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| **论文** | **模型** | **针对问题** | **相似技术** | **具体方法** |
| Predict then Propagate Graph Neural Networks meet Personalized PageRank | PPNP | 过光滑 | / | 解耦神经网络，改进传播算法 |
| Representation Learning on Graphs with Jumping Knowledge Networks | JK-Net | 过光滑 | / | layer-aggregation |
| Cluster-GCN: An Efficient Algorithm for Training Deep and Large Graph Convolutional Networks | Cluster-GCN | 梯度消失，  过光滑 | / | 改进对称归一化矩阵同时进行正则化 |
| N-GCN: Multi-scale Graph Convolution for Semi-supervised Node Classification | N-GCN | 过光滑 | Inception | 组合不同尺度感受野的GCN |
| Residual or Gate? Towards Deeper Graph Neural Networks for Inductive Graph Representation Learning | RGNN | 过光滑 | RNN | 使用RNN对各层之间的长期依赖建模 |
| DeepGCNs: Can GCNs Go as Deep as CNNs? | ResGCN | 梯度消失/爆炸 | ResNet | 添加residual connections |
| DenseGCN | DenseNet | 添加dense connections |
| DropEdge: Towards Deep Graph Convolutional Networks on Node Classification | DropEdge | 过拟合，  过光滑 | Dropout | 从输入图随机删除一定数量的边 |
| Break the Ceiling: Stronger Multi-scale Deep Graph Convolutional Networks | Snowball | 过光滑 | DenseNet | 添加dense connections |
| Truncated Krylov | Inception | 组合不同尺度感受野的GCN |
| PairNorm Tackling Oversmoothing in GNNs | PairNorm | 过光滑 | / | 引入正则化项改进目标函数 |