参考文献

- [1] https://www.statista.com/topics/751/facebook/
- [2] Malewicz G, Austern M H, Bik A J C, et al. Pregel: a system for large-scale graph processing[C]//Proceedings of the 2010 ACM SIGMOD International Conference on Management of data. ACM, 2010: 135-146.
- [3] Xin R S, Gonzalez J E, Franklin M J, et al. Graphx: A resilient distributed graph system on spark[C]//First International Workshop on Graph Data Management Experiences and Systems. ACM, 2013: 2.
- [4] Valiant L G. A bridging model for parallel computation[J]. Communications of the ACM, 1990, 33(8): 103-111.
- [5] 申林,薛继龙,曲直,杨智,代亚非. IncGraph:支持实时计算的大规模增量图处理系统[J]. 计算机科学与探索,2013,12:1083-1092.
- [6] Bar-Yossef Z, Kumar R, Sivakumar D. Reductions in streaming algorithms, with an application to counting triangles in graphs[C]//Proceedings of the thirteenth annual ACM-SIAM symposium on Discrete algorithms. Society for Industrial and Applied Mathematics, 2002: 623-632.
- [7] Tsourakakis C E, Kang U, Miller G L, et al. Doulion: counting triangles in massive graphs with a coin[C]//Proceedings of the 15th ACM SIGKDD international conference on Knowledge discovery and data mining. ACM, 2009: 837-846.
- [8] Buriol L S, Frahling G, Leonardi S, et al. Counting triangles in data streams[C]//Proceedings of the twenty-fifth ACM SIGMOD-SIGACT-SIGART symposium on Principles of database systems. ACM, 2006: 253-262.
- [9] S. Baswana. Streaming algorithm for graph spanners single pass and constant processing time per edge. Inf. Process. Lett. 106(3):110–114, 2008.
- [10] M. Elkin. Streaming and fully dynamic centralized algorithms for constructing and maintaining sparse spanners. ACM Transactions on Algorithms, 7(2):20, 2011.
- [11] A. A. Bencz'ur and D. R. Karger. Approximating s-t minimum cuts in $^{\sim}O(n2)$ time. In ACM Symposium on Theory of Computing, pages 47–55, 1996.
- [12] Chu S, Cheng J. Triangle listing in massive networks and its applications[C]//Proceedings of the 17th ACM SIGKDD international conference on Knowledge discovery and data mining. ACM, 2011: 672-680.
- [13] Cheng R, Hong J, Kyrola A, et al. Kineograph: taking the pulse of a fast-changing and connected world[C]//Proceedings of the 7th ACM european conference on Computer Systems. ACM, 2012: 85-98.
- [14] 景年强,薛继龙,曲直,杨智,代亚非. SpecGraph:基于并发更新的分布式实时图计算模型[J]. 计算机研究与发展,2014,(S1):155-160.
- [15] Adamic L A, Lukose R M, Puniyani A R, et al. Search in power-law networks[J]. Physical

