Table 1: Comparison of different methods of the ADMM algorithm after a fixed number of K steps. Numbers reported are the average across the test data. The error measures the average distance of the local solutions to the global minimizer $\text{avg}\left(\|x_i^K - x^\star\|_2^2\right)$ and the consensus measures the degree to which the constraint (??) is satisfied as $\text{avg}\left(\|x_i^K - \bar{x}^K\|\right)$, where $\bar{x}^K$ is the average solution at step K. The baseline method does not use learning but uses the default values $\alpha = 1, e_{ij} = 1$ for all iterations instead. In the combined version, we learn both individual step-size parameters α_i and the edge weights simultaneously. Lower is better for all metrics. Best is **bold**, second base <u>underlined</u>.

	k=5		K=10 (**train**)		k=20	
Consensus	Error	Consensus	Error	Consensus	Error	Consensus
Baseline	19.07	12.23	9.17	7.10	2.33	2.13
Global α	18.74	17.21	4.19	3.65	3.46	3.37
Local α_i	<u>14.50</u>	12.26	<u>3.05</u>	<u>2.82</u>	<u>1.17</u>	<u>1.14</u>
Weight e_{ij}	17.98	<u>10.96</u>	7.39	5.47	1.52	1.40
Combined	**13.39**	**8.05**	**1.96**	**1.76**	**0.76**	**0.65**
Least-squares	Error	Consensus	Error	Consensus	Error	Consensus
Baseline	70.86	<u>10.29</u>	53.23	7.77	30.09	2.44
Global α	61.32	23.41	27.12	9.21	14.93	3.48
Local α_i	**56.80**	14.66	<u>23.79</u>	<u>7.37</u>	<u>12.96</u>	<u>1.84</u>
Weight e_{ij}	67.83	14.19	43.99	8.20	19.45	2.51
Combined	<u>58.97</u>	**8.83**	**18.24**	**5.42**	**11.79**	**0.95**