Chaoming Song

Publications

Multiscale dynamical network mechanisms underlying aging of an online organism from birth to death

Zheng, M., Cao, Z., Vorobyeva, Y., Manrique, P., Song, C. & Johnson, N. F. Dec 1 2018 In : Scientific Reports. 8, 1, 3552

Universality and correlations in individuals wandering through an online extremist space

Cao, Z., Zheng, M., Vorobyeva, Y., Song, C. & Johnson, N. F. Mar 26 2018 In : Physical Review E. 97, 3, 032315

A temporally heterogeneous survival framework with application to social behavior dynamics

Yu, L., Cui, P., Song, C., Zhang, T. & Yang, S. Aug 13 2017 *KDD 2017 - Proceedings of the 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining.* Association for Computing Machinery, Vol. Part F129685, p. 1295-1304 10 p.

A multiscale survival process for modeling human activity patterns

Zhang, T., Cui, P., Song, C., Zhu, W. & Yang, S. Mar 1 2016 In : PLoS One. 11, 3, e0151473

From micro to macro: Uncovering and predicting information cascading process with behavioral dynamics

Yu, L., Cui, P., Wang, F., Song, C. & Yang, S. Jan 5 2016 *Proceedings - IEEE International Conference on Data Mining, ICDM.* Institute of Electrical and Electronics Engineers Inc., Vol. 2016-January, p. 559-568 10 p. 7373360

New online ecology of adversarial aggregates: ISIS and beyond

Johnson, N. F., Zheng, M., Vorobyeva, Y., Gabriel, A., Qi, H., Velasquez, N., Manrique, P., Johnson, D., Restrepo, E., Song, C. & Wuchty, S. Jun 17 2016 In : Science. 352, 6292, p. 1459-1463 5 p.

Quantifying the evolution of individual scientific impact

Sinatra, R., Wang, D., Deville, P., Song, C. & Barabási, A. L. Nov 4 2016 In : Science. 354, 6312, aaf5239

Scaling identity connects human mobility and social interactions

Deville, P., Song, C., Eagle, N., Blondel, V. D., Barabási, A. L. & Wang, D. Jun 28 2016 In : Proceedings of the National Academy of Sciences of the United States of America. 113, 26, p. 7047-7052 6 p.

Uncovering and predicting the dynamic process of information cascades with survival model

Yu, L., Cui, P., Wang, F., Song, C. & Yang, S. May 12 2016 (Accepted/In press) In : Knowledge and Information Systems. p. 1-27 27 p.

Women's connectivity in extreme networks

Manrique, P., Cao, Z., Gabriel, A., Horgan, J., Gill, P., Qi, H., Restrepo, E. M., Johnson, D., Wuchty, S., Song, C. & Johnson, N. Jun 1 2016 In : Science advances. 2, 6, p. e1501742

Impact of human mobility on social networks

Wang, D. & Song, C. Apr 1 2015 In : Journal of Communications and Networks. 17, 2, p. 100-109 10 p.

A dynamic graph optimization framework for multihop device-to-device communication underlaying cellular networks

Li, Y., Song, C., Jin, D. & Chen, S. 2014 In : IEEE Wireless Communications. 21, 5, p. 52-61 10 p., 6940420

A network framework of cultural history

Schich, M., Song, C., Ahn, Y. Y., Mirsky, A., Martino, M., Barabási, A. L. & Helbing, D. Aug 1 2014 In : Science. 345, 6196, p. 558-562 5 p.

Career on the move: Geography, stratification, and scientific impact

Deville, P., Wang, D., Sinatra, R., Song, C., Blondel, V. D. & Barabási, A. L. Apr 24 2014 In : Scientific Reports. 4, 4770

Cavity method for force transmission in jammed disordered packings of hard particles

Bo, L., Mari, R., Song, C. & Makse, H. A. Oct 7 2014 In : Soft Matter. 10, 37, p. 7379-7392 14 p.

