

## Lingfei WU

### Positions

- 2016 -            Postdoctoral researcher, Knowledge Lab, Computation Institute,  
University of Chicago
- 2014 - 2016    Postdoctoral researcher, Center for Behavior, Institutions and the  
Environment, School of Human Evolution and Social Change,  
Arizona State University
- 2013 - 2014    Algorithm Engineer, Baidu, Inc., Beijing

### Education

- 2013            PhD., Communication, City University of Hong Kong
- 2009            M.A., Communication, Peking University
- 2006            B.A., Political Science, China University of Political Science and Law

### Visiting

- 2011.2 - 2011.6    Australian Demographic & Social Research Institute,  
Australian National University
- 2010.6 - 2010.7    Wolfram Science Summer School, Department of  
Mathematics and Statistics, University of Vermont

### Publications

#### Journal Articles

Wu L., J. A. Baggio, and M. A. Janssen (2016), The Role of Diverse Strategies in Sustainable Knowledge Production. Accepted by *PLoS ONE*.

Wang, C. and L. Wu, The Scaling of Attention Networks. *Physica A: Statistical Mechanics and its Applications*, 448 (2016): 196-204.

- Li. X., X. Wang, J. Zhang, L. Wu (2015), Allometric Scaling, Size distribution and Pattern Formation of Natural Cities. *Palgrave Communications*, 1(15017).
- Zhang J., X. Li, X. Wang, W. Wang, L. Wu (2015), Scaling behaviors in the growth of networked systems and their geometric origins. *Scientific Reports*, 5(9767).
- Wu, L., J. Zhang, and M. Zhao (2014), The metabolism and growth of web forums. *PLoS ONE*, 9(8): e102646.
- Wu, L. and R. Ackland (2014), How Web1.0 fails: The mismatch between hyperlinks and clickstreams. *Social Network Analysis and Mining*, 4: 202 - 206.
- Zhang J. and L. Wu (2013), Allometry and dissipation of ecological networks. *PLoS ONE*, 8(9): e72525.
- Wu, L. and J. Zhang (2013), The decentralized structure of collective attention on the Web. *European Physical Journal B*, 86(6): 266-277.
- Wu, L. and J. Zhang (2011), Accelerating growth and size-dependent distribution of human online activities. *Physical Review E*, 84 (2): 026113-026117.
- Wu, L. (2011), The accelerating growth of online tagging systems. *European Physical Journal B*, 83(2): 283-287.
- Wu, L., Y. Cai, and D. Liu (2011), Online shopping among Chinese consumers: An exploratory investigation of demographics and value orientation. *International Journal of Consumer Studies*, 35(4): 458-469.
- Wu, L., H. Zhang, and D. Liu (2010), The application of hierarchical linear models: A model of use and gratification theory. *Journal of Data Analysis*, 4: 33-50.

## Books

- Wu, L. (2014), *Data Mining in Social Science*, e-book, Available at <http://lingfeiw.gitbooks.io/data-mining-in-social-science/>
- Wu, L., The Beautiful Flow of Collective Attention. In *Frontiers of Artificial Intelligence*, edited by Swarm Agents Club. Beijing, China: Turing Press, 2015, p. 198-220.

## Journal Articles (in review)

Wang, C., L. Wu, J. Zhang, and M. Janssen, The Hidden Geometry of Attention Diffusion. Submitted to *Scientific Reports*

### **Conference papers**

Ackland, R. and L. Wu, Index numbers and information networks. ACM Web Science Conference, Paris, 2013.

Zhang, J. and L. Wu, Allometric scaling in an evolutionary model of weighted food web. the Thirteenth International Conference on the Simulation and Synthesis of Living Systems, Michigan, 2012.

Wu, L., On predicting the collective surfing behavior. International Communication Association (ICA) Annual Conferences, Phoenix, 2012.

Ackland, R. and L. Wu, Revealed preference in networks. Workshop on Information in Networks, New York, 2011.

Wu, L. and D. Liu, Chinese citizen's attitude towards Internet censorship. ACM Web Science Conference, Athens, 2009.

Wu, L., Y. Cai, and D. Liu, Value orientation, Internet usage, and online shopping adoption: A structural equation modeling investigation on Chinese consumers. Agricultural and Applied Economics Association (AAEA) Annual Meeting, Milwaukee, 2009.

### **Presentations**

Wu, L., C. Wang, M. Janssen, J. Zhang, and M. Zhao, The hidden geometry of attention diffusion, The 6th International Conference on Social Informatics, Barcelona, 2014.

Wu, L. and C. Wang, Heterogeneity and allometric growth of human collaborative tagging behavior, The 2011 Chinese Conference of Complex Networks, Chengdu, 2011.

Wu, L. and R. Ackland, The fail of the Web 1.0, Symposium of Doctoral Students in Communication, Singapore, 2011.

Wu, L. The attention economics and the Web, The 3rd Postgraduate Student Symposium of the Chinese Journalism and Communication Consortium, Shanghai, 2011.

Wu, L., Social network evolution based on simple rules: How birds of a feather flock tighter, The 8th NKS Summer School, Burlington, 2010.

Wu, L., Finding the opinion leader: Use the Google page rank algorithm to analyze social networks, The 1st Postgraduate Student Symposium of the Chinese Journalism and Communication Consortium, Hong Kong, 2009.

### **Invited talks**

2013.9.14 Social science and art in the age of big data, C5 Art Center, Beijing.

2013.1.2 Network models of collective attention, Swarm Agents Club, Beijing.

2011.5.20 Predicting collective surfing behavior, The Commonwealth Scientific and Industrial Research Organization (CSIRO), Canberra.

2011.5.3 The mismatch between hyperlinks and surfing activities, Demographic & Social Research Institute Seminars, ANU, Canberra.

### **Media coverage of research**

2013.1.14 Predicting collective online behavior, *Springer Select* and *Science Daily*.

2011.1.11 Why social networks are sucking up more of your time, *New Scientist*

2011.9.1 Online activity grows in a similar pattern to those of real-Life networks, *Science Daily*

### **Teaching and Mentoring**

#### **Teaching**

2014 Fall **The study group of social science data mining**, Center for Behavior, Institutions and the Environment, Arizona State University, 5 members (graduate students).

2014 Spring **The study group of programing collective intelligence**, Center for Behavior, Institutions and the Environment, Arizona State University, 11 members (graduate students).

2008 Fall      **Market Research and Data Mining**, School of Journalism and Communication, Peking University, 116 registered students (junior college students).

### **Mentoring**

Co-mentoring: Miles Manning since 2014, Applied Mathematics for Life and Social Science, Arizona State University (PhD student).

Co-mentoring: Loretta Cheeks since 2014, Computer Science, Arizona State University (PhD student).

### **Grants**

2013      Co-PI, Australian Research Council Discovery Grant "Understanding online attention and user-generated content creation: An information consumption and production perspective" (DP140103688; R. Ackland; \$225,000; 2014-2016)

### **Software**

scholarNetwork – a Python language software for the crawling, analysis, and visualization of the bibliographic data from Google Scholar, Available at <https://pypi.python.org/pypi/scholarNetwork/>

FlowNetwork – a Python module for flow network analysis (under development).

### **Language**

Chinese (native), English (advanced), Python, R, Matlab, Mathematica, Processing, NetLogo