09. CHENG, Wei. Spectral Clustering and Transition Paths Analysis of Karate Club Network.

Summary of the report.

In this projects, spectral clustering and transition path analysis are studied on a typical Zachery's Karate Club Network. The Cheeger vector is applied to bipartite the network into two components with spectral clustering, which is alternatively achieved by solving Laplacian equation with Dirichelet boundary conditions on a committor function in transition path analysis. Then relative importance of the nodes in bridging communities are shown by effective and transition flux. Finally, one social network and protein binding transition network are investigated following the same clue.

Describe the strengths of the report.

Reasonable and well organized.

Describe the weaknesses of the report.

Having a conclusion and summary will be better.

Evaluation on quality of writing (1-5):

4

Evaluation on presentation (1-5):

1

No video.

Evaluation on creativity (1-5):

4

Confidence on your assessment (1-3):

2

01. CSIC5011_Project2_Report

1. Summary
   This report studied the spectral clustering and transition path on the Club Network dataset. The report included several methods such as Fiedler Theory, Transition Path theory, and Markov Chain.
2. Describe the strengths of the report.
   The report gives a detailed study of a complicated network problem. And clear results are illustrated.
3. Describe the weaknesses of the report.
   No obvious weakness is discovered
4. Evaluation on quality of writing (1-5): 5 The report gives detailed explanations of the issue and the methodologies as well as the results they got.
5. Evaluation on presentation (1-5): 4
6. Evaluation on creativity (1-5):4
7. Confidence on your assessment: 2

Group 9

Summary of the report

Spectral clustering and transition path analysis are studied on a typical Zachery's Karate Club Network

Strength

Applied the methods on 3 dataset.

Weakness

The 3 dataset are not so related.

Evaluation on quality of writing (1-5): *3*

Maybe uniform the first person by changing 'we' to 'I', 'our' to 'my' since it's one person's work; The overall logic could be better; The 3 dataset are not so related, so that the story telling is important, maybe tell a story about the experiment arrangement.

Evaluation on quality of presentation (1-5): *1*

There is no presentation link provided.

Evaluation on quality of creativity (1-5): *4*

The idea of tried spectral clustering and transition paths analysis

Confidence on your assessment (1-3): *2*

9. Spectral Clustering and Transition Paths Analysis of Karate Club Network.

- **Summary of this report:** In this projects, spectral clustering and transition path analysis are studied on a typical Zachery' s Karate Club Network.
- **Describe the strengths of the report:** The models are described in detail

- **Describe the weaknesses of the report**: The main conclusion in this report is not clear.
- **Evaluation on presentation: 4:**

There are many equations in this slide. When the author talked about these equations. It's hard for listeners to follow. The mouse arrow on the screen can be used to emphasize the steps in the derivation.

- **Evaluation on Clarity and quality of writing (1-5):** 5

  The whole report is well written and the organization is very logic.
- **Evaluation on creativity (1-5): 5**
- **Overal ratings: 4.5**
- **Confidence on your assessment: 2**

1. Spectral Clustering and Transition Paths Analysis of Karate Club Network

   Summary:

   Using spectral clustering and transition path analysis to study the Karate club network.

   Strength of the project:

   Very clear and detailed discussion of the methodology.

Evaluation on Clarity and quality of writing (1-5):	4
Evaluation on Technical Quality (1-5):	5
Overall rating:	4
Confidence on your assessment:	2

09. CHENG, Wei. Spectral Clustering and Transition Paths Analysis of Karate Club Network.

Summary: The author study spectral clustering and transition path analysis on Zachery' s Karate Club Network and other networks.

Strengths: The report is clear and well organized. The report contain a deep analysis of the results.

Weakness:

Evaluation on quality of writing: 5

Evaluation on presentation: 4

Evaluation on creativity: 4

Confidence on your assessment: 2

Spectral Clustering and Transition Paths Analysis of Karate Club Network

8.1 Summary

Wei Cheng studies the spectral clustering and transition path analysis on a typical Zachery's Karate Club Network.

8.2 Strength and Weakness

Cheng has done a good job on explaining his idea, all the concepts and contents are cover in this report. I cannot find weakness over this report.

8.3 Score

8.3.1 Clarity and Quality of Writing

The structure of this report is good. didn't find any typo in this report. I will give him 5/5 on this aspect.

8.3.2 Presentation

Good and fluent presentation. I will give him 5/5 on this aspect.

8.3.3 Creativity

Cannot understand the creativity of this report. 3/5

8.3.3 Overall

The overall score for this poster is 4.3/5.

09.Wei Cheng_report

In this project, it considered the row Markov matrix and calculated its Perron eigenvector. And the effective and transition flux were computed depending on a defined committor function to analysis the relative importance of the node bridging the communities. It considered several methods and gave clear graph results.

Evaluation on Clarity and quality of writing (1-5):	5
Evaluation on Technical Quality (1-5):	5
Overall rating:	5
Confidence on your assessment:	2