Epigenetic state network approach for describing cell phenotypic transitions

Wang, P., Song, C., Zhang, H., Wu, Z., Tian, X. J. & Xing, J. 2014 In : Interface Focus. 4, 3

Modeling and predicting popularity dynamics via reinforced Poisson Processes

Shen, H., Wang, D., Song, C. & Barabási, A. L. 2014 *Proceedings of the 28th AAAI Conference on Artificial Intelligence and the 26th Innovative Applications of Artificial Intelligence Conference and the 5th Symposium on Educational Advances in Artificial Intelligence.* AI Access Foundation, Vol. 1, p. 291-297 7 p.

Quantifying information flow during emergencies

Gao, L., Song, C., Gao, Z., Barabási, A. L., Bagrow, J. P. & Wang, D. Feb 6 2014 In : Scientific Reports. 4, 03997

Response to comment on "Quantifying long-term scientific impact"

Wang, D., Song, C., Shen, H. W. & Barabási, A. L. 2014 In : Science. 345, 6193

Quantifying long-term scientific impact

Wang, D., Song, C. & Barabási, A. L. 2013 In : Science. 342, 6154, p. 127-132 6 p.

Edwards thermodynamics of the jamming transition for frictionless packings: Ergodicity test and role of angoricity and compactivity

Wang, K., Song, C., Wang, P. & Makse, H. A. Jul 25 2012 In : Physical Review E - Statistical, Nonlinear, and Soft Matter Physics. 86, 1, 011305

Publishing: Handful of papers dominates citation

Barabási, A. L., Song, C. & Wang, D. Nov 1 2012 In : Nature. 491, 7422, p. 40 1 p.

Human mobility, social ties, and link prediction

Wang, D., Pedreschi, D., Song, C., Giannotti, F. & Barabási, A. L. 2011 *Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining.* p. 1100-1108 9 p.

Information spreading in context

Wang, D., Wen, Z., Tong, H., Lin, C. Y., Song, C. & Barabási, A. L. 2011 *Proceedings of the 20th International Conference on World Wide Web, WWW 2011.* p. 735-744 10 p.

Jamming II: Edwards' statistical mechanics of random packings of hard spheres

Wang, P., Song, C., Jin, Y. & Makse, H. A. Feb 1 2011 In : Physica A: Statistical Mechanics and its Applications. 390, 3, p. 427-455 29 p.

Angoricity and compactivity describe the jamming transition in soft particulate matter

Wang, K., Song, C., Wang, P. & Makse, H. A. Sep 2010 In : EPL. 91, 6, 68001

Application of Edwards' statistical mechanics to high-dimensional jammed sphere packings

Jin, Y., Charbonneau, P., Meyer, S., Song, C. & Zamponi, F. Nov 18 2010 In : Physical Review E - Statistical, Nonlinear, and Soft Matter Physics. 82, 5, 051126

Distribution of volumes and coordination numbers in jammed matter: Mesoscopic ensemble

Wang, P., Song, C., Jin, Y., Wang, K. & Makse, H. A. Dec 2010 In : Journal of Statistical Mechanics: Theory and Experiment.2010, 12, P12005

Enhancement of scale-free network attack tolerance

Qu, Z. H., Wang, P., Song, C. M. & Qin, Z. G. Nov 2010 In : Chinese Physics B. 19, 11, 110504

From force distribution to average coordination number in frictional granular matter

Wang, P., Song, C., Briscoe, C., Wang, K. & Makse, H. A. Oct 1 2010 In : Physica A: Statistical Mechanics and its Applications. 389, 19, p. 3972-3977 6 p.

Jamming I: A volume function for jammed matter

Song, C., Wang, P., Jin, Y. & Makse, H. A. Nov 1 2010 In : Physica A: Statistical Mechanics and its Applications. 389, 21, p. 4497-4509 13 p.

Jamming III: Characterizing randomness via the entropy of jammed matter

Briscoe, C., Song, C., Wang, P. & Makse, H. A. Oct 1 2010 In : Physica A: Statistical Mechanics and its Applications. 389, 19, p. 3978-3999 22 p.

Jamming in two-dimensional packings

Meyer, S., Song, C., Jin, Y., Wang, K. & Makse, H. A. Dec 15 2010 In : Physica A: Statistical Mechanics and its Applications.389, 22, p. 5132-5144 13 p.

Limits of predictability in human mobility

Song, C., Qu, Z., Blumm, N. & Barabási, A. L. Feb 19 2010 In : Science. 327, 5968, p. 1018-1021 4 p.

