

Title: Description of the files contained in CLBIC.zip.

Files:

1. **main.R** are the main functions for the CLBIC and BIC methods for selecting the community number K , including implementations of the Spectral Clustering and SCORE algorithms. It also includes functions to generate correlated binary data as specified in Section 4.1 of the main manuscript.
2. **Table1.R** are the codes for Table 1.
3. **Table2.R** are the codes for Table 2.
4. **Table3.R** are the codes for the comparison of the CLBIC approach with a Variational Bayes method in Table 3.
5. **Table4.R** are the codes for the DCBM results of Table 4.
6. **Table5.R** are the codes for the increasing K scenario of Table 5.
7. **DataAnalysis.R** are the codes for the real data analysis in Sections 4.2.1 and 4.2.2.

Remarks:

1. Different settings and options (including total number of communities, community sizes, correlation among binary data, etc.) are included in the files Table1.R through Table5.R.
2. In DataAnalysis.R, while the real data sets are available upon request, data reading is omitted.