Meng Jiang

CONTACT
INFORMATION

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Google Scholar: #citation = 504 (310 as the first author), h-index = 9

RESEARCH
INTERESTS

Data-driven Behavioral Analytics with Networks
- *Methodology:* from observation, representation to models and algorithms;
- *Applications:* behavior prediction, recommender systems, anti-fraud systems, etc.

Given massive behavior data (user-item interaction), I study
- Mining user-item behavior network with social, spatiotemporal contexts;
- Structuring rich information network from unstructured items' content;
- Integrating behavior-info networks for intelligent and trustworthy systems.

JOB EXPERIENCE

University of Illinois at Urbana-Champaign, IL, US   August 2015 – Present
- Postdoctoral Research Associate in Data Mining Group, Computer Science
- Advisor: Professor Jiawei Han

University of Maryland, College Park, MD, US   June 2016 – July 2016
- Visiting Researcher in Institute for Advanced Computer Studies (UMIACS)
- Advisor: Professor V.S. Subrahmanian

EDUCATION

Tsinghua University, Beijing, China   August 2010 – July 2015
- PhD of Engineering with *Dissertation Award* in Computer Science
- Advisor: Professor Shiqiang Yang

Carnegie Mellon University, Pittsburgh, PA, US   August 2012 – May 2013
- Visiting PhD Student in Database Group, Computer Science
- Advisor: Professor Christos Faloutsos

Tsinghua University, Beijing, China   August 2006 – July 2010
- Bachelor of Engineering with *Excellent Thesis Award* in Computer Science

MAJOR PROJECT
EXPERIENCE

NSF IIS 16-18481: Multi-Dimensional Structuring,   August 2016 – Present
Summarizing and Mining of Social Media Data
- Major supported member: wrote 8/15 pages of the NSF III Small proposal.

NS CTA I4: Distributed, User-Oriented Multi-Scale   June 2016 – July 2016
Network Summarization and Online Analytical Processing
- Visited U.S. Army Research Lab at *Aberdeen Proving Ground*. Collaborated with
Dr. Timothy P. Hanratty, Dr. John Richardson and Heather Roy.

NS CTA I1: Constructing Unified, Structured   June 2016 – July 2016
Knowledge Networks by Integrating Text, Social Media and Multi-Genre Networks
- Visited U.S. Army Research Lab at *Adelphi Laboratory Center*. Collaborated with
Dr. Lance M. Kaplan and Dr. Taylor Cassidy.

MSRA Intern: Cross-Platform Behavior Modeling   June 2014 – August 2014
- Developed a cross-platform transfer learning model. Published in AAAI 2016.
- Mentor: Dr. Xing Xie. Won *Award of Excellence* in MSRA Internship Program.

Tsinghua-Tencent Lab: Mining Rich Social Media Data   July 2011 – July 2015
• Deployed social recommender systems in Weibo News Feed. Improved conversion rate from 5.78% to 8.27% (relatively 43%).
• Developed a scalable algorithm to detect fake/zombie followers. Won ACM SIGKDD 2014 *Best Paper Finalist.*

JOURNAL
PAPERS

[J1] Lu Liu, Feida Zhu, **Meng Jiang**, Jiawei Han, Lifeng Sun and Shiqiang Yang. "Mining Diversity on Social Media Networks", in Multimedia Tools and Applications (MTA), 2012. (IF = *1.331*)

[J2] **Meng Jiang**, Peng Cui, Fei Wang, Wenwu Zhu and Shiqiang Yang. "Scalable Recommendation with Social Contextual Information", in IEEE Transactions on Knowledge and Data Engineering (TKDE), 2014. (IF = *2.476*, #citation = *33*)

[J3] **Meng Jiang**, Peng Cui, Xumin Chen, Fei Wang, Wenwu Zhu and Shiqiang Yang. "Social Recommendation with Cross-Domain Transferable Knowledge", in IEEE Transactions on Knowledge and Data Engineering (TKDE), 2015. (IF = *2.476*)

[J4] **Meng Jiang**, Peng Cui, Alex Beutel, Christos Faloutsos and Shiqiang Yang. "Inferring Lockstep Behavior from Connectivity Pattern in Large Graphs", in Knowledge and Information Systems (KAIS), 2015. (IF = *1.702*)

[J5] **Meng Jiang**, Peng Cui, Alex Beutel, Christos Faloutsos and Shiqiang Yang. "Catching Synchronized Behaviors in Large Networks: A Graph Mining Approach", Special Issue on the Best of SIGKDD 2014, in ACM Transactions on Knowledge Discovery from Data (TKDD), 2016. (IF = *1.000*)

[J6] **Meng Jiang**, Peng Cui and Christos Faloutsos. "Suspicious Behavior Detection: Current Trends and Future Directions", Special Issue on Online Behavioral Analysis and Modeling, in IEEE Intelligent Systems, 2016. (IF = *3.532*)