Modelling the scaling properties of human mobility

Song, C., Koren, T., Wang, P. & Barabási, A. L. Oct 2010 In : Nature Physics. 6, 10, p. 818-823 6 p.

Small-world to fractal transition in complex networks: A renormalization group approach

Rozenfeld, H. D., Song, C. & Makse, H. A. Jan 11 2010 In : Physical Review Letters. 104, 2, 025701

Theory of random packings

Song, C., Wang, P. & Makse, H. A. 2010 *AIP Conference Proceedings.* Vol. 1227, p. 271-279 9 p.

Energy-landscape network approach to the glass transition

Carmi, S., Havlin, S., Song, C., Wang, K. & Makse, H. A. 2009 In : Journal of Physics A: Mathematical and Theoretical. 42, 10, 105101

A phase diagram for jammed matter

Song, C., Wang, P. & Makse, H. A. May 29 2008 In : Nature. 453, 7195, p. 629-632 4 p.

Entropy of jammed matter

Briscoe, C., Song, C., Wang, P. & Makse, H. A. Oct 31 2008 In : Physical Review Letters. 101, 18, 188001

Particle dynamics and effective temperature of jammed granular matter in a slowly sheared three-dimensional Couette cell

Wang, P., Song, C., Briscoe, C. & Makse, H. A. Jun 30 2008 In : Physical Review E - Statistical, Nonlinear, and Soft Matter Physics. 77, 6, 061309

Scaling of degree correlations and its influence on diffusion in scale-free networks

Gallos, L. K., Song, C. & Makse, H. A. Jun 19 2008 In : Physical Review Letters. 100, 24, 248701

A review of fractality and self-similarity in complex networks

Gallos, L. K., Song, C. & Makse, H. A. Dec 15 2007 In : Physica A: Statistical Mechanics and its Applications. 386, 2, p. 686-691 6 p.

How to calculate the fractal dimension of a complex network: The box covering algorithm

Song, C., Gallos, L. K., Havlin, S. & Makse, H. A. Mar 1 2007 In : Journal of Statistical Mechanics: Theory and Experiment.3, P03006

Measuring the coordination number and entropy of a 3D jammed emulsion packing by confocal microscopy

Brujić, J., Song, C., Wang, P., Briscoe, C., Marty, G. & Makse, H. A. Jun 15 2007 In : Physical Review Letters. 98, 24, 248001

Scaling theory of transport in complex biological networks

Gallos, L. K., Song, C., Havlin, S. & Makse, H. A. May 8 2007 In : Proceedings of the National Academy of Sciences of the United States of America. 104, 19, p. 7746-7751 6 p.

Dynamic particle tracking reveals the ageing temperature of a colloidal glass

Wang, P., Song, C. & Makse, H. A. Aug 30 2006 In : Nature Physics. 2, 8, p. 526-531 6 p.

Origins of fractality in the growth of complex networks

Song, C., Havlin, S. & Makse, H. A. Apr 2006 In : Nature Physics. 2, 4, p. 275-281 7 p.

Experimental and computational studies of jamming

Song, C., Wang, P., Potiguar, F. & Makse, H. A. Jun 22 2005 In : Journal of Physics Condensed Matter. 17, 24

Experimental measurement of an effective temperature for jammed granular materials

Song, C., Wang, P. & Makse, H. A. Feb 15 2005 In : Proceedings of the National Academy of Sciences of the United States of America. 102, 7, p. 2299-2304 6 p.

Granular dynamics in compaction and stress relaxation

Brujić, J., Wang, P., Song, C., Johnson, D. L., Sindt, O. & Makse, H. A. Sep 16 2005 In : Physical Review Letters. 95, 12, 128001

Reversibility and effective temperature in jammed granular matter

Song, C., Wang, P., Brujić, J. & Makse, H. A. 2005 *Powders and Grains 2005 - Proceedings of the 5th International Conference on Micromechanics of Granular Media.* Vol. 1, p. 387-391 5 p.

Self-similarity of complex networks

Song, C., Havlin, S. & Makse, H. A. Jan 27 2005 In : Nature. 433, 7024, p. 392-395 4 p.