



Figure 1: Illustration of FedLap+. The global graph is shown to the left along with the adjacency matrix. In the **offline phase**, the clients perform the decentralized Arnoldi iterations to acquire part of the Laplacian eigenvectors. Below the clients, the underlying adjacency matrix, reconstructed from the client information, is shown. In the **online phase**, the clients use the acquired eigenvectors to compute the loss function and train the model θ by means of standard federated learning.