# SICHAO FU

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

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#### **EDUCATION**

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

Machine learning, Pattern recognition, Deep learning, Graph convolution networks.

#### POSTGRADUATE HONORS AND AWARDS

National Graduate Fellowship, 2019

Second Prize of the 13th "Siemens Cup" China Intelligent Manufacturing

Challenge (the Second Division of North China), 2019

First Prize of Academic Scholarship, 2019

Certificate of Computer and Software Professional Qualification, 2018

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

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

First Prize in Qingdao Graduate Student Electronic Design Competition , 2017

Second Prize in National Undergraduate "Internet Plus" Innovation Competition, 2017

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

Third Prize of Academic Scholarship, 2017

### **PUBLICATIONS**

#### Journal papers

- 1. <u>Sichao Fu</u>, Weifeng Liu, Yicong Zhou and Liqiang Nie, "HpLapGCN: Hypergraph p-Laplacian Graph Convolutional Networks", *Neurocomputing*, vol. 362, pp. 166-174, 2019.
- 2. <u>Sichao Fu</u>, Weifeng Liu, Li Shuying and Yicong Zhou, "Two-Order Graph Convolutional Networks for Semi-Supervised Classification", *IET Image Processing*, in press, 2019.
- 3. <u>Sichao Fu</u>, Weifeng Liu, Dapeng Tao, Yicong Zhou and Liqiang Nie, "HesGCN: Hessian Graph Convolutional Networks for Semi-Supervised Classification, *Information Sciences*, Accepted, 2019.
- 4. <u>Sichao Fu</u>, Weifeng Liu, Yicong Zhou, Zheng-Jun Zha and Liqiang Nie, "Human Activity Recognition by Manifold Regularization Based Dynamic Graph Convolutional Networks", *Neurocomputing*, Under Second Review.
- 5. <u>Sichao Fu</u>, Weifeng Liu, Dapeng Tao, Yicong Zhou and Liqiang Nie, "Semi-supervised Learning Using Graph *p*-Laplacian Convolutional Networks", *Knowledge-Based Systems*, Under Review.

6. <u>Sichao Fu</u>, Weifeng Liu, Yicong Zhou and Liqiang Nie, "Jointly Learning Example and Feature Graph Representations using Graph Convolutional Networks for Semi-supervised Classification", *IEEE Transactions on Neural Networks and Learning Systems*, Under Review.

# Conference papers

- 7. Sichao Fu, Xinghao Yang and Weifeng Liu, "The Comparison of Different Graph Convolutional Neural Networks for Image Recognition", 2018 International Conference on Internet Multimedia Computing and Service, Nanjing, China, pp. 12, 2018.
- 8. <u>Sichao Fu</u>, Weifeng Liu, Yicong Zhou, Zheng-Jun Zha and Liqiang Nie, "Dynamic Graph Convolutional Networks by Manifold Regularization", 2019 IJCAI Workshop on Deep Learning for Human Activity Recognition, Macao, China, Accepted, 2019.
- 9. <u>Sichao Fu</u>, Weifeng Liu and Zheng-Jun Zha, "DyGCN: Dynamic Graph Convolutional Networks", 2019 ACM International Conference on Multimedia in Asia, Beijing, China, Under Review.

#### **Book Chapters**

10. <u>Sichao Fu</u> and Weifeng Liu, "Research on Graph Convolutional Networks for Remote Sensing Images Recognition", *Generalization with Deep Learning: For Improvement on Sensing Capability, World Scientific*, Accepted, 2019.

#### CHINA PATENTS

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

First Applicant

· Patent for Invention

Open Number: CN109583519AOpen 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**

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.

- · 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

Student First Project Leader

· 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

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"
	"Journal of Applied Remote Sensing"
	"International Joint Conference on Artificial Intelligence"
	"International Conference on Information and Knowledge Managemen"
	"International Conference on Multimedia and Expo"
	"International Conference on Systems, Man, and Cybernetics"
	"International Conference on Machine Learning, Optimization, and Data Science"

"Asian Conference on Pattern Recognition"

Attended conference

 $\hbox{``2018 International Conference on Internet Multimedia Computing and Service''}$ 

"2019 International Joint Conference on Artificial Intelligence"

"Chinese Conference on Pattern Recognition and Computer Vision"