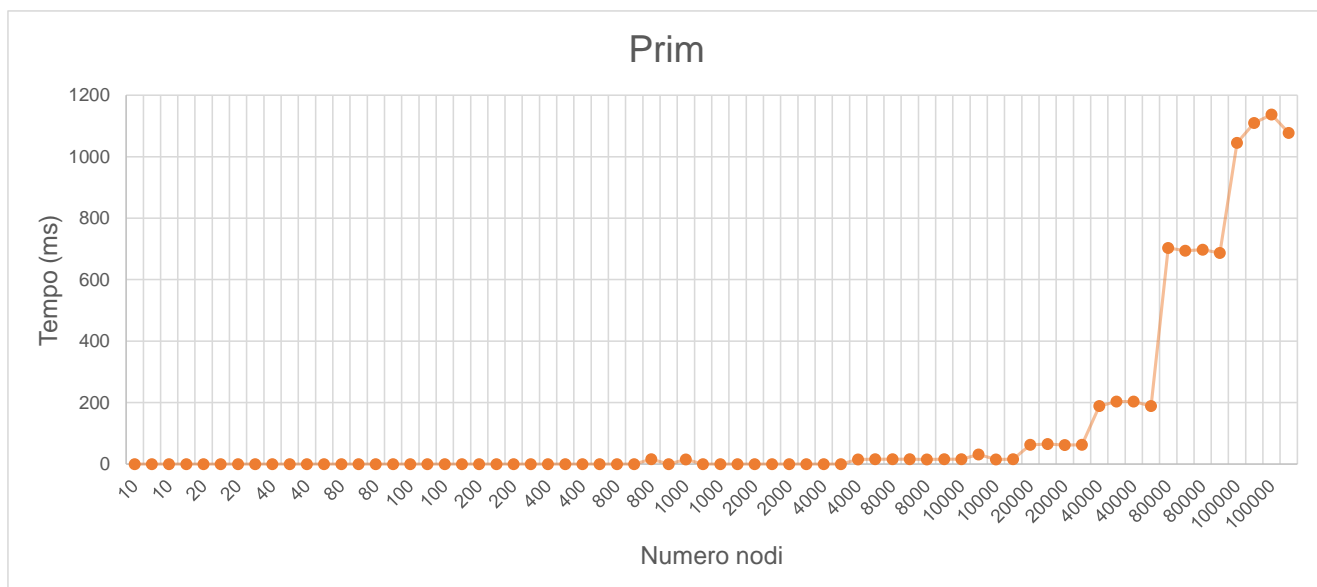


Relazione di laboratorio

Corso di Algoritmi Avanzati
Laurea Magistrale in Informatica
A.A. 2019-2020

Magarotto Francesco
Muraro Enrico
Piva Giulio