[J7] **Meng Jiang**, Alex Beutel, Peng Cui, Bryan Hooi, Shiqiang Yang and Christos Faloutsos. "Spotting Suspicious Behaviors in Multimodal Data: A General Metric and Algorithms", in IEEE Transactions on Knowledge and Data Engineering (TKDE), 2016. (IF = *2.476*)

CONFERENCE
PAPERS

[C1] Lu Liu, Jie Tang, Jiawei Han, **Meng Jiang** and Shiqiang Yang. "Mining Topic-Level Influence in Heterogeneous Networks", in ACM International Conference on Information and Knowledge Management (CIKM), 2010. (#citation = *188*)

[C2] **Meng Jiang**, Peng Cui, Rui Liu, Qiang Yang, Fei Wang, Wenwu Zhu and Shiqiang Yang. "Social Contextual Recommendation", in ACM International Conference on Information and Knowledge Management (CIKM), 2012. (#citation = *116*)

[C3] **Meng Jiang**, Peng Cui, Fei Wang, Qiang Yang, Wenwu Zhu and Shiqiang Yang. "Social Recommendation across Multiple Relational Domains", in ACM International Conference on Information and Knowledge Management (CIKM), 2012. (#citation = *44*)

[C4] **Meng Jiang**, Peng Cui, Alex Beutel, Christos Faloutsos and Shiqiang Yang. "Detecting Suspicious Following Behavior in Multimillion-Node Social Networks", in

International Conference on World Wide Web Companion (WWW), 2014. (Poster, #citation = *16*)

[C5] **Meng Jiang**, Peng Cui, Alex Beutel, Christos Faloutsos and Shiqiang Yang. "Inferring Strange Behavior from Connectivity Pattern in Social Networks", in Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2014. (#citation = *26*)

[C6] **Meng Jiang**, Peng Cui, Fei Wang, Xinran Xu, Wenwu Zhu and Shiqiang Yang. "FEMA: Flexible Evolutionary Multi-faceted Analysis for Dynamic Behavioral Pattern Discovery", in ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2014. (#citation = *12*)

[C7] **Meng Jiang**, Peng Cui, Alex Beutel, Christos Faloutsos and Shiqiang Yang. "CatchSync: Catching Synchronized Behavior in Large Directed Graphs", in ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2014. (#citation = *36*, **Best Paper Finalist**: *9/151*)

[C8] **Meng Jiang**, Alex Beutel, Peng Cui, Bryan Hooi, Shiqiang Yang and Christos Faloutsos. "A General Suspiciousness Metric for Dense Blocks in Multimodal Data", in IEEE International Conference on Data Mining (ICDM), 2015. (#citation = *13*)

[C9] **Meng Jiang**, Peng Cui, Nicholas Jing Yuan, Xing Xie and Shiqiang Yang. "Little is Much: Bridging Cross-Platform Behaviors through Overlapped Crowds", in AAAI Conference on Artificial Intelligence (AAAI), 2016.

[C10] **Meng Jiang**, Christos Faloutsos and Jiawei Han. "CatchTartan: Representing and Summarizing Dynamic Multicontextual Behaviors", in ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2016.

[C11] Huan Gui, Jialu Liu, Fangbo Tao, **Meng Jiang**, Brandon Norick, Jiawei Han. "Large-Scale Embedding Learning in Heterogeneous Event Data", in IEEE International Conference on Data Mining (ICDM), 2016.

[C12] Kun Kuang, **Meng Jiang**, Peng Cui, Shiqiang Yang. "Steering Social Media Promotions with Effective Strategies", in IEEE International Conference on Data Mining (ICDM), 2016.

BOOK CHAPTERS [B1] **Meng Jiang** and Peng Cui. "Mining User Behaviors in Large Social Networks", in "Big Data in Complex and Social Networks", Chapman and Hall/CRC Big Data Series, 2016.

[B2] **Meng Jiang**. "Behavior Modeling in Social Networks", in "Encyclopedia of Social Network Analysis and Mining", 2nd edition, Springer, 2016.

TUTORIALS [T1] **Meng Jiang** and Peng Cui. "Behavior Modeling in Social Networks: From Micro to Macro", in IEEE International Conference on Data Mining (ICDM), 2015. (3 hours, 50+ audience and $700 honorium)

[T2] **Meng Jiang**, Peng Cui and Jiawei Han. "Data-Driven Behavioral Analytics: Observations, Representations and Models", in ACM International Conference on Information and Knowledge Management (CIKM), 2016.

WORKSHOP PAPER	[W1] **Meng Jiang**. "Catching Social Media Advertisers with Strategy Analysis", in the 1st International Workshop on Computational Methods for *CyberSafety*, ACM International Conference on Information and Knowledge Management (CIKM), 2016.
GRANT	[G1] "NSF III: Small: Multi-Dimensional Structuring, Summarizing and Mining of Social Media Data", National Science Foundation Award Number: NSF IIS 16-18481 (08-01-2016 – 07-31-2019, $500,000). Jiawei Han, PI. **Meng Jiang** wrote 8/15 pages of the proposal and he is the major supported member.

