

# SICHAO FU

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College of Control Science and Engineering, China University of Petroleum (East China)

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## EDUCATION

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**China University of Petroleum(East China), Qingdao**

*Sep. 2017– Jul. 2020*

M. Eng. in Electronics & Communication Engineering

Supervisor Professor Weifeng Liu

**Linyi University, Linyi**

*Sep. 2013– Jul. 2017*

B. Eng. in Communication Engineering

## RESEARCH INTERESTS

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Machine learning, Pattern recognition, Deep learning, Graph convolution networks (GCN).

## POSTGRADUATE HONORS AND AWARDS

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Third Prize of Academic Scholarship, 2017

Second Prize in “Number Building Cup” National Undergraduate Mathematical Modeling Challenge Competition, 2017

Second Prize in National Undergraduate “Internet Plus” Innovation Competition, 2017

First Prize in Qingdao Graduate Student Electronic Design Competition , 2017

Outstanding Leadership of the 15th Graduate Student “Bo Cui Festival” Science and Technology Academic Activity, 2017

Excellent Activist of the 15th Graduate Student “Bo Cui Festival” Science and Technology Academic Activity, 2017

Certificate of Computer and Software Professional Qualification, 2018

First Prize of Academic Scholarship, 2019

Second Prize of the 13th “Siemens Cup” China Intelligent Manufacturing Challenge (the Second Division of North China), 2019

## PUBLICATIONS

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### Journal papers

- **Sichao Fu**, Weifeng Liu, Li Shuying, Yicong Zhou. Two-Order Graph Convolutional Networks for Semi-Supervised Classification. IET Image Processing, IET. Impact factor: 2.004.
- **Sichao Fu**, Weifeng Liu, Yicong Zhou, Liqiang Nie. HpLapGCN: Hypergraph p-Laplacian Graph Convolutional Networks. Neurocomputing, Elsevier. Impact factor: 4.072.
- **Sichao Fu**, Weifeng Liu, Dapeng Tao, Yicong Zhou.  $p$  - Laplacian Graph Convolutional Networks for Semi-Supervised Classification. IEEE Transactions on Knowledge and Data Engineering, IEEE. Impact factor: 3.857, Under Second Review.
- Weifeng Liu, **Sichao Fu**, Yicong Zhou, Zheng-Jun Zha, Liqiang Nie. Human Activity Recognition by Manifold Regularization Based Dynamic Graph Convolutional Networks. Neurocomputing, Elsevier. Impact factor: 4.072, Under Second Review.
- **Sichao Fu**, Weifeng Liu, Dapeng Tao, Yicong Zhou, Liqiang Nie. HesGCN: Hessian Graph Convolutional Networks for Semi-Supervised Classification. Information Sciences, Elsevier. Impact factor: 5.524, Under Second Review.

- **Sichao Fu**, Weifeng Liu, Yicong Zhou, Liqiang Nie. Dual Graph Convolutional Networks by Considering Example Graph and Feature Graph. Under Proofreading. IEEE Transactions on Geoscience and Remote Sensing, IEEE. Impact factor: 5.63, Under Review.

#### Conference papers

- **Sichao Fu**, Xinghao Yang, Weifeng Liu. The Comparison of Different Graph Convolutional Neural Networks for Image Recognition. The 10th International Conference on Internet Multimedia Computing and Service (ICIMCS 2018). August 17-19, 2018, Nanjing, China.
- **Sichao Fu**, Weifeng Liu, Yicong Zhou, Zheng-Jun Zha, Liqiang Nie. Dynamic Graph Convolutional Networks by Manifold Regularization. IJCAI 2019 workshop on Deep Learning for Human Activity Recognition. August 10-16, 2019, Macao, China. Accepted.
- **Sichao Fu**, Weifeng Liu, Zheng-Jun Zha. DyGCN: Dynamic Graph Convolutional Networks. 1st ACM International Conference on Multimedia in Asia. December 16-18, 2019, Beijing, China. Under Review.

#### Book Chapters

- **Sichao Fu**, Weifeng Liu. How to Better Preserve the Locality and Similarity Relationships between Remote Sensing Images for Graph Convolutional Networks? Generalization with Deep Learning: For Improvement on Sensing Capability, World Scientific. Accepted.

### CHINA PATENTS

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#### **Semi-supervised classification method based on $p$ -Laplacian graph convolutional neural networks**

*First Applicant*

- Patent for Invention
- Open Number: CN109583519A
- Open Date: 5 April, 2019

#### **Semi-supervised classification method based on hypergraph $p$ -Laplacian graph convolutional neural networks**

*First Applicant*

- Patent for Invention
- Open Number: CN109766935A
- Open Date: 17 May, 2019

### PROJECT

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#### **Image annotation based on multiview depth sparse coding and manifold regularization**

*Jan. 2017 - Dec. 2020*

*Project Member*

- Funded by: National Natural Science Foundation of China.
- Grant Number: 61671480.

#### **Theory and method with large-scale data deep structure learning** *Jan. 2018 - Dec. 2020*

*Project Member*

- Funded by: Independent Innovation Research Project, China University of Petroleum (East China).
- Grant Number: 18CX07011A.

#### **Person re-identification algorithms based on metric learning**

*May 2018 - May 2019*

*Project Member*

- Funded by: Graduate Student Innovation Project, China University of Petroleum (East China).
- Grant Number: YCX2018064.

**Data representation learning theory and method based on graph neural networks**     *Jan. 2019 - Dec. 2020*  
*Main Project Member*

- Funded by: Key Laboratory of Complex Systems Modeling and Simulation, Ministry of Education.

**Semi-supervised classification method based on graph neural networks**     *May. 2019 - May. 2020*  
*Project Leader*

- Funded by: Graduate Student Innovation Project, China University of Petroleum (East China).
- Grant Number: YCX2019080.

## ACADEMIC ACTIVITIES

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### Ad-hoc reviewer

“IEEE Transactions on Circuits and Systems for Video Technology”  
 “IEEE Transactions on Geoscience and Remote Sensing”  
 “IEEE Access”  
 “Neural Networks”  
 “Information Sciences”  
 “Neurocomputing”  
 “Pattern Recognition”  
 “Artificial Intelligence in Medicine ”  
 “Neural Processing Letters”  
 “Multimedia Tools and Applications ”  
 “Pattern Analysis and Applications ”  
 “International Joint Conference on Artificial Intelligence (IJCAI 2019)”  
 “International Conference on Multimedia and Expo (ICME 2019)”  
 “International Conference on Systems, Man, and Cybernetics (SMC 2019)”  
 “Chinese Conference on Pattern Recognition and Computer Vision (PRCV 2019)”  
 “Asian Conference on Pattern Recognition (ACPR 2019)”  
 “International Conference on Information and Knowledge Management (CIKM 2019)”  
 “International Conference on Machine Learning, Optimization, and Data Science (LOD 2019)”

### Attended conference

“International Conference on Internet Multimedia Computing and Service (ICIMCS 2018)”  
 “ International Joint Conference on Artificial Intelligence (IJCAI 2019)”