# 参考

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- 1. <u>从图(Graph)到图卷积(Graph Convolution)</u>: 漫谈图神经网络模型 (一): <u>https://www.cnblogs.com/SivilTaram/p/graph\_neural\_network\_2.html</u>
- 2. 如何通俗易懂地解释卷积? : <a href="https://www.zhihu.com/question/22298352">https://www.zhihu.com/question/22298352</a>
- 3. 如何理解傅里叶变换公式?: https://www.zhihu.com/question/19714540
- 4. 傅立葉分析專題: <a href="https://ccjou.wordpress.com/">https://ccjou.wordpress.com/</a>
- 5. 拉普拉斯矩阵与拉普拉斯算子的关系: <a href="https://zhuanlan.zhihu.com/p/85287578">https://zhuanlan.zhihu.com/p/85287578</a>
- 6. 如何理解 Graph Convolutional Network(GCN)?: <a href="https://www.zhihu.com/question/54504471">https://www.zhihu.com/question/54504471</a>
- 7. 何时能懂你的心——图卷积神经网络(GCN): <u>https://zhuanlan.zhihu.com/p/</u> 71200936
- 8. 解读三种经典GCN中的Parameter Sharing: <a href="https://zhuanlan.zhihu.com/p/72373094">https://zhuanlan.zhihu.com/p/72373094</a>
- 9. GRAPH CONVOLUTIONAL NETWORKS: <a href="https://tkipf.github.io/graph-convolutional-networks/">https://tkipf.github.io/graph-convolutional-networks/</a>
- 10. A comprehensive survey on graph neural networks: <a href="https://blog.acolyer.org/2019/02/06/a-comprehensive-survey-on-graph-neural-networks/">https://blog.acolyer.org/2019/02/06/a-comprehensive-survey-on-graph-neural-networks/</a>

- 11.How to do Deep Learning on Graphs with Graph Convolutional Networks: <a href="https://towardsdatascience.com/how-to-do-deep-learning-on-graphs-with-graph-convolutional-networks-7d2250723780">https://towardsdatascience.com/how-to-do-deep-learning-on-graphs-with-graph-convolutional-networks-7d2250723780</a>
- 12. Notes about GCN Sampling: <a href="https://yanghan.life/2019/09/08/Notes-about-gcn-sampling/">https://yanghan.life/2019/09/08/Notes-about-gcn-sampling/</a>
- 13. 从源头探讨 GCN 的行文思路: <a href="https://zhuanlan.zhihu.com/p/78466344">https://zhuanlan.zhihu.com/p/78466344</a>
- 14. GraphSAGE:我寻思GCN也没我牛逼: <a href="https://zhuanlan.zhihu.com/p/">https://zhuanlan.zhihu.com/p/</a>
- 15. FastGCN openreview : <a href="https://openreview.net/forum?id=rytstxWAW">https://openreview.net/forum?id=rytstxWAW</a>
- 16. Tutorial on graph neural networks for computer vision: <a href="https://medium.com/@BorisAKnyazev/tutorial-on-graph-neural-networks-for-computer-vision-and-beyond-part-1-3d9fada3b80d">https://medium.com/@BorisAKnyazev/tutorial-on-graph-neural-networks-for-computer-vision-and-beyond-part-1-3d9fada3b80d</a>
- 17. Graph nets, <a href="https://github.com/deepmind/graph\_nets">https://github.com/deepmind/graph\_nets</a>
- 18. 图卷积网络 GCN Graph Convolutional Network(谱域GCN)的理解: <a href="https://blog.csdn.net/yyl424525/article/details/100058264#\_1211">https://blog.csdn.net/yyl424525/article/details/100058264#\_1211</a>
- 19. 蒙特卡洛方法与定积分计算: <a href="https://cosx.org/2010/03/monte-carlo-method-to-compute-integration/">https://cosx.org/2010/03/monte-carlo-method-to-compute-integration/</a>
- 20. Probility spaces : https://www.countbayesie.com/blog/2015/8/30/picture-guide-to-probability-spaces

- 21. Knowing Your Neighbours: Machine Learning on Graphs: <a href="https://www.kdnuggets.com/2019/08/neighbours-machine-learning-graphs.html">https://www.kdnuggets.com/2019/08/neighbours-machine-learning-graphs.html</a>
- 22. GNN 开卷有益与再谈图卷积: https://zhuanlan.zhihu.com/p/101310106
- 23. 图神经网络的表征能力有多强? <a href="https://swarma.org/?p=16450">https://swarma.org/?p=16450</a>
- 24. GNN 教程: Weisfeiler-Leman 算法 <a href="https://archwalker.github.io/blog/2019/06/22/GNN-Theory-WL.html">https://archwalker.github.io/blog/2019/06/22/GNN-Theory-WL.html</a>
- 25. 入门图深度学习: https://mp.weixin.qq.com/s/hyHUkiEyXGn3v-M0d0igVg
- 26. 复杂网络的双曲嵌入: <a href="https://pattern.swarma.org/path?id=7">https://pattern.swarma.org/path?id=7</a>
- 27. 双曲空间模型: <a href="http://wiki.swarma.net/">http://wiki.swarma.net/</a>
  <a href="mailto:index.php?title=%E5%8F%8C%E6%9B%B2%E7%A9%BA%E9%97%B4%E6%A8%A1%E5%9E%8B&variant=zh">http://wiki.swarma.net/</a>
  <a href="mailto:swarma.net/">swarma.net/</a>
  <a href="mailto:swarma.net/">https://swarma.net/</a>
  <a href="mailto:swarma.net/">swarma.
- 28. Poincaré圆盘模型:一个神奇的双曲世界: <u>https://blog.csdn.net/matrix67/article/details/4780218</u>
- 29. 《Graph Neural Networks多强大? 》阅读笔记: <u>https://zhuanlan.zhihu.com/p/</u>62006729
- 30. 图系列|图网络学习从入门到进阶:系列相关优质文章与资料汇总: <u>https://</u>zhuanlan.zhihu.com/p/104631376

- 31. 为什么要进行图嵌入Graph embedding?:
- 32. <u>图上的预训练任务</u>: <u>https://archwalker.github.io/</u>
- 33. 图表示学习方法的鲁棒性

#### 参考 报告PPT

- 1. A BRIEF INTRODUCTION TO GRAPH CONVOLUTION Zhizhong LI , Dec 20, 2018
- 2. The Laplacian Matrix of a Graph, Chapter
- 3. Advancements in Graph Neural Networks, Jure Leskovec
- 4. Representation Learning on Networks, WWW-18 Tutorial, Jure Leskovec
- 5. CE7454: Deep Learning for Data Science Lecture 14: Graph Neural Networks, Xavier Bresson, Nanyang Technological University (NTU), Singapore
- 6. Graph Neural Network Review, By Wu Tianlong
- 7. Structured deep models: Deep learning on graphs and beyond, By Thomas Kipf, 25 May 2018
- 8. Graph Neural Networks: Models and Applications, , IBM Research, AAAI 2020

#### 参考 报告PPT

- 9. Cognitive Graph for Understanding, Reasoning, and Decision, Tang Jie, Tsinghua University
- 10. Graph Neural Networks and Applications—A Review, Tang Jie, Tsinghua University
- 11. Geometric deep learning on graphs and manifolds, Yann LeCun