Design, Big Data, Data Science Technology and Application

Graduate courses: Image Processing and Analysis, Deep Learning (in English).

Main papers published:

1. Hongjian WANG, Ning SHEN, Xiaoxu LEI, Hartmut GEMMEKE, Michael ZAPF, Shoujian YU and Xiaoling XIA. 3D ultrasound computed tomography system calibration using a neural network. Medical Imaging 2022: Ultrasonic Imaging and Tomography. vol. 12038. SPIE, 2022.

2. Yuling FAN, Hongjian WANG, Hartmut GEMMEKE, Torsten HOPP and Juergen HESSER. Model-data-driven image reconstruction with neural networks for ultrasound computed tomography breast imaging. Neurocomputing, vol. 467, pp. 10-21, 2022.

3. Hongjian WANG, Yudong WU, Shan OUYANG, Xunlei CHEN, Yunfu SHEN and Yi JIN. The Design and Implementation of Reconfigurable Quaternary Logic Processor, In Parallel and Distributed Computing, Applications and Technologies: 22nd International Conference, PDCAT 2021, Springer, Cham, 2022.
4. Hongjian WANG, Shan OUYANG, Yunfu SHEN and Xunlei CHEN. Ternary Optical Computer: An Overview and Recent Developments, 2021 12th International Symposium on Parallel Architectures, Algorithms and Programming (PAAP), pp. 82-87, IEEE, 2021.
5. Yuling FAN, Hongjian WANG, Hartmut GEMMEKE, Torsten HOPP and Jürgen HESSER. DDN: dual domain network architecture for non-linear ultrasound transmission tomography reconstruction, Medical Imaging 2021: Ultrasonic Imaging and Tomography. vol. 11602. SPIE, 2021.
6. Yuling FAN, Hongjian WANG, Hartmut GEMMEKE, Torsten HOPP and Jürgen HESSER. Memory-Efficient Neural Network for Non-Linear Ultrasound Computed Tomography Reconstruction, 2021 IEEE 18th International Symposium on Biomedical Imaging (ISBI), pp. 429-432, IEEE, 2021.
7. Hongjian WANG, Xueze QIAN, Hartmut GEMMEKE, Torsten HOPP, Nicole V. RUITER and Jürgen HESSER. Fast Image Reconstruction in Ultrasound Transmission Tomography by U-net, 2020 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), IEEE, 2020.
8. Wenzhao ZHAO, Hongjian WANG, Hartmut GEMMEKE, Koen W. A. VAN DONGEN, Torsten HOPP and Jürgen HESSER. Ultrasound transmission tomography image reconstruction with a fully convolutional neural network. Physics in Medicine & Biology, vol.65 (235021), 2020.
9. Yuling FAN, Hongjian WANG, Hartmut GEMMEKE, Torsten HOPP and Jürgen HESSER. MI-net: a deep network for non-linear ultrasound computed tomography reconstruction, 2020 IEEE International Ultrasonics Symposium (IUS), IEEE, 2020.
10. Hongjian WANG, Thai Hoa HUYNH, Hartmut GEMMEKE, Torsten HOPP and Jürgen HESSER. GPU acceleration of wave based transmission tomography, 2019 IEEE International Symposium on Biomedical Imaging (ISBI'19), Venice, Italy, April 8-11, 2019.
11. Hongjian WANG, Hartmut GEMMEKE, Torsten HOPP and Jürgen HESSER. Accelerating image reconstruction in ultrasound transmission tomography using L-BFGS algorithm, 2019 SPIE Medical Imaging, San Diego, United States, Feb. 16-21, 2019.
12. Hongjian WANG, Hartmut GEMMEKE, Torsten HOPP and Jürgen HESSER. Multigrid method for solving linearized systems in ultrasound transmission tomography, 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference (IEEE NSS/MIC 2018), Sydney, Australia, Nov. 10-17, 2018.
13. Hongjian WANG, Burak DALKILIC, Hartmut GEMMEKE, Torsten HOPP and Jürgen HESSER. Ultrasound image reconstruction using Nesterov's accelerated gradient, 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference (IEEE NSS/MIC 2018), Sydney, Australia, Nov. 10-17, 2018.
14. Hongjian WANG, Abdelkhalek MANSOURI and Jean-Charles CREPUT. Cellular matrix model for parallel combinatorial optimization algorithms in Euclidean plane. Applied Soft Computing, vol.61, pp.642-660, 2017.
15. Hongjian WANG, Naiyu ZHANG and Jean-Charles CREPUT. A massively parallel neural network approach to large-scale Euclidean traveling salesman problems. Neurocomputing, vol.240, pp.137-151, 2017.
16. Hongjian WANG, Naiyu ZHANG, Jean-Charles CREPUT, Yassine RUICHEK and Julien

MOREAU. Massively parallel GPU computing for fast stereo correspondence algorithms. *Journal of Systems Architecture*, vol.65, pp.46-58, 2016.

17. Hongjian WANG, Naiyu ZHANG, Jean-Charles CREPUT, Julien MOREAU and Yassine RUICHEK. Parallel structured mesh generation with disparity maps by GPU implementation. *IEEE Transactions on Visualization and Computer Graphics*, vol.21, no.9, pp.1045-1057, 2015.

18. Hongjian WANG and Kai SONG. Simulative method for the optical processor reconfiguration on a dynamically reconfigurable optical platform. *Applied Optics*, vol.51, no.2, pp.167-175, 2012.

Requirements for the future international students: Love scientific research, interested in my research field, self-disciplined and diligent.

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Lecturer and Master's Supervisor. Completed undergraduate studies at Tongji University and then pursued a Ph.D. at the same university, earning a Ph.D. degree in 2020. Engaged in research in the field of neuromorphic intelligence and its interdisciplinary applications. Has published over 30 papers in high-quality domestic and international journals and conferences, with research findings featured in international journals such as *IJIS* and *IEEE Transactions*. Currently, he is the principal investigator for one National Natural Science Foundation of China (NSFC) Young Scientist Fund project, one Shanghai Sailing Program project. .

Selected publications:

1. Zijian Wang, Haibo Shi, Yanting Zhang, and Cairong Yan. Recurrent Spiking Neural Network with Dynamic Presynaptic Currents Based on Backpropagation. *International Journal of Intelligent Systems*. DOI:10.1002/int.22772
2. Zijian Wang, Yuxuan Huang, Yaqin Zhu, Bingxing Xu, and Long Chen. "Dynamic layer-span connecting spiking neural networks with backpropagation training." *Complex & Intelligent Systems* (2023): 1-16.
3. Long Chen, Xuhang Li, Yaqin Zhu, Haitao Wang, Jiayong Li, Yu Liu, Zijian Wang*, "Intralayer-Connected Spiking Neural Network with Hybrid Training Using Backpropagation and Probabilistic Spike-Timing Dependent Plasticity", *International Journal of Intelligent Systems*, vol. 2023, Article ID 3135668, 13 pages, 2023. <https://doi.org/10.1155/2023/3135668>
4. Yuxuan Huang, Jianxu Zheng, Bingxing Xu, Xuhang Li, Yu Liu, Zijian Wang*, Hua Feng*, Shiqi Cao. An Improved Model using Convolutional Sliding Window-Attention Network for Motor Imagery EEG Classification. *Frontiers in neuroscience*.
5. Zijian Wang, Zuo Zhang, and Yaoru Sun. "Different Neural Information Flows Affected by Activity Patterns for Action and Verb Generation." *Frontiers in Psychology* 13 (2022): 802756-802756.

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