Fig. 1) copmarsion between different articutre (one realization, N=32)
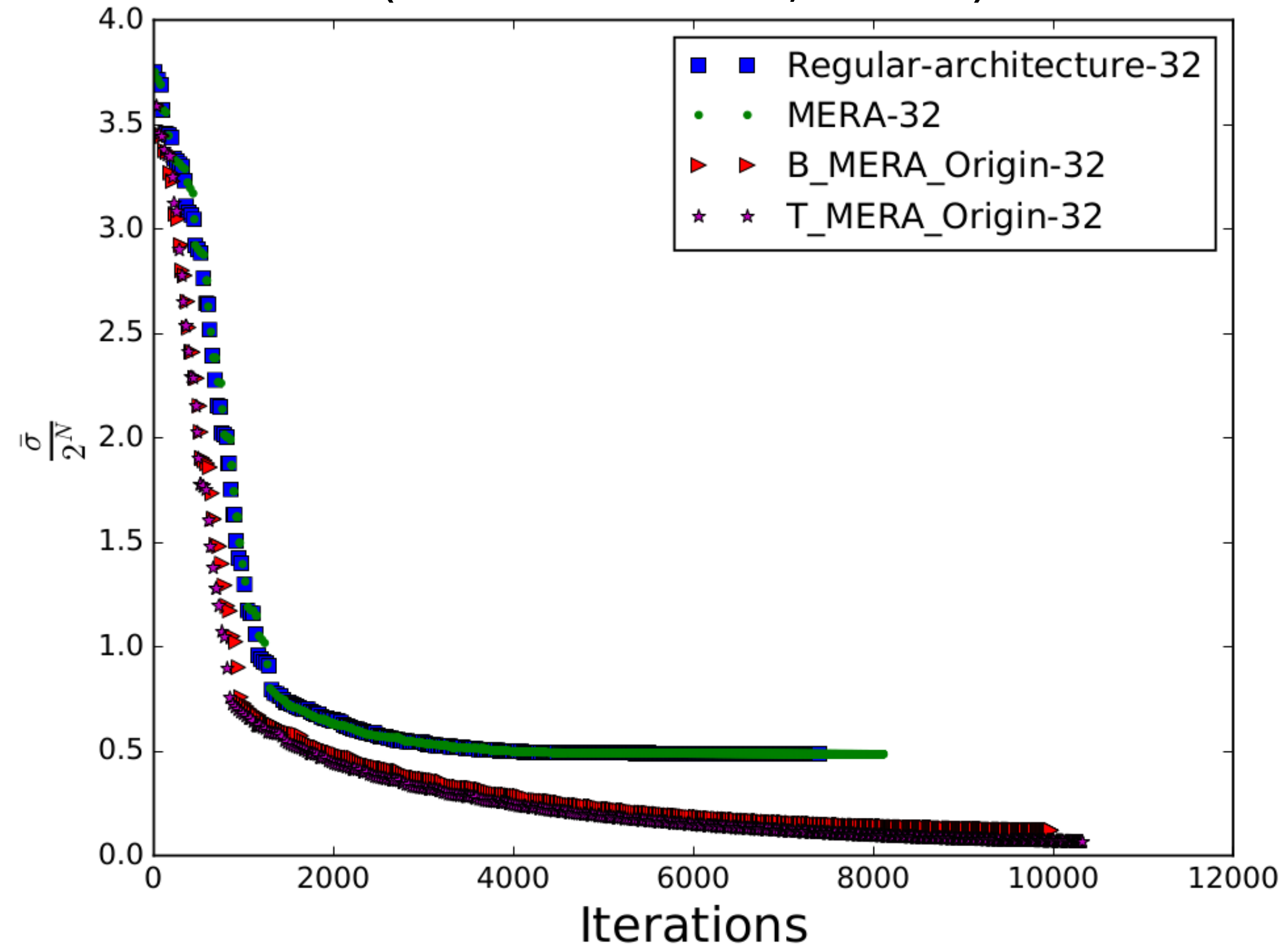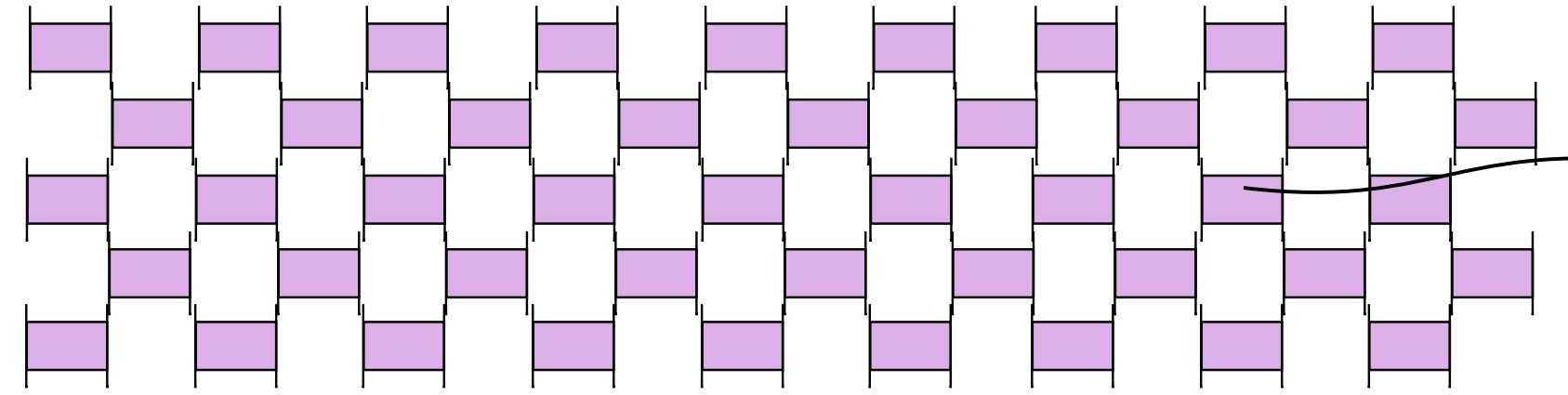

a) regular architucture

b) MERA architacture

c) binary MERA (B_MERA)

d) Ternary MERA (T_MERA)

TABLE I. Accuracy for Heisenberg Model (averaged over 10 realization).

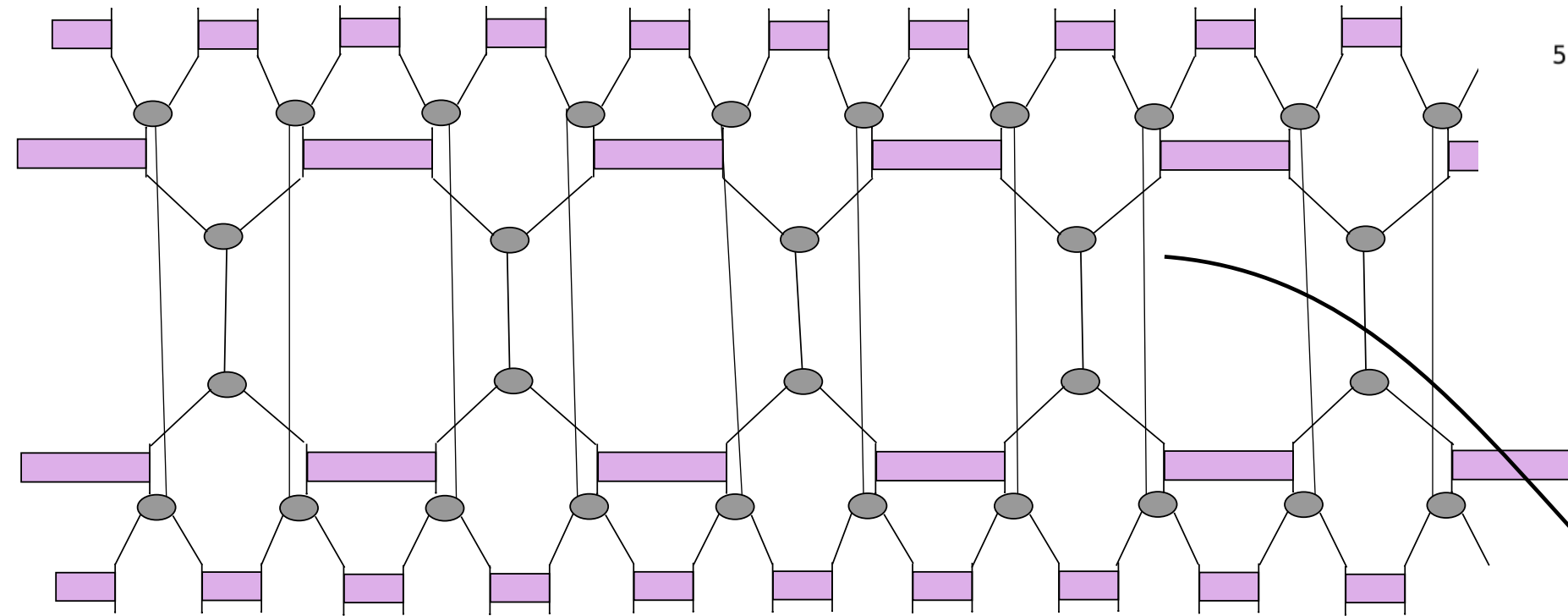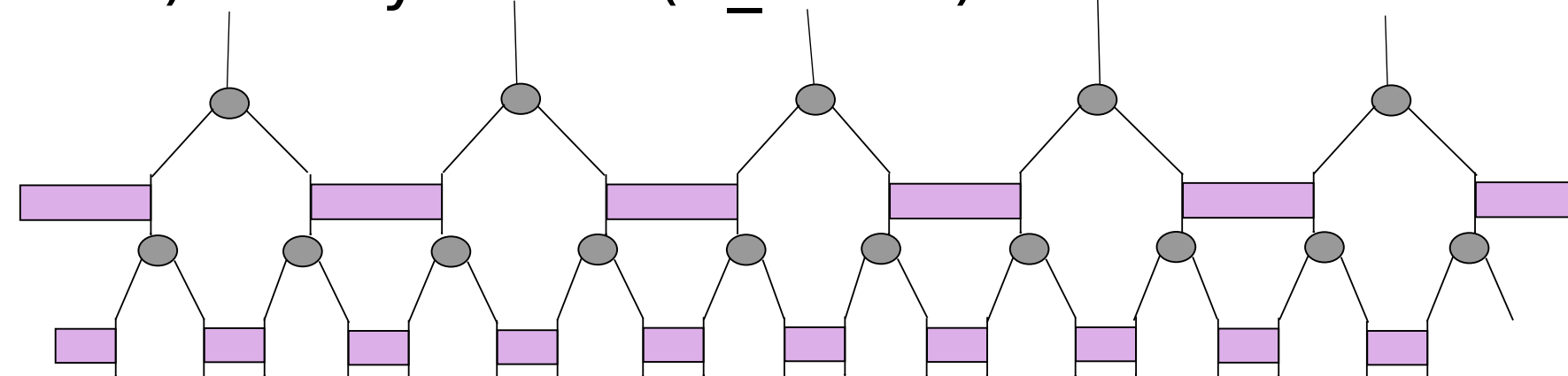| method	W	N	$\overline{\sigma^2}/2^N$	Complexity
Regular	$W = 8$	44	0.6058	$\mathcal{O}(2^{24})$
MERA	$W = 8$	44	0.6066	$\mathcal{O}(2^{24})$
B_MERA	$W = 8$	44	0.2407	$\mathcal{O}(2^{22})$
T_MERA	$W = 8$	44	0.0120	$\mathcal{O}(2^{27})$

TABLE I. Accuracy for Heisenberg Model (averaged over 50 realization).

method	W	N	$\overline{\sigma^2}/2^N$	Complexity
Regular	$W = 8$	16	0.1399	$\mathcal{O}(2^{24})$
MERA	$W = 8$	16	0.1405	$\mathcal{O}(2^{24})$
B_MERA	$W = 8$	16	0.05407	$\mathcal{O}(2^{22})$
T_MERA	$W = 8$	16	0.00120	$\mathcal{O}(2^{27})$