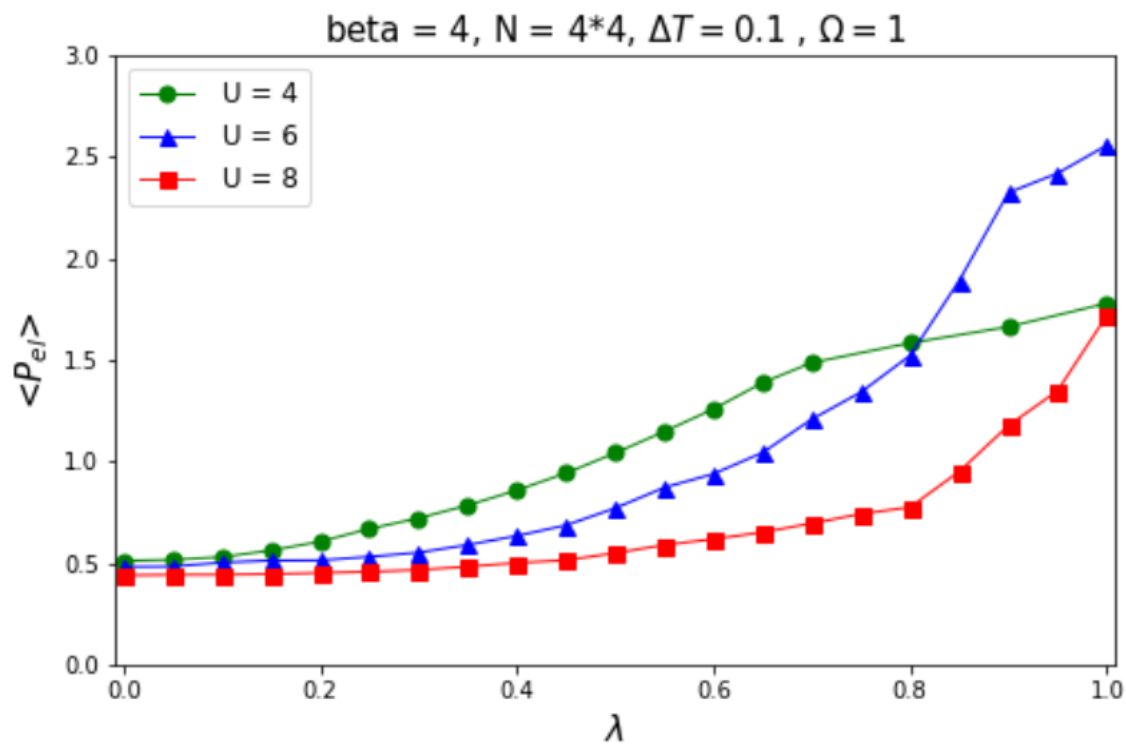
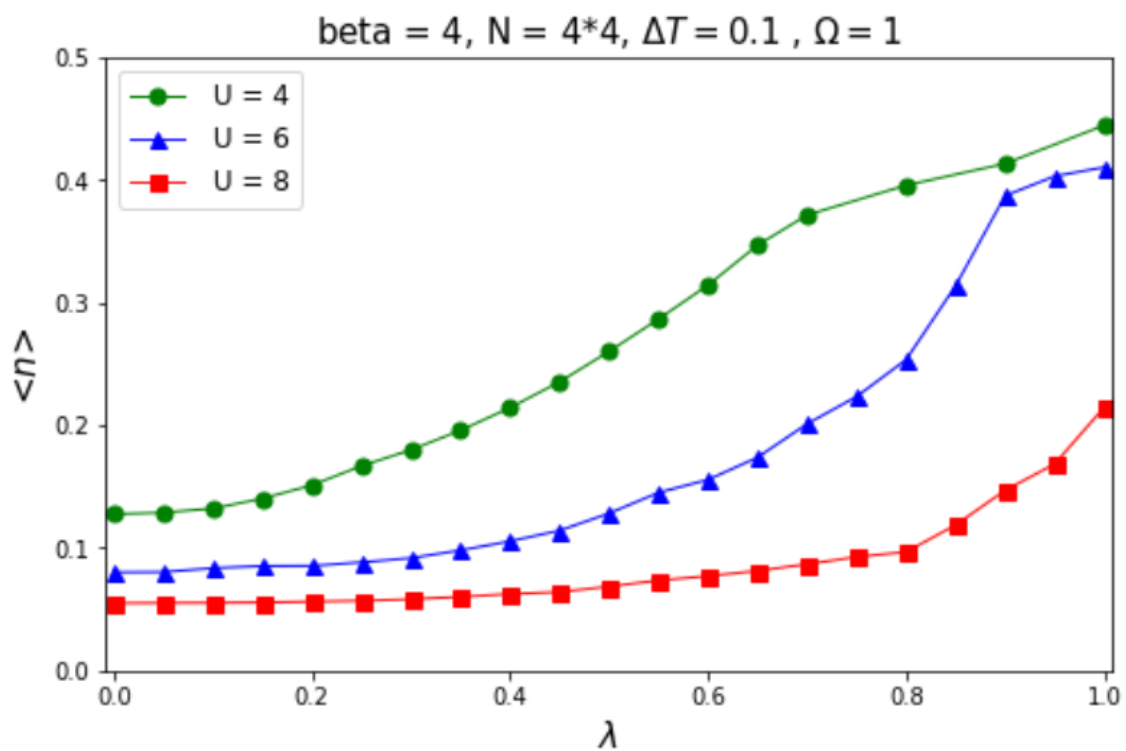


