

Conglei Shi

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Research on Visual Analytics, combining the power of machine learning and information visualization to better understand data

Education

2010.9
2014.8

Ph.D Degree of Computer Science, *The Hong Kong University of Science and Technology (HKUST)*, Hong Kong.

- Supervisor: Prof. Huamin Qu.
- Research Interest: Human Computer Interaction
- Thesis Topic: Visual Analysis of User Behavior from Web Log Data

2006.9
2010.7

Bachelor of Computer Science, *Shanghai Jiao Tong University(SJTU)*, Shanghai, China.

- Enrolled in Honored Class without College Entrance Exam

Working/Research Experience

2016.6

Research Staff Member, *IBM T. J. Watson Research Center*, Yorktown Height, NY, USA.

- Working on Visual Analytic of anomaly detection on online social media and financial services

2015.1
2016.3

Post-doctoral Research Fellow, *IBM T. J. Watson Research Center*, Yorktown Height, NY, USA.

- Worked on System G project, a comprehensive set of Graph Computing Tools, Cloud, and Visualizations for Big Data (<http://systemg.research.ibm.com/>)

2014.11
2014.9

Post-doctoral Research Fellow, *The Hong Kong University of Science and Technology (HKUST)*, Hong Kong.

- Supervisor: Prof. Huamin Qu
- Led a research team on studying online learning behavior from MOOCs and released a web app VisMOOC (<http://vis.cse.ust.hk/vismoooc>)

2013.7
2013.12

Visiting Ph.D Student, *Aviz Team, French Institute for Research in Computer Science and Control (INRIA)*, France.

- Supervisor: Dr. Pierre Dragicevic and Prof. Jean-Daniel Fekete
- Created a web based toolkit for users generating physical visualization
- Studied on time oriented data and proposed a new design for visually presenting the semantic meaning as well as preserving the temporal information

2013.1
2013.4

Research Intern, *Internet Graphics(IG) Group in Microsoft Research Asia (MSRA)*, Beijing.

- Mentor: Dr. Yingcai Wu
- Researched on the dynamics of user loyalty behavior and proposed a new visual design and developed a visual analytics system to help analysts to analyze the user loyalty and other factors on search engines.



Research Intern, *Internet Graphics(IG) Group in Microsoft Research Asia (MSRA)*, Beijing.

- o Mentor: Dr. Weiwei Cui
- o Researched on visualizing the both the ranking and value for large time series data and proposed RankExplorer together with a visual analytics system. The result has been published on *Transaction of Visualization and Computer Graphics*



Research Assistant, *Center of Brain-like Computing and Machine Intelligence*, SJTU.

- o Supervisor: Prof. Baoliang Lu
- o Led a team to design a 3D virtual platform to simulate driving system for the experiment of alertness.



Developing Intern, *Cisco Research & Develop Center (CRDC)*, Shanghai.

- o Worked on embedded programing, focusing on the VoIP part on Embedded Linux.
- o Collaborated with the test group to fix the system bugs.



Awards



ACM IUI 2017 Best Paper Award.



IEEE PacificVis Honorable Mention Award of Best Paper.



The APICTA Awards: Merit Award in E-learning Category.



The HKICT Awards: Best Innovation (Innovative Technology) Silver Award.



IEEE VIS Honorable Mention Award of Best Paper.



HKUST Overseas Research Award.



HKUST SENG PhD Fellowship Award.



National Scholarship.



1st class in China Undergraduate Mathematical Contest In Modeling.



People's Scholarship for three times.



Silver Medal in China Chemistry Olympiad Winter.



1st class in China Information Olympiad.



Journal Publications



Benjamin Bach, Conglei Shi, Nicolas Heulot, Tara Madhyastha, Tom Grabowski, and Pierre Dragicevic. "Time curves: Folding time to visualize patterns of temporal evolution in data". In: *IEEE transactions on visualization and computer graphics* 22.1 (2016), pp. 559–568.



Nan Cao, Conglei Shi, Sabrina Lin, Jie Lu, Yu-Ru Lin, and Ching-Yung Lin. "TargetVue: Visual analysis of anomalous user behaviors in online communication systems". In: *IEEE transactions on visualization and computer graphics* 22.1 (2016), pp. 280–289.

2016

Qing Chen, Yuanzhe Chen, Dongyu Liu, Conglei Shi, Yingcai Wu, and Huamin Qu. “Peakvizor: Visual analytics of peaks in video clickstreams from massive open online courses”. In: *IEEE transactions on visualization and computer graphics* 22.10 (2016), pp. 2315–2330.

2016

Tongshuang Wu, Yingcai Wu, Conglei Shi, Huamin Qu, and Weiwei Cui. “Piecestack: Toward better understanding of stacked graphs”. In: *IEEE transactions on visualization and computer graphics* 22.6 (2016), pp. 1640–1651.

2014

Conglei Shi, Yingcai Wu, Shixia Liu, Hong Zhou, and Huamin Qu. “LoyalTracker: Visualizing loyalty dynamics in search engines”. In: *IEEE transactions on visualization and computer graphics* 20.12 (2014), pp. 1733–1742.

