

# Ruijie Wang

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## Education

### Shanghai Jiao Tong University

Department of Computer Science

Shanghai, China

Sept. 2015–Jul. 2019 (expected)

- B.S. in Computer Science & Technology
- 3<sup>rd</sup> year GPA: 92.73/100; 2<sup>nd</sup> year GPA: 92.15/100; 1<sup>st</sup> year GPA: 86.03/100
- **Advisors:** Prof. [Xinbing Wang](#) & Prof. [Weinan Zhang](#)

## Research Interests

- Graph Mining, Text Mining, Data Systems, Large-scale Data Management

## Publications

### AceKG: A Large-scale Knowledge Graph for Academic Data Mining

[PDF]

- R. Wang, Y. Yan, J. Wang, Y. Jia, Y. Zhang, W. Zhang, X. Wang.
- In Proceedings of the 27th International Conference on Information and Knowledge Management. **CIKM 2018**.

### Author Name Disambiguation on Heterogeneous Information Network with Adversarial Representation Learning

[PDF]

- R. Wang, Y. Yan, C. Wen, Y. Zhou, J. Gao, W. Zhang, X. Wang.
- Submitted to the 30th Web Conference. **WWW 2019**.

### RI-SSGE: A Framework with Rule Inference and Sentence Schema Graph Embedding for Question to Subgraph

[PDF]

- Y. Yan, R. Wang, C. Wen, H. Sun, Y. Zhu, W. Zhang, X. Wang.
- Submitted to the 17th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Techniques. **NAACL-HLT 2019**.

## Research Experiences

### Adversarial Representation Learning for Author Disambiguation

SJTU

Advisor: Prof. [Xinbing Wang](#) & Prof. [Weinan Zhang](#)

Jun. - Sept. 2018

- Proposed a novel adversarial representation learning model for heterogeneous information network in the academic domain, to deal with author name disambiguation task.
- Represented the information of heterogeneous information network via employing a generative adversarial module and embedding content and relation information into low-dimension representation space.
- Proposed a self-training strategy and a random walk based exploration to eliminate the requirement for labelled samples and to measure high-order similarities among papers.

### KBQA with Rule Inference and Sentence Schema Graph Embedding

SJTU

Advisor: Prof. [Xinbing Wang](#) & Prof. [Weinan Zhang](#)

Aug. - Nov. 2018

- Proposed a novel knowledge based question answering framework (KBQA) with rule inference and sentence schema graph embedding (RI-SSGE), which transforms natural language query to SPARQL subgraph.
- Built a new KBQA dataset with 133,143 QA pairs, which is the first KBQA benchmark in academic domain.
- Conducted experiments on Geoquery-880 and extensive experiments on the complex queries with operations.

### AceKG: A Large-scale Knowledge Graph for Academic Data Mining 🌐

SJTU

Advisors: Prof. [Xinbing Wang](#) & Prof. [Weinan Zhang](#)

Oct. 2017 - Apr. 2018

- Proposed Academic Knowledge Graph (AceKG), a large-scale (3.13 billion triples) knowledge graph in academic domain.
- Performed entity alignment and rule based inferences to further enrich the knowledge graph.
- Conducted experiments of three academic data mining tasks on the NRL benchmark datasets built from AceKG.

- Implemented the Knowledge Graph System based on Apache Jena consisting of TDB database and SPARQL engine.

### Overlapping Community Detection in Temporal Text Networks 🌐

SJTU

Advisors: Prof. [Xinbing Wang](#) & Prof. [Luoyi Fu](#)

Nov. 2016 - Feb. 2017

- Proposed Model Affiliation Graph with Interacting Communities (MAGIC), a generative model which captured community interactions and considered the information from both link structures and node attributes.
- Conducted experiments on three categories of datasets to verify the superiority of our model in terms of 4 widely-used metrics.

### Acemap: Academic Map System 🌐

SJTU

Advisor: Prof. [Xinbing Wang](#)

Oct. 2016 - Jun. 2017

- Built a new academic system (Acemap), working for data analysis and visualization of scholarly networks.
- Built and maintained the back-end for Acemap and the database for the huge academic dataset with billions of records including authors, papers, institutes and etc.
- Implemented visualization for paper information networks based on ForceAtlas2 algorithm and presented the result with an async tile map loading system on website.

## Selected Projects

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### Polluted-MNIST Classification Baselines 🌐 🌐

CS420 Machine Learning, SJTU

Advisor: Prof. [Shikui Tu](#)

June. 2018

- Implemented and evaluated a wide range of image classification and domain adaptation methods (transferring from a related USPS dataset) on the Polluted-MNIST dataset, and achieved 98.98% accuracy with best model.

### Evaluation and Forecast for Renewable Energy towards a Sustainable Future 🌐

2018 MCM

Advisor: Prof. [Xiaofeng Gao](#)

Feb. 2018

- Proposed Multiple Self-Adaptive Regression model (MSAR) and a revised ARIMA model with Development Index (DI-ARIMA) to characterize and forecast based on the evolution energy profile between 1960-2009 in USA.

### Gene Chip Analysis 🌐 🌐

CS410 Artificial Intelligence, SJTU

Advisor: Prof. [Bo Yuan](#)

Dec. 2017

- Implemented and evaluated algorithms including deep forest, random forest, SVM and deep neural network with greedy layer-wise pre-training on gene chip analysis, and achieved significant results on 4 tasks.

## Patents

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- Y. Jia, Y. Huang, H. Wu, J. Li, **R. Wang**, J. Su, M. Liu, Y. Hong, J. Wang, L. Fu, X. Wang, "Overlapping Community Detection in Temporal Text Networks", CHN No. 107480213A.

## Teaching Experience

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- Teaching Assistant for EE448: Big Data Mining 🌐.

## Honors and Awards

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- **SJTU Excellent Student Award.** (Excellent students in CS Department) each possible academic year
- **Rong Chang Innovation Scholarship.** (CNY 30,000. Top 20 student scholars in SJTU) 2018
- **Chunshung Scholar.** (Top 50 student scholars in SJTU) 2018
- **Meritorious Winner, Mathematics Contest in Modeling (MCM).** (Top 8% globally) 2018
- **EIC Education Scholarship.** (Top 2% in CS Department) 2017
- **Samsung Scholarship.** (Top 2% in CS Department) 2017
- **Bronze Medal & First Prize, Chinese Physics Olympiad.** (CPhO, less than 0.1% nationally) 2014