TEACHING EXPERIENCE

UIUC CS412: An Introduction to Data Warehousing and Data Mining   Fall 2016
• Taught for *undergraduates* occasionally (*e.g.*, Data Warehousing and OLAP chapter, Data Cube chapter) when the Instructor Prof. Jiawei Han was out of campus.
• Led three teams (24 students) for Project of "Triple Scoring" in WSDM Cup 2017. Provided three promising solutions and a complementary dataset.

UIUC CS512: Data Mining: Principles and Algorithms   Spring 2016
• Led three teams (9 graduates) for Projects of "Relationship Prediction".

THU CS-G: Streaming Media Technology: Algorithms and Applications Fall 2013
• Teaching assistant for over 50 *graduate* students.

THU CS-UG: An Introduction to Multimedia Technologies   Spring 2013
• Teaching assistant for over 160 *undergraduate* students. Introduced and graded homework and projects.

MENTORED STUDENTS

Jingbo Shang: Using discriminative patterns for prediction   Spring 2016
• Ph.D. student at University of Illinois at Urbana-Champaign.
• *Submitted a manuscript to TKDE.* Jingbo Shang, **Meng Jiang**, Wenzhu Tong, Jinfeng Xiao, Jian Peng, and Jiawei Han. "DPPred: An Effective Prediction Framework with Concise Discriminative Patterns".

Kun Kuang: Understanding promotional strategies in social media   2014 – 2016
• Ph.D. student at Tsinghua University.
• *Paper accepted by ICDM 2016.* Kun Kuang, **Meng Jiang**, Peng Cui, Shiqiang Yang. "Steering Social Media Promotions with Effective Strategies".

Suhansanu Kumar: Generating heterogeneous graphs with distributions   2016
• Master student at University of Illinois at Urbana-Champaign.

Vipul Venkataraman: Improve meta-path prediction   2015 – 2016
Pramod Srinivasan   with network embedding
• Master students at University of Illinois at Urbana-Champaign.

Xumin Chen: Social recommendation across multiple domains   2015
• Undergraduate at Tsinghua University, (now Ph.D. student at Tsinghua).
• *Collaborated in TKDE 2015 paper.*

Xinran Xu: Behavior modeling with spatiotemporal data   2013 – 2014
• Undergraduate at Tsinghua University, (now Master student at Tsinghua).
• *Collaborated in KDD 2014 paper.*

Rui Liu: Social recommendation with contextual information   2011 – 2012
• Undergraduate in Tsinghua University, (now Master student at University of Wash-

ington, Ph.D. student at Dartmouth College).
- *Collaborated in CIKM 2012 and TKDE 2014 papers.*

Tsinghua-Samsung User Intention Inference Project   2010 – 2011
- Led a team of 5 undergraduate students to develop an Android app that recommends activities in campus. Wrote project proposal, mid-term and final reports.
- **Chao Zhang**, **Daixin Wang**, **Tianyang Zhang** (Ph.D. at Tsinghua University)
- **Yingjie Zhang**, **Yihan Sun** (now Ph.D. students at Carnegie Mellon University)

HONORS AND AWARDS	KDD 2016 Rising Stars, Microsoft Academic Search, 2016
	Dissertation Award, Tsinghua University, 2015
	Excellent PhD Graduate, Beijing City, 2015
	KDD Best Paper Finalist, 2014
	National Scholarship, China, 2014
	Award of Excellence in MSRA Internship Program, 2014
	KDD Student Travel Award, 2014
	PAKDD Student Travel Grant Award, 2014
	Sohu Research Fellowship, 2013

SERVICES

PC Member: AAAI 2017, PAKDD 2017, DSC 2016, IEEE DSAA 2015
Session Chair: Special Session BBDA in IEEE DSAA 2016
Reviewer: Frontiers of Computer Science (FCS), IEEE Intelligent Systems (IS), INFORMS Journal on Computing (JOC), Information Sciences (INS), Journal of Computers (JCP), Knowledge and Information Systems (KAIS), Neurocomputing (NEWCOM), Trans. on Information Forensics and Security (TIFS), Trans. on Intelligent Systems and Technology (TIST), Trans. on Internet and Information Systems (TIIS), Trans. on Knowledge Discovery from Data (TKDD), Trans. on Knowledge and Data Engineering (TKDE), Trans. on Multimedia Computing Communications and Applications (TOMCCAP), World Wide Web Journal (WWWJ), NIPS 2016
External reviewer: PKDD 2016, EDBT 2016, AAAI 2016, KDD 2015, IJCAI 2015, AAAI 2015, WSDM 2015, ICDM 2014, CIKM 2014, KDD 2014, Globecom 2014
Volunteer: KDD 2014