Lingfei WU

Positions

2014 -   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

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, and M. Janssen, The Hidden Geometry of Attention Diffusion. Submitted to *Scientific Reports*

Wang, C. and L. Wu, The Scaling of Attention Networks. Submitted to *Physica A: Statistical Mechanics and its Applications*

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