- review E, 2001, 64(4): 046135.
- [16] Doekemeijer N, Varbanescu A L. A survey of parallel graph processing frameworks[J]. Delft University of Technology, 2014.
- [17] Tian Y, Balmin A, Corsten S A, et al. From think like a vertex to think like a graph[J]. Proceedings of the VLDB Endowment, 2013, 7(3): 193-204.
- [18] Malicevic J. Trends in Large-Scale Graph Processing[J].
- [19] Kalavri V, Vlassov V, Haridi S. High-Level Programming Abstractions for Distributed Graph Processing[J]. arXiv preprint arXiv:1607.02646, 2016.
- [20] BuluçA, Meyerhenke H, Safro I, et al. Recent advances in graph partitioning[M]//Algorithm Engineering. Springer International Publishing, 2016: 117-158.
- [21] Rahimian F, Payberah A H, Girdzijauskas S, et al. Distributed vertex-cut partitioning[C]//IFIP International Conference on Distributed Applications and Interoperable Systems. Springer Berlin Heidelberg, 2014: 186-200.
- [22] BuluçA, Meyerhenke H, Safro I, et al. Recent advances in graph partitioning[M]//Algorithm Engineering. Springer International Publishing, 2016: 117-158.
- [23] Liu W, Wang J, Kumar S, et al. Hashing with graphs[C]//Proceedings of the 28th international conference on machine learning (ICML-11). 2011: 1-8.
- [24] Ugander J, Backstrom L. Balanced label propagation for partitioning massive graphs[C]//Proceedings of the sixth ACM international conference on Web search and data mining. ACM, 2013: 507-516.
- [25] Kernighan B W, Lin S. An efficient heuristic procedure for partitioning graphs[J]. The Bell system technical journal, 1970, 49(2): 291-307.
- [26] Karypis G, Kumar V. METIS--unstructured graph partitioning and sparse matrix ordering system, version 2.0[J]. 1995.
- [27] Ioanna Filippidou and Yannis Kotidis. Online and On-demand Partitioning of Streaming Graphs. In 2015 IEEE International Conference on Big Data (Big Data), 2015.
- [28] Isabelle Stanton and Gabriel Kliot. Streaming Graph Partitioning for Large Distributed Graphs. In KDD '12, pages 1222-1230, 2012.
- [29] Charalampos E. Tsourakakis, Christos Gkantsidis, Bozidar Radunovic and Milan Vojnovic. FENNEL Streaming Graph Partitioning for Massive Scale Graphs. In WSDM '14, pages 333-342. 2014
- [30] Xie C, Chen R, Guan H, et al. Sync or async: Time to fuse for distributed graph-parallel computation[J]. ACM SIGPLAN Notices, 2015, 50(8): 194-204.
- [31] Low Y, Gonzalez J E, Kyrola A, et al. Graphlab: A new framework for parallel machine learning[J]. arXiv preprint arXiv:1408.2041, 2014.
- [32] Lumsdaine A, Gregor D, Hendrickson B, et al. Challenges in parallel graph processing[J]. Parallel Processing Letters, 2007, 17(01): 5-20.
- [33] Gelly I. Graph Processing with Apache Flink[J]. 2016.

- [34] Avery C. Giraph: Large-scale graph processing infrastructure on hadoop[J]. Proceedings of the Hadoop Summit. Santa Clara, 2011, 11.
- [35] https://hama.apache.org/hama_graph_tutorial.html
- [36] Gonzalez J E, Low Y, Gu H, et al. PowerGraph: Distributed Graph-Parallel Computation on Natural Graphs[C]//OSDI. 2012, 12(1): 2.
- [37] Kyrola A, Blelloch G E, Guestrin C. GraphChi: Large-Scale Graph Computation on Just a PC[C]//OSDI. 2012, 12: 31-46.
- [38] S. Muthukrishnan. Data Streams: Algorithms and Applications. Foundations and Trends in Theoretical Computer Science, 1(2), 2005.
- [39] S. Baswana. Streaming algorithm for graph spanners single pass and constant processing time per edge. *Inf. Process. Lett.* 106(3):110–114, 2008.
- [40] M. Elkin. Streaming and fully dynamic centralized algorithms for constructing and maintaining sparse spanners. *ACM Transactions on Algorithms*, 7(2):20, 2011.
- [41] A. A. Bencz'ur and D. R. Karger. Approximating s-t minimum cuts in $^{\sim}O(n2)$ time. In ACM Symposium on Theory of Computing, pages 47–55, 1996.
- [42] D. A. Spielman and S.-H. Teng. Spectral sparsification of graphs. *SIAM J. Comput.*, 40(4):981–1025, 2011.
- [43] G. Cormode and S. Muthukrishnan. An improved data stream summary: the count-min sketch and its applications. J. Algorithms, 55(1):58–75, 2005.
- [44] P. Zhao, C. C. Aggarwal, and M. Wang. gSketch: On query estimation in graph streams. PVLDB, 5(3):193–204, 2011.
- [45] Nan Tang, Qing Chen, Prasenjit Mitra. Graph Stream Summarization: From Big Bang to Big Crunch. SIGMOD '16 Proceedings of the 2016 International Conference. pages 1481-1496, 2016
- [46] Sundaresh R S, Hudak P. A theory of incremental computation and its application[C]//Proceedings of the 18th ACM SIGPLAN-SIGACT symposium on Principles of programming languages. ACM, 1991: 1-13.
- [47] Peng D, Dabek F. Large-scale Incremental Processing Using Distributed Transactions and Notifications[C]//OSDI. 2010, 10: 1-15.
- [48] 张钟. 大规模图上的最短路径问题研究[D].中国科学技术大学,2014.
- [49] Page L, Brin S, Motwani R, et al. The PageRank citation ranking: bringing order to the web[J].
- [50] https://hazelcast.org/
- [51] http://www.livejournal.com/