

# Panpan (盼盼) Xu (徐)

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## Summary

I am a PhD candidate in Hong Kong University of Science and Technology. My research focus is in information visualization, esp. heterogeneous graph data visualization and visual analysis of social media data. I am interested in combining analysis and interactive visualization techniques to gain insight into large and complex data.

## Education

2010–Now **Ph.D Candidate, Computer Science**, Hong Kong University of Science and Technology.

2005–2009 **B.S., Computer Science**, Zhejiang University (Chu Kochen Honors College).

### Ph.D Qualification Exam

Title A Survey on Visual Analysis of Graphs

Supervisor Prof. Huamin Qu

### Bachelor's Thesis

Title Physically Realistic Flow Simulation in Computer Animation

Supervisor Prof. Xiaogang Jin

*Developed a prototype system for simulating and rendering visual effects of flows like smoke and fire, speeded by utilizing graphics hardwares.*

## Internship and Visiting Experiences

Now **Visiting Student**, Information Interface Lab (IILab) at Georgia Institute of Technology, Mentor: Prof. John Stasko.

2012–2013 **Research Intern**, Microsoft Research Asia, Mentor: Dr. Yingcai Wu.

## Publications

J-2013 Visual Analysis of Topic Competition on Social Media. *in IEEE Transactions on Visualization and Computer Graphics (accepted by IEEE Visual Analytics Science and Technology)*

**Panpan Xu**, Yingcai Wu, Enxun Wei, Tai-Quan Peng, Shixia Liu, Jonathan J.H. Zhu, Huamin Qu.

Developed a framework combining *text and time series analysis* techniques with *interactive visualization* to gain insight into the dynamics of the users' influence and the competition among the topics for users' attention on *social media*.

J-2013 Visual Analysis of Set Relations in a Graph. *in Computer Graphics Forum (Proceedings of EuroVis)*

**Panpan Xu**, Fan Du, Conglei Shi, Nan Cao, Hong Zhou, Huamin Qu.

Developed visualization techniques to analyze the homophily effect in a *social network*, and proposed a *set visualization* method employing the metaphor of railway maps.

J-2013 Edge Bundling in Information Visualization. *in Tsinghua Science and Technology*

Hong Zhou, **Panpan Xu**, Xiaoru Yuan, Huamin Qu

Surveyed edge bundling techniques used to reduce edge cluttering and to facilitate connection pattern detection in *graph drawing*.

J-2012 RankExplorer: Visualization of Ranking Changes in Large Time Series Data. *in IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis)*

Conglei Shi, Weiwei Cui, Shixia Liu, **Panpan Xu**, Wei Chen, Huamin Qu.

Visualize the ranking change among a large number of items such as search phrases, which are ranked by their popularity and constantly changes overtime.

C-2012 Visualization of Taxi Drivers' Income and Mobility Intelligence. in *International Symposium on Visual Computing*

Yuan Gao, **Panpan Xu**, Lu Lu, He Liu, Siyuan Liu, Huamin Qu

C-2011 Visual analysis of people's mobility pattern from mobile phone data. in *International Symposium on Visual Information Communication and Interaction*

Jiansu Pu, **Panpan Xu**, Huamin Qu, Weiwei Cui, Siyuan Liu, Lionel M. Ni

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## Miscellaneous Projects

2014 Citation Visualization for VIS 25 Anniversary. Collaborated with IILab in Georgia Tech and developed visualizations for exploring and analyzing the publications in VIS conferences **Demo**

2013 Visual Analysis of Mobile Checkin Data. Collaborated with Huawei Noah's Ark Lab and developed an interactive visualization system for visualizing large scale **spatial-temporal data**

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## Technical Skills

Languages Java, JavaScript, Python, C/C++, R

Visualization D3.js, Prefuse

Libs

Graphics WebGL, OpenGL, Shader Language (GLSL)

Others Version Control Systems (Git), Web Development (html, css, javascript), Databases (MySQL, SQLite), Graphic Design Softwares (Adobe Illustrator), etc.

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## Teaching Assistant Experience

2010-2013 Design and Analysis of Algorithms

2011, 2013 Computer Graphics

2010 Object-Oriented Programming and Data Structures

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## Awards and Scholarships

2014 HKUST Overseas Research Award

2013 VIS Doctoral Colloquium Student Travel Grant

2010-2013 HKUST Research/Teaching Assistant Studentship

2006-2008 Zhejiang University Academic Scholarships

2007 Mathematical Modeling Contest 1st Prize in Zhejiang Province

2007 The 5th Mathematical Modeling Contest of Zhejiang University, 2nd Prize

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## Professional Activities

2013 Doctoral Colloquium at VIS'13

2013 Student Volunteer at VIS'13

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## Languages

Chinese Mother tongue

English Fluent (Toefl 104/120, taken in 2008)