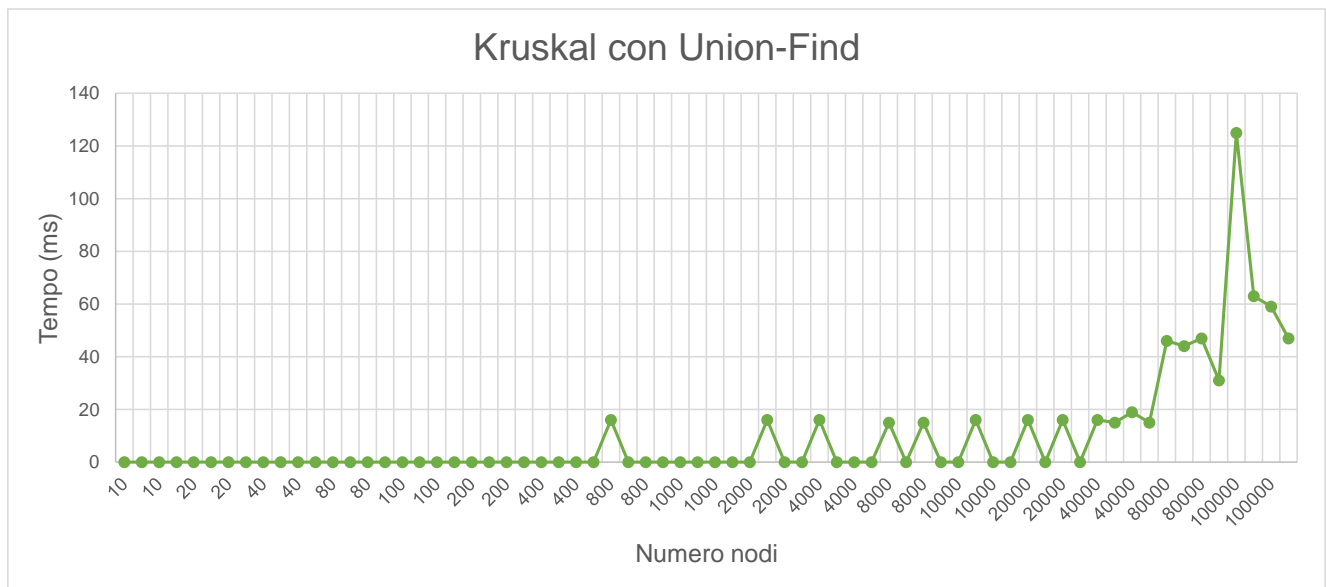


Figura 3: Grafico andamento algoritmo di Kruskal con Union-Find

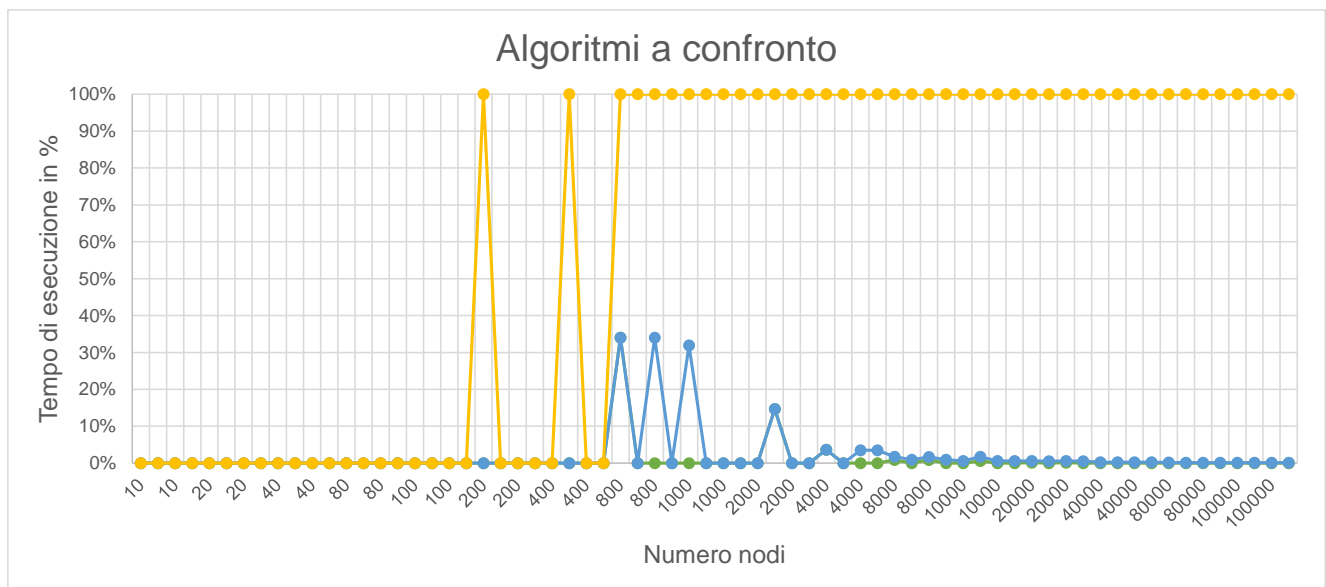
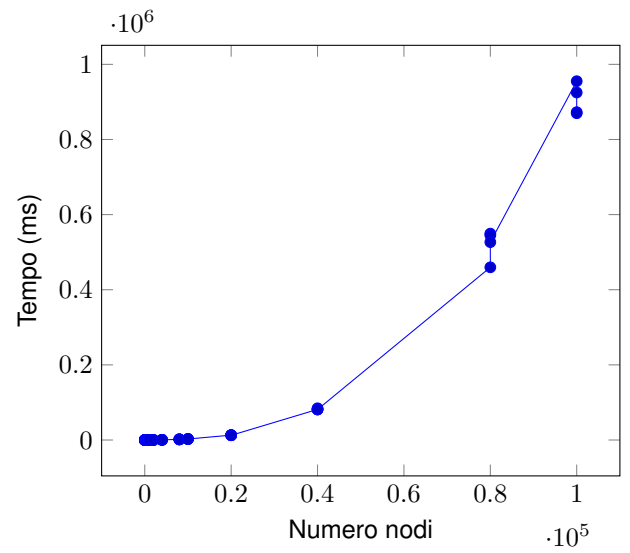


