Dr. Ke Chen

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Pattern Recognition and Intelligent System

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Research Interests

- Evolutionary Algorithm, particularly Particle Swarm Optimization
- Feature Selection, Feature Construction and Dimension Reduction
- Image Analysis, Image Classification
- Evolutionary deep learning

Education

2018-Present: **Visiting Scholars**, *Computer Science*, Victoria University of Wellington (two years)

2017-Present: **Doctor of Philosophy**, *Pattern Recognition and Intelligent System*, Shandong University

2014-2017: **Masters of Engineering**, *Control Engineering*, Yanshan University

2010-2014: **Bachelor of Engineering**, *Automation*, Weifang University

Publications

Google Scholar: https://scholar.google.com.hk/citations?user=cUh3dO8AAAAJ&hl=en

Refereed Journal Articles……………………………………………………………………………..

[1] ***Ke Chen***, Fengyu Zhou, Lei Yin, Shuqian Wang, Yugang Wang, Fang Wan, A hybrid particle swarm optimizer with sine cosine acceleration coefficients, ***Information Sciences***, 2018, 422: 218-241. (***SCI, IF=5.524***)

https://doi.org/10.1016/j.ins.2017.09.015

[2] ***Ke Chen***, Fengyu Zhou, Aling Liu, Chaotic dynamic weight particle swarm optimization for numerical function optimization, ***Knowledge-Based Systems***, 2018, 139: 23-40. (***SCI, IF=5.101***)

https://doi.org/10.1016/j.knosys.2017.10.011

[3] ***Ke Chen***, Fengyu Zhou, Yugang Wang, Lei Yin, An ameliorated particle swarm optimizer for solving numerical optimization problems, ***Applied Soft Computing***, 2018, 73: 482-496. (***SCI, IF=4.873***)

https://doi.org/10.1016/j.asoc.2018.09.007

[4] ***Ke Chen***, Fengyu Zhou, Xianfeng Yuan, Hybrid Particle Swarm Optimization with Spiral-Shaped Mechanism for Feature Selection, ***Expert Systems with Applications***, 2019, 128: 140-156. (***SCI,***

IF=4.292)

https://doi.org/10.1016/j.eswa.2019.03.039

[5] Peifeng Niu, ***Ke Chen****, Yunpeng Ma, Xia Li, Aling Liu, Guoqiang Li, Model turbine heat rate by fast learning network with tuning based on ameliorated krill herd algorithm, ***Knowledge-Based Systems***, 2017, 118: 80-92. (***SCI, IF=5.101, Corresponding Author***)

https://doi.org/10.1016/j.knosys.2016.11.011

[6] Chao Liu, Peifeng Niu, Guoqiang Li, Yunpeng Ma, Weiping Zhang, ***Ke Chen***, Enhanced shuffled frog-leaping algorithm for solving numerical function optimization problems, ***Journal of Intelligent Manufacturing***, 2018, 29(5): 1133-1153. (***SCI, IF=3.535***)

https://doi.org/10.1007/s10845-015-1164-z

[7] Peifeng Niu, ***Ke Chen****, Aling Liu, Yunpeng Ma, Zhen Zhao, Guoqiang Li, Study on the Optimal Initial Pressure of a Steam Turbine Unit Based on Krill Herd Algorithm, ***Journal of Chinese Society of Power Engineering***, 2017, 37(8): 615-621. (***Corresponding Author,*** *In Chinese*)

[8] Peifeng Niu, ***Ke Chen***, Yunpeng Ma, Qingchong Zhao, Guoqiang Li, Modelling of Turbine Heat Rate Based on Krill Herd Algorithm and Its Application, ***Journal of Chinese Society of Power Engineering***, 2016, 36(10):781-787. (*In Chinese*)

[9] Yunpeng Ma, Peifeng Niu, ***Ke Chen***, Shanshan Yan, Guoqiang Li, Optimize NOx emissions model of boiler based on chaos group teaching-learning-based optimization algorithm, ***Acta Metrologica Sinica***, 2017, 39(1): 125-129. (*In Chinese*)

[10] Xia Li, Peifeng Niu, Yunpeng Ma, ***Ke Chen***, Qiuya Wang, NOx emission reduction of a boiler based on ameliorated chicken swarm optimization, ***Journal of Chinese Society of Power Engineering***, 2017, 37(4): 293-300. (*In Chinese*)