2012

Conglei Shi, Weiwei Cui, Shixia Liu, Panpan Xu, Wei Chen, and Huamin Qu. “RankExplorer: Visualization of ranking changes in large time series data”. In: *IEEE Transactions on Visualization and Computer Graphics* 18.12 (2012), pp. 2669–2678.

2011

Weiwei Cui, Shixia Liu, Li Tan, Conglei Shi, Yangqiu Song, Zekai Gao, Huamin Qu, and Xin Tong. “Textflow: Towards better understanding of evolving topics in text”. In: *IEEE transactions on visualization and computer graphics* 17.12 (2011), pp. 2412–2421.

2010

Rajesh Kumar, Wenli Yu, Cuilan Jiang, Conglei Shi, and Yaping Zhao. “Improvement of the isolation and purification of lutein from marigold flower (*Tagetes erecta* L.) and its antioxidant activity”. In: *Journal of food process engineering* 33.6 (2010), pp. 1065–1078.

Conference Publications

2017

Chun-Fu (Richard) Chen, Marco Pistoia, Conglei Shi, Paolo Girolami, Joseph W. Ligman, and Yong Wang. “UI X-Ray: Interactive mobile UI testing based on computer vision”. In: *Intelligent User Interface(IUI)*. 2017, pp. 1–8.

2015

Ching-Yung Lin, Danny Yeh, Nan Cao, Jui-Hsin Lai, Chun-Fu Chen, Conglei Shi, Jie Lu, Jason Crawford, Keith Houck, Yinglong Xia, et al. “IBM system G Social Media Solution: Analyze multimedia content, people, and network dynamics in context”. In: *Multimedia & Expo Workshops (ICMEW), 2015 IEEE International Conference on*. IEEE. 2015, pp. 1–4.

2015

Conglei Shi, Siwei Fu, Qing Chen, and Huamin Qu. “VisMOOC: Visualizing video clickstream data from massive open online courses”. In: *Visualization Symposium (PacificVis), 2015 IEEE Pacific*. IEEE. 2015, pp. 159–166.

2014

Saiganesh Swaminathan, Conglei Shi, Yvonne Jansen, Pierre Dragicevic, Lora A Oehlberg, and Jean-Daniel Fekete. "Supporting the design and fabrication of physical visualizations". In: *Proceedings of the 32nd annual ACM conference on Human factors in computing systems*. ACM. 2014, pp. 3845–3854.

2014

Saiganesh Swaminathan, Conglei Shi, Yvonne Jansen, Pierre Dragicevic, Lora Oehlberg, and Jean-Daniel Fekete. "Creating physical visualizations with MakerVis". In: *CHI'14 Extended Abstracts on Human Factors in Computing Systems*. ACM. 2014, pp. 543–546.

2013

Panpan Xu, Fan Du, Nan Cao, Conglei Shi, Hong Zhou, and Huamin Qu. "Visual analysis of set relations in a graph". In: *Computer Graphics Forum*. Vol. 32. 3pt1. 2013, pp. 61–70.

Services

2017

Program Committee, *SIG KDD*.

2017

Program Committee, *AAAI Conference on Artificial Intelligence*.

2017

Program Committee, *IEEE Pacific Visualization*.

2015
2017

Program Committee, *IEEE Pacific Visualization Notes*.

2015

Reviewer, *IEEE Transaction on Computer Graphics and Visualization*.

2015

Reviewer, *IEEE Transaction on Multimedia*.

2015

Reviewer, *IEEE Information Visualization (InfoVis)*.

2015

Reviewer, *IEEE Visual Analytics Science and Technology (VAST)*.

2016

Reviewer, *EuroVis*.

2015
2016

Reviewer, *IEEE Pacific Visualization*.

2015

Reviewer, *Graph Drawing & Network Visualization Conference*.

2015

Reviewer, *ACM SIGCHI*.

2015

Reviewer, *Tsinghua Science and Technology*.

2014

Reviewer, *The Visual Computer*.

2012

Student Volunteer, *IEEE Information Visualization (InfoVis)*.

Conference Presentation

2016.7

Time curves: Folding time to visualize patterns of temporal evolution in data, *SigGraph 2016*, CA, USA.

2015.4

VisMOOC: Visualizing VideoClickstream Data from Massive Open Online Courses, *IEEE Pacific Visualization*, Hang Zhou, China.

2014.11

LoyalTracker: Visualizing Loyalty Dynamics in Search Engines, *IEEE VIS*, Paris, France.

2012.10

RankExplorer: Visualization of Ranking Changes in Large Time Series Data, *IEEE VisWeek*, Seattle, WA.
USA

Invited Talks

2015.12

Visualization of temporal data from a general approach to a specific application, *Columbia University*, New York, United States.

2014.8

Visual Analysis of User Behavior from Web Log Data, *IBM T.J. Watson Research Center*, Yorktown Height, NY.

Teaching Experience

2013

TA, *IELM4320: Design Thinking*, HKUST & China Academy of Art .

2011

TA, *Comp3711: Design and Analysis of Algorithms*, HKUST.

2011

TA, *Comp341: Computer Graphics*, HKUST.

2010

TA, *Comp152: Object Oriented Programming and Data Structure*, HKUST.

Languages

Mandarin

Native

Mother Tongue

English

Fluent

Daily practice, all work performed in English