

1 We sincerely thank the five reviewers for their valuable feedback.

2 **R1:** We thank the reviewer for valuable comments. Our point-to-point response is as follows:

3 **Convergence Bounds:**

4 **R3:** We thank the reviewer for valuable comments. We extend on the assumptions:

5 **Comparison with vanilla GD:** **TO COMPLETE**

6 **R4:** We thank the reviewer for the thorough analysis. Our remarks are listed below:

7 **Experiments:** We thank the reviewer for pointing out this mistake. For Adam we provide below the testing accuracy

8 with respect to the learning rate.

9 **R8:** We thank the reviewer for valuable comments and typos. Our response is as follows:

10 **Dependence on the graph typology:**