

# DI (DEREK) JIN

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## EDUCATION

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- University of Michigan, Ann Arbor, MI** *2021.05*  
PhD in Computational Science & Engineering (expected)  
Advisor: Danai Koutra
- Carnegie Mellon University, Pittsburgh, PA** *2016.05*  
Master in Computational Data Science (MCDS), School of Computer Science  
Research advisor: Christos Faloutsos  
QPA: 3.67/4.00
- Duke University, Durham, NC** *2014.05*  
Master in Electrical & Computer Engineering  
GPA: 3.66/4.00
- Beijing Institute of Technology (BIT), Beijing** *2012.07*  
Bachelor of Engineering in Automation  
Overall GPA: 88.5/100

## RESEARCH INTERESTS

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Large scale graph mining and summarization, graph representation learning, social network analysis and applied machine learning

## PUBLICATIONS

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(Under submission) Ryan Rossi, **Di Jin**, Sungchul Kim, Nerseen Ahmed, John Boaz Lee and Danai Koutra, From Community to Role-based Graph Embeddings.

**Di Jin**, Mark Heimann, Ryan Rossi and Danai Koutra. node2bits: Compact Time- and Attribute-aware Node Representations for User Stitching. The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (**ECML-PKDD**), Würzburg, Germany, Sep. 2019.

**Di Jin**, Ryan Rossi, Eunye Koh, Sungchul Kim, Anup Rao and Danai Koutra. Latent Network Summarization: Bridging Network Embedding and Summarization. ACM SIGKDD Conference of Knowledge Discovery and Data Mining (**KDD**), Anchorage, Aug. 2019.

**Di Jin**, Mark Heimann, Tara Safavi, Mengdi Wang, Lee Wei, Lindsay Snider and Danai Koutra. Smart Roles: Inferring Professional Roles in Email Networks. ACM SIGKDD Conference of Knowledge Discovery and Data Mining (**KDD**), Anchorage, Aug. 2019.

Yujun Yan, Mark Heimann, **Di Jin** and Danai Koutra. Fast Flow-based Random Walk with Restart in a Multi-query Setting. SIAM International Conference on Data Mining (**SDM**), San Diego, May 2018.

**Di Jin** and Danai Koutra. Exploratory Analysis of Graph Data by Leveraging Domain Knowledge. IEEE International conference of data mining. (**ICDM**), New Orleans, November 2017.

**Di Jin**, Aristotelis Leventidis, Haoming Shen, Ruowang Zhang, Junyue Wu and Danai Koutra. PERSEUS-HUB: Interactive and Collective Exploration of Large-Scale Graphs. **Informatics** 2017, 4, 22.  
(deployed system on Amazon AWS and Azure)

**Di Jin**, Mengdi Wang, Yu-Ru Lin. TELELINK: Link Prediction in Social Network Based on Multiplex Cohesive Structures. 2016 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (**SBP-BRiMS**), June 2016.

## WORKSHOPS AND DEMOS

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**Di Jin** and Danai Koutra. Exploratory Analysis of Networks by Leveraging Domain Knowledge. International School and Conference on Network Science (**NetSci'17**), June 2017.

**Di Jin**, Christos Faloutsos, Danai Koutra, Ticha Sethapakdi. PERSEUS3: Visualizing and Interactively Mining Large-Scale Graphs. **KDD** Workshop on Mining and Learning with Graphs (**MLG**), August 2016.

Danai Koutra, **Di Jin**, Yuanchi Ning, and Christos Faloutsos. PERSEUS: An Interactive Large-Scale Graph Mining and Visualization Tool. **VLDB**, Hawaii, September 2015.

## PATENTS

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Latent Graph Summarization for User Stitching and Online Anomaly Detection Pending Examination

## AWARDS & HONORS

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KDD Travel Grant	2019
ICDM Travel Grant	2017
Excellent Graduate Thesis at BIT	2012
Top 3% Level Scholarship (three-time recipient), BIT	2008-2011
Annual Outstanding Student at BIT	2009

## TALKS

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Exploratory Analysis of Graph Data by Leveraging Domain Knowledge. Oral talk at IEEE International conference of data mining. (**ICDM**), New Orleans, November 2017.

Exploratory Analysis of Graph Data by Leveraging Domain Knowledge. Lightning talk at the International School and Conference on Network Science (**NetSci'17**), June 2017.

PERSEUS: An Interactive Large-Scale Graph Mining and Visualization Tool. Demo at the workshop of “Explore Graduate Studies in Computer Science & Engineering”, University of Michigan, September 2016.

PERSEUS3: Visualizing and Interactively Mining Large-Scale Graphs. Presentation at **KDD** Workshop on Mining and Learning with Graphs (**MLG**), August 2016.

PERSEUS: An Interactive Large-Scale Graph Mining and Visualization Tool. Invited group presentation at the Intelligent Systems Program (ISP), University of Pittsburgh, July 2015.

## WORK EXPERIENCE

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Research intern at Adobe Research, San Jose. Mentors: Sungchul Kim and Ryan Rossi. May-Aug., 2019

Research intern at Adobe Research, San Jose. Mentor: Ryan Rossi. May-Aug., 2018

Graduate Student Research Assistant, University of Michigan, Ann Arbor, 2016.

## SKILLS

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Skilled in Hadoop, Spark, Java, Python, Matlab, R.

Familiar with C/C++, Javascript, Assembly, Bash Script,  $\text{\LaTeX}$

## TEACHING EXPERIENCE

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EECS 498: Data Mining, Graduate student instructor (GSI) at UM	<i>2017</i>
MHCI Intro Programming with Media, Intro to Machine Learning (10-601), TA at CMU	<i>2015</i>
ECE-555: Probability in ECE, TA at Duke	<i>2013</i>

## SERVICE

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PC member for GEM at **PKDD 19'**

PC member for IDEA at **KDD 18'**

Subreviewer for **AAAI' 18, KDD' 18, SDM' 18, AAAI' 18, SDM' 17, WWW' 17**

Reviewer for **Demo session**, CIKM, November 2019

Reviewer for **Applied Network Science Journal**, open access journal, July 2018

Reviewer for **PLOS ONE Journal**, open access journal, July 2017

## OUTREACH

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Student volunteer (demo presentation) at the workshop of “Explore Graduate Studies in Computer Science & Engineering” at Computer Science and Engineering, University of Michigan, Ann Arbor. September, 2016 and 2017. The goal of this one-day workshop is to help undergraduate and MS students better prepare for the graduate school application process and broaden participation in computing research.

Presenter for the workshop of “Graduate professional experience in MCDS”, CMU. Topic: highlights on career experience in both industry and academia. September, 2015

## STUDENTS MENTORED

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Managed a team of 5 students to build and deploy PERSEUS\_HUB, an interactive summarization and anomaly detection system.

### **M.S. students**

Haoming Shen, University of Michigan (Mar' - Aug' 17)

### **Undergraduate students**

Aristotelis Leventidis, University of Michigan (Mar' 17 - )

Junyue Wu, University of Michigan (Mar' 17 - )

Ruowang Zhang, University of Michigan (Nov' 16 - )

Charles Wang, University of Michigan (Sep' 16 - Feb' 17)