[11] Peifeng Niu, Zhen Zhao, Yunpeng Ma, ***Ke Chen***, Qiuya Wang, Qingchong Zhao, Model improvement for Boiler NOx emission based on wind driven optimization algorithm, ***Journal of Chinese Society of Power Engineering***, 2016, 36(9): 732-738. (*In Chinese*)

[12] Peifeng Niu, Qiuya Wang, Yunpeng Ma, Qingchong Zhao, ***Ke Chen***, Zhen Zhao, Study on NOx Emission from Boiler Based on Quantum Adaptation Bird Swarm Algorithm, ***Acta Metrologica Sinica***, 2017, 38(6): 770-775. (*In Chinese*)

Refereed International Conference Papers…………………………………………………………..

[13] ***Ke Chen***, Fengyu Zhou, Bing Xue, Particle Swarm Optimization for Feature Selection with Adaptive Mechanism and New Updating Strategy, ***Australasian Joint Conference on Artificial Intelligence***, Springer, Cham, 2018: 419-431.

https://link.springer.com/chapter/10.1007/978-3-030-03991-2_39

Submitted Papers…………………………………………………………………………………..

[14] ***Ke Chen***, Bing Xue, Mengjie Zhang, Fengyu, Zhou, Novel Chaotic Grouping Particle Swarm Optimization with A Dynamic Regrouping Strategy for Solving Numerical Optimization Tasks,

Submitted to *Knowledge-Based Systems*.

Patents..

[15] 2018, Data feature selection method and system based on improved particle swarm optimization, No. 201810844459.8 (*In process*)

Research Grants

[1] 2015-2017: Research on biologically-inspired algorithm and its application in boiler combustion optimization, supported by the National Natural Science Foundation of China (No.61403331).

[2] 2015-2017: Research and application of the artificial bee colony and quantum fast learning network for predicting NOx emissions and boiler efficiency from a Coal-Fired Boiler, supported by the National Natural Science Foundation of China (No.61573306).

[3] 2017-2018: Research on autonomous human activity learning method supported by intelligent space, supported by the National Natural Science Foundation of China (No.61375084).

[4] 2017-2019: Research on self-diagnosing method of service robots supported by cloud computing, supported by the National Natural Science Foundation of China (No.61773242).

[5] 2018-2020: Service robot cloud service platform, supported by National Key Research & Development Program of China (No. 2017YFB1302400).

Awards

- 2018: Oversea Ph.D Scholarship (Awarded by China Scholarship Council)
- 2018: National Scholarship of China
- 2018: National First-Class academic Scholarships
- 2018: Excellent master's thesis in Hebei Province
- 2018: Shandong University Excellent Graduate Cadre Scholarship
- 2018: Second Prize of Shandong University Graduate Outstanding Academic Achievement Award
- 2018: Excellent Master's Thesis of Yanshan University
- 2018: Excellent student award of Shandong University
- 2018: Third Prize of "Huawei Cup" 15th China Graduate Mathematical Modeling Contest
- 2017: Second Prize of "Huawei Cup" 15th China Graduate Mathematical Modeling Contest
- 2017: Outstanding Graduate of Yanshan University
- 2017: National First-Class academic Scholarships
- 2016: Be recommended for admission to be a postgraduate without entrance examination
- 2016: Excellent student award of Yanshan University
- 2016: National First-Class academic Scholarships
- 2015: Excellent student award of Yanshan University
- 2015: National First-Class academic Scholarships
- 2014: Outstanding Graduate of Weifang City

Professional Services

Reviewer of Journal
- Journal of Computational and Applied Mathematics （*SCI*）
- Swarm and Evolutionary Computation (*SCI*)
- Soft Computing (*SCI*)
- Journal of Jilin University Engineering and Technology Edition (*EI*)

Reviewer of Conference
- Chinese Automation Congress & Intelligent Manufacturing International Conference (CAC & CIMIC 2017)
- Chinese Control and Decision Conference (CCDC 2017)

Computer Skills

- Programming: MATLAB, Python
- Typography: LATEX, Microsoft Office
- Operating Systems: Windows, Linux

Links

- Homepage: https://ckzixf.github.io/index.html
- Google Scholar: https://scholar.google.com.hk/citations?user=cUh3dO8AAAAJ&hl=en
- ResearchGate: https://www.researchgate.net/profile/Ke_Chen100