Figura 4: Grafico che mette in relazione i tempi di esecuzione dei tre algoritmi in base al tempo richiesto per la loro esecuzione

1 Kruskal

#	Numero nodi	Tempo (ms)	MST
1	10	0	29316
2	10	0	2126
3	10	0	-44765
4	10	0	20360
5	20	0	-32021
6	20	0	18596
7	20	0	-42560
8	20	0	-37205
9	40	0	-122078
10	40	0	-37021
11	40	0	-79570
12	40	0	-79741
13	80	0	-139926
14	80	0	-211345
15	80	0	-110571
16	80	0	-233320
17	100	0	-141960
18	100	0	271742

#	Numero nodi	Tempo (ms)	MST
45	8000	1722	-17844628
46	8000	1713	-18800966
47	8000	1731	-18741474
48	8000	1753	-18190442
49	10000	2637	-22086729
50	10000	2601	-22338561
51	10000	2563	-22581384
52	10000	2638	-22606313
53	20000	12976	-45978687
54	20000	13002	-45195405
55	20000	13009	-47854708
56	20000	12427	-46420311
57	40000	81522	-92003321
58	40000	81525	-94397064
59	40000	84400	-88783643
60	40000	81242	-93017025
61	80000	459713	-186834082
62	80000	549392	-185997521
63	80000	545050	-182065015
64	80000	526711	-180803872
65	100000	955113	-230698391
66	100000	925063	-230168572
67	100000	872704	-231393935
68	100000	869876	-231011693



2 Kruskal con Union-Find

#	Numero nodi	Tempo (ms)	MST
1	10	0	29316
2	10	0	2126
3	10	0	-44765
4	10	0	20360
5	20	0	-32021
6	20	0	18596
7	20	0	-42560
8	20	0	-37205
9	40	0	-122078
10	40	0	-37021
11	40	0	-79570
12	40	0	-79741
13	80	0	-139926
14	80	0	-211345
15	80	0	-110571
16	80	0	-233320
17	100	0	-141960
18	100	0	-271743
19	100	0	-288906
20	100	0	-232178
21	200	16	-510185
22	200	0	-515136
23	200	0	-444357
24	200	0	-393278
25	400	0	-1122919
26	400	31	-788168
27	400	0	-895704
28	400	0	-733645
29	800	31	-1541291
30	800	32	-1578294
31	800	31	-1675534
32	800	15	-1652119
33	1000	32	-2091110
34	1000	32	-1934208
35	1000	31	-2229428
36	1000	31	-2359192
37	2000	109	-4811598
38	2000	93	-4739387
39	2000	109	-4717250
40	2000	125	-4537267
41	4000	423	-8722212
42	4000	437	-9314968
43	4000	412	-9845767
44	4000	439	-8681447

#	Numero nodi	Tempo (ms)	MST
45	8000	6.75	
46	10000	7	
47	20000	11.5	
48	40000	29.5	
49	80000	57.25	
50	100000	99.75	

