

# Hande Dong

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## EDUCATION

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### University of Science and Technology of China

2019.09 - 2022.06

Master of Electronics and Communications Engineering

Advisor: Xiangnan He

Research interests: machine learning and data mining, particularly in graph neural network, recommender system, bias and de-bias method

### University of Science and Technology of China

2015.09 - 2019.06

Bachelor of Applied Physics, *Chung-Yao Chao Talent Program* in Applied Physics

## RESEARCH PROJECTS

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### A meta-learning based debiasing framework for recommendation

2020.11 - 2021.02

- I summarized the bias in recommendation from the discrepancy of the risk and empirical risk function.
- I participated in the proposal of AutoDebias, a new debiasing framework in RS based on meta-learning. I implemented AutoDebias and debiasing baselines with pytorch and verified its effectiveness.
- The work has been published in SIGIR 2021. The GitHub repository has 30 stars at present. AutoDebias has been patented (number: 202110424290.2).

### A survey about bias and debias methods in recommender system

2020.05 - 2020.09

- I participated in reviewing previous works about bias and debiasing methods in recommender system. And I especially focused on popularity bias. And I participated in the writing of the survey about bias and debias in recommender system.
- The survey has 39 citations in Google Scholar at present.

### The relationship of Graph Convolution Network and Label Propagation

2019.02 - 2020.10

- I proved the equivalence of decoupled graph convolution network and label propagation from gradient perspective, and revealed the strengths and weaknesses of decoupled GCN.
- Based on analysis, I designed a new algorithm, Propagation then Training Adaptively, to overcome the weaknesses of decoupled GCN and provide robustness and high efficiency.
- The work has been published in WWW 2021. The algorithm has been patented (number: 202011591264.0).

## INTERNSHIP EXPERIENCE

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### Huawei, Shanghai, algorithm engineer

2018.07 - 2018.09

- I participated in the research on how to predict 5G/4G signal based on 4G/5G signal. In terms of data visualization, I used matplotlib to visualize the collected data; in terms of model improvement, I introduced the neural network to this problem for the first time, and increased the performance by 3-4%.

## PUBLICATIONS

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**AutoDebias: Learning to Debias for Recommendation**; *SIGIR 2021 (CCF Class A)*; Jiawei Chen\*, **Hande Dong\***, Yang Qiu, Xiangnan He, Xin Xin, Liang Chen, Guli Lin, Keping Yang; Co-first Author.

**Bias and Debias in Recommender System: A Survey and Future Directions**; *TKDE underreview (CCF Class A)*; Jiawei Chen, **Hande Dong**, Xiang Wang, Fuli Feng, Meng Wang, Xiangnan He; Second Author.

**On the Equivalence of Decoupled Graph Convolution Network and Label Propagation**; *WWW 2021 (CCF Class A)*; **Hande Dong**, Jiawei Chen, Fuli Feng, Xiangnan He, Shuxian Bi, Zhaolin Ding, Peng Cui; First Author.

## OTHER EXPERIENCE

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### Class Monitor

2019.09 - present

### Web and Server Administrator for Lab of Data Science

2021.03 - present

### Teacher Assistant of Fundamental of Data Science course

2020 Fall semester

### Teacher Assistant of Computer Programming course

2017 Fall semester

## AWARDS

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<b>Outstanding student leaders</b> , University of Science and Technology of China	<i>2020.05</i>
<b>Outstanding graduates</b> , University of Science and Technology of China	<i>2019.06</i>
<b>Character and academic outstanding graduates</b> , Anhui Province	<i>2019.06</i>