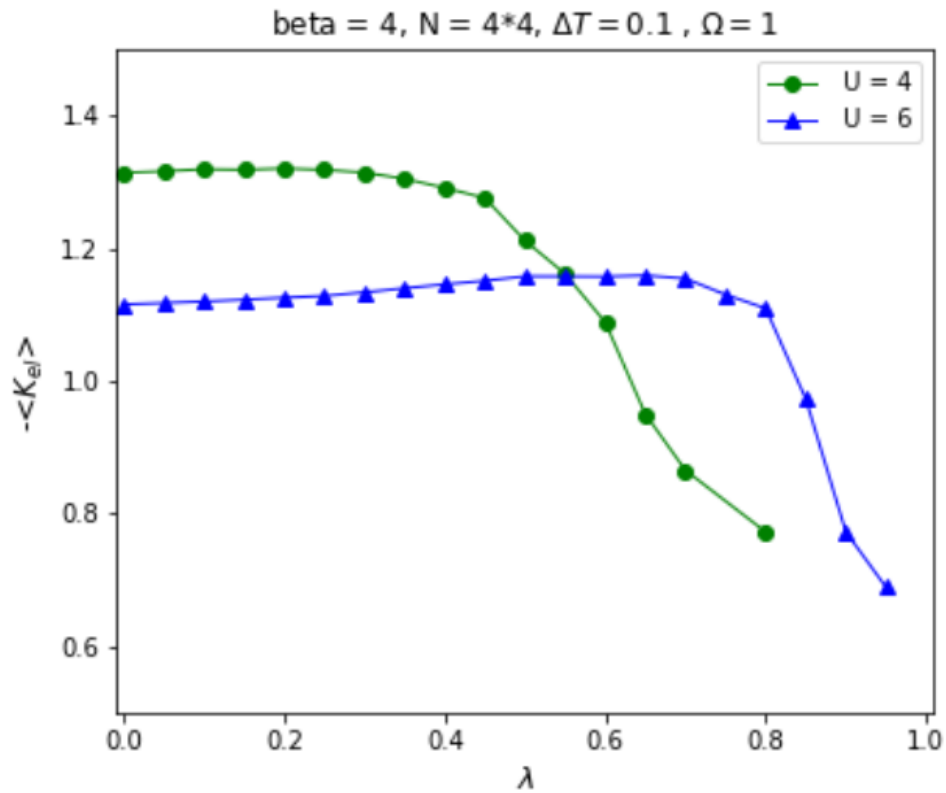
The average potential energy of electrons (all in half-filling)



