

# XIAO QIN

Homepage: <http://web.cs.wpi.edu/~xqin>

Office: Fuller Laboratories 319, 100 Institute Road, Worcester, MA 01609

Email: [xqin@cs.wpi.edu](mailto:xqin@cs.wpi.edu)

---

## RESEARCH INTEREST

My broad research interests include data mining, big data analytics and information management.

---

## EDUCATION

- Ph.D. Candidate**, Computer Science 2013 – Present  
*Worcester Polytechnic Institute*, Worcester, MA, USA.  
Advisor: Dr. Elke A. Rundensteiner
- Master of Science**, Information Sciences 2011  
*University of Pittsburgh*, Pittsburgh, PA, USA.  
Concentration: Information Retrieval/Online Question & Answering Systems.
- Bachelor of Engineer**, Computer Science & Technology 2009  
*Harbin Institute of Technology*, Harbin, Heilongjiang, China.  
Thesis: "A Rule-based, Statistical Model for Chinese Archeology Term Extraction."

---

## PUBLICATION

1. Tabassum Kakar, **Xiao Qin**, Susmitha Wunnavu, Brian McCarthy, Andrew Schade, Huy Quoc Tran, Brian Zylich, Elke A. Rundensteiner, Lane Harrison, Sanjay K. Sahoo and Suranjan De. *DEVES: A Visual Analytics System for Drug Safety Evaluation*. (In submission to **SIGMOD** '18.)
2. Tabassum Kakar, **Xiao Qin**, Elke Rundensteiner, Lane Harrison, Sanjay Sahoo and Suranjan De. *DIVA: Towards Validation of Hypothesized Drug-Drug Interactions via Visual Analysis*. (In submission to **VAST** '18.)
3. **Xiao Qin**, Lei Cao, Elke Rundensteiner and Samuel Madden. *Scalable Kernel Density Estimation-based Local Outlier Detection over Large Data Streams*. (In submission to **KDD** '18.)
4. **Xiao Qin**, Tabassum Kakar, Susmitha Wunnavu, Brian McCarthy, Andrew Schade, Huy Quoc Tran, Brian Zylich, Elke A. Rundensteiner, Lane Harrison, Sanjay K. Sahoo and Suranjan De. *Multi-Drug Adverse Reactions Analytics*. (To appear in **ICDE** '18.)
5. Susmitha Wunnavu, **Xiao Qin**, Tabassum Kakar, Xiangnan Kong, Elke Rundensteiner, Sanjay Sahoo and Suranjan De. *One Size Does Not Fit All: An Ensemble Approach Towards Information Extraction from Adverse Drug Event Narratives*. **HEALTHINF** '18, 176-188.
6. **Xiao Qin**, Tabassum Kakar, Susmitha Wunnavu, Elke Rundensteiner and Lei Cao. *MARAS: Signaling Multi-Drug Adverse Reactions*. **KDD** '17, 1615-1623.
7. Susmitha Wunnavu, **Xiao Qin**, Tabassum Kakar, Vimig Socrates, Amber Wallace and Elke Rundensteiner. *Towards Transforming FDA Adverse Event Narratives into Actionable Structured Data for Improved Pharmacovigilance*. **SAC** '17, 777-782.
8. **Xiao Qin**, Ramoza Ahsan, Xika Lin, Elke Rundensteiner, and Matthew Ward. *Interactive Temporal Association Analytics*. **EDBT** '16, 197-208.
9. **Xiao Qin**, Zhongqiang Chen, Yuan Zhang and Shenhong Zhu. *Death Hoax Detection in Query Suggestions*. **Yahoo! Tech Pulse** '15.
10. **Xiao Qin**, Ramoza Ahsan, Xika Lin, Elke Rundensteiner, and Matthew Ward. *iPARAS: Incremental Construction of Parameter Space for Online Association Mining*. **BigMine** '14, JMLR 36 :149-165.
11. Amin Teymorian, **Xiao Qin**, and Ophir Frieder. *RESQ: Rank-Energy Selective Query Forwarding for Distributed Search Systems*. **CIKM** '12, 2579-2582.
12. Dongping Gao, Zhendong Niu, Lening Lv, Peng Jiang, **Xiao Qin**, and Jiahong Guo. *Chinese Unknown Word Recognition Based on Functional Applications of Type Theory*. **IITA** '08, 3 :498-502.

## TALK/POSTER

---

- *Kernel Density Estimation-based Local Outlier Detection over High Volume Data Streams*. New England Database Day (NEDBD). MIT, Cambridge, MA. Jan 19, 2018.
- *Density-based Outlier Detection over Data Stream*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Apr 11, 2017.
- *Text Mining From Drug Surveillance Report Narratives*. The 5th Annual Community Engagement and Research Symposium. Umass Medical School, Worcester, MA. Mar 25, 2016.
- *Towards Pharmacovigilance Using Machine Learning To Identify Unknown Adverse Reactions Triggered By Drug-Drug Interaction*. The 5th Annual Community Engagement and Research Symposium. Umass Medical School, Worcester, MA. March 25, 2016.
- *Interactive Temporal Association Analytics*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Apr 11, 2016.
- *EPSTAR: An Evolving Parameter Space Framework for Interactive Temporal Association Rule Mining*. New England Database Summit (NEDB). MIT, Cambridge, MA. Jan 30, 2015.
- *Evolving Parameter Space Framework for Interactive Temporal Association Mining*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Dec 10, 2014.
- *IncPARAS: An Incremental Parameter Space Load Pipeline for Interactive Association Mining*. Graduate Research Innovation Exchange (GRIE). WPI, Worcester, MA. Mar 19, 2014.
- *IncPARAS: An Incremental Parameter Space Load Pipeline for Interactive Association Mining*. New England Database Summit (NEDB). MIT, Cambridge, MA. Jan 31, 2014.

## EMPLOYMENT

---

- |  |   |
|--|---|
| <b>Worcester Polytechnic Institute</b>   | 8/2015 – 5/2016   |
| <i>Teaching Assistant</i>  | Worcester, MA   |
| - CS 2223: Algorithms  |   |
| - CS 4432: Database Systems II   |   |
| - CS 542: Database Management Systems  |   |
| <b>Yahoo! Search</b>   | 5/2015 – 8/2015   |
| <i>Technical Intern III</i>  | Sunnyvale, CA   |
| · <i>Search Assist Team</i> , Manager : Shenhong Zhu, Mentor: Dr. Zhongqiang Chen                          |   |
| - Developed data mining algorithms and pipelines for filtering query suggestions with controlled contents. |   |
| <b>Worcester Polytechnic Institute</b>   | 8/2013 – 5/2015   |
| <i>Research Assistant</i>  | Worcester, MA   |
| · <i>Database System Research Group (DSRG)</i>   | <a href="http://davis.wpi.edu:8180/DSRG/">http://davis.wpi.edu:8180/DSRG/</a> |
| Supervisor: Dr. Elke A. Rundensteiner  |   |
| · <i>Data Visualization Lab (Xmdv)</i>   | <a href="http://davis.wpi.edu/xmdv/">http://davis.wpi.edu/xmdv/</a>           |
| Supervisor: Dr. Matthew O. Ward  |   |
| <b>Georgetown University</b>   | 8/2011 – 5/2012   |
| <i>Research Assistant</i>  | Washington, DC  |
| · <i>Information Retrieval Lab</i>   | <a href="http://ir.cs.georgetown.edu/">http://ir.cs.georgetown.edu/</a>       |
| Supervisor: Dr. Nazli Goharian   |   |
| <b>University of Pittsburgh</b>  | 1/2011 – 4/2011   |
| <i>Research Assistant</i>  | Pittsburgh, PA  |
| · <i>Personalized Adaptive Web Systems Lab</i>   |   |
| Supervisor: Dr. Peter Brusilovsky & Dr. Jung Sun Oh  |   |

## SERVICE & OTHER ACTIVITY

---

### External Reviewer

- ICDE 16' International Conference on Data Engineering.
- VLDB 15',18' International Conference on Very Large Data Bases.
- SIGMOD 15',17',18' International Conference on Management of Data.
- EDBT 14',17' International Conference on Extending Database Technology.

### Conference Volunteer

- 28th IEEE International Conference on Data Engineering (ICDE 2012).

## AWARD

---

- HEALTHINF 18' Best Student Paper Award Runner-up.
- Oak Ridge Institute for Science and Education (**ORISE**) Fellowship. 16' – 17', 17' – 18'.
- WPI Travel Award 14', 16', 17'.
- ACM SIGKDD Travel Award 17'.
- 3rd place in 2016 WPI Graduate Research and Innovation Exchange (GRIE) Poster Competition.
- Honorable mention in 2017 WPI GRIE Poster Competition.

## TECHNICAL STRENGTH

---

### Computer Languages Databases Tools

Java, Python, C++, Ruby, Perl, C and SQL.  
MySQL, Microsoft Access and SQL Server.  
Hadoop, Pig, Oozie, Mahout, MatLab, Weka, Lingpipe,  
OpenNLP, Mallet, Lucene, Lemur , GNUPlot and  $\LaTeX$ .