

# Prodotto Matrice-Vettore

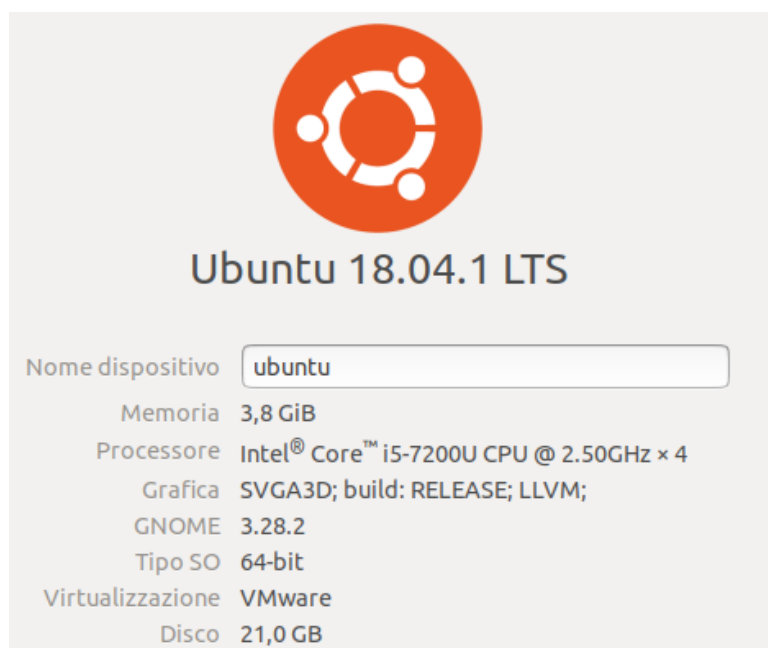
di Petraglia Mariangela

Per il corso di Metodi Numerici per l'Informatica

A.A. 2018/2019

## Caratteristiche macchina di test

I test sono stati eseguiti su una macchina virtuale con le seguenti caratteristiche:

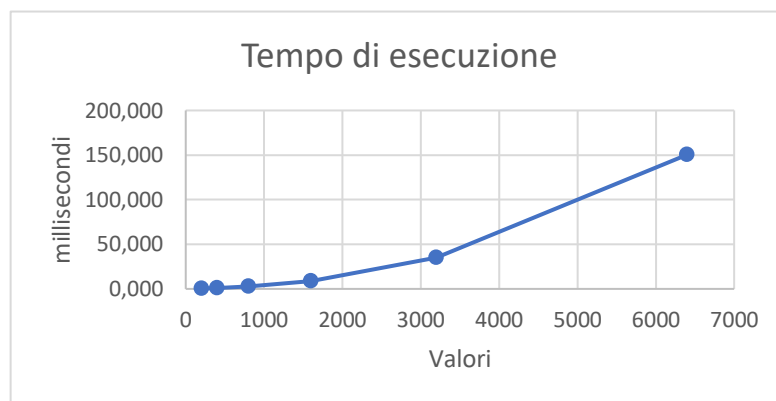


I 4 core indicati nelle specifiche sono virtuali: il processore della macchina sottostante è dual-core.

## Risultati di esecuzione

### Sequenziale