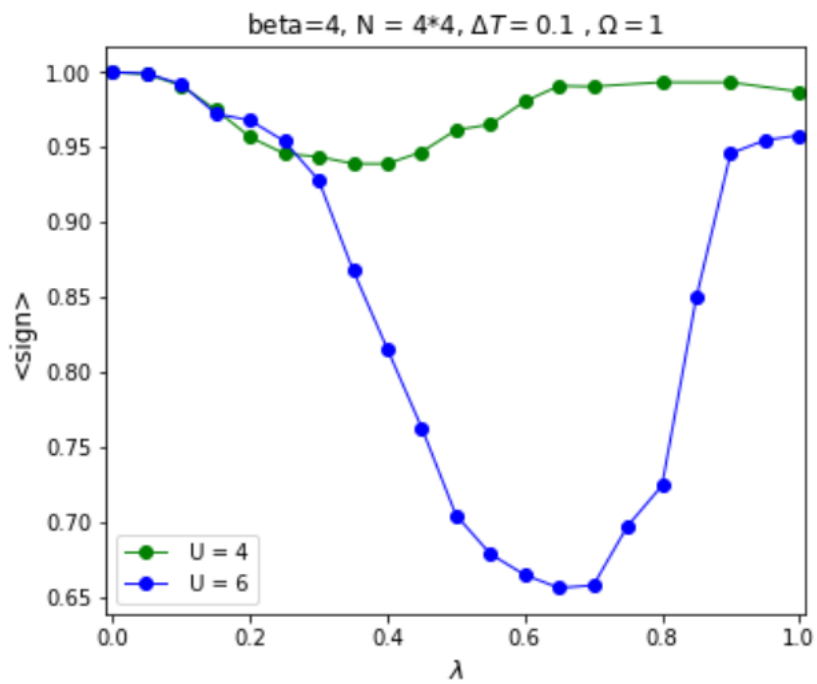
The average double occupancy (all in half-filling):



The average absolute value of kinetic energy of electrons (all in half-filling):



Average sign for $U = 4$ and $U = 6$ cases:



Values:

$$U = 4$$

λ	sign	$\langle P_{el} \rangle$	$\langle K_{el} \rangle$	$\langle n \rangle$
0	1.0	0.510308	-1.31363	0.127577
0.05	0.998735	0.515562	-1.31594	0.12889
0.1	0.991085	0.52884	-1.31904	0.13221
0.15	0.97508	0.561407	-1.31824	0.1403517
0.2	0.95676	0.604996	-1.32027	0.1512489
0.25	0.9457	0.667896	-1.31812	0.166974
0.3	0.9437	0.720099	-1.31389	0.18002477
0.35	0.93906	0.783666	-1.30456	0.1959165
0.4	0.939029	0.857561	-1.29091	0.21439
0.45	0.946908	0.94199	-1.27558	0.23549
0.5	0.961471	1.04111	-1.21129	0.260276
0.55	0.96521	1.14687	-1.21129	0.2867166
0.6	0.980519	1.25767	-1.08824	0.314416
0.65	0.990934	1.38767	-0.949857	0.346916
0.7	0.990496	1.48605	-0.865079	0.371513
0.8	0.993346	1.58309	-0.772134	0.3957719
0.9	0.993276	1.66274	-0.68824	0.413406
1	0.987098	1.77844	-0.639575	0.444609

$$U = 6$$

λ	sign	$\langle P_{el} \rangle$	$\langle K_{el} \rangle$	$\langle n \rangle$
0	1.0	0.481198	-1.11527	0.080199
0.05	0.999195	0.48235	-1.1173	0.0803916
0.1	0.991977	0.501415	-1.11954	0.0835692
0.15	0.972433	0.511413	-1.12236	0.085235
0.2	0.967909	0.512571	-1.12534	0.08542857
0.25	0.954014	0.530084	-1.12794	0.08834734
0.3	0.928015	0.55072	-1.13347	0.0917866
0.35	0.86796	0.588643	-1.1396	0.09810712
0.4	0.81547	0.63304	-1.14548	0.10550661
0.45	0.762988	0.685297	-1.15081	0.114216147
0.5	0.704682	0.769387	-1.15751	0.12823118
0.55	0.678809	0.87107	-1.15739	0.1451783
0.6	0.664881	0.938192	-1.15709	0.1556986
0.65	0.656155	1.04324	-1.15883	0.17387269
0.7	0.657859	1.20726	-1.1542	0.20121027
0.75	0.697509	1.34079	-1.12989	0.2234655
0.8	0.724303	1.5214	-1.10925	0.25356724
0.85	0.849861	1.89007	-0.972687	0.3137959
0.9	0.945878	2.3233	-0.772134	0.38721588
0.95	0.954665	2.41893	-0.688777	0.40315506
1	0.957955	2.55665	-0.651059	0.4104416

Average sign:

