

# CSC 575 Workshop 3 - Hardness of Checking Maximal Quasi-Cliques

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# Materials

The materials can be found at these locations

- ▶ *YouTube Video*
- ▶ *Appendix Video*
- ▶ *Shared Microsoft OneDrive*
- ▶ *Shared Google Drive*
- ▶ *GitHub (no video)*

# Publication of Study

The paper chosen for research is as follows with the specific proof outline on pgs. 6-8.

[1]



S.V. Sanei-Mehri, A. Das, et al.

Mining largest maximal quasi-cliques.

*ACM Trans. Knowl. Discov. Data* 15(5), apr 2021.

<https://doi.org/10.1145/3446637>

# Resources

Additional resources were leveraged for the understanding of 3-SAT to r-CLIQUE reduction technique, as well as cliques and quasi-cliques in general, which can be found here:

- ▶ <https://d1b10bmlvqabco.cloudfront.net/attach/hsoyaw6eh1215z/hcf60z2lm1mde/hy4775493rba/clique.pdf>
- ▶ <https://www.geeksforgeeks.org/proof-that-clique-decision-problem-is-np-complete/>
- ▶ [https://en.wikipedia.org/wiki/Clique\\_problem](https://en.wikipedia.org/wiki/Clique_problem)
- ▶ <https://www.youtube.com/watch?v=5PJDPiIjIpYA>
- ▶ <https://dl.acm.org/doi/10.1145/1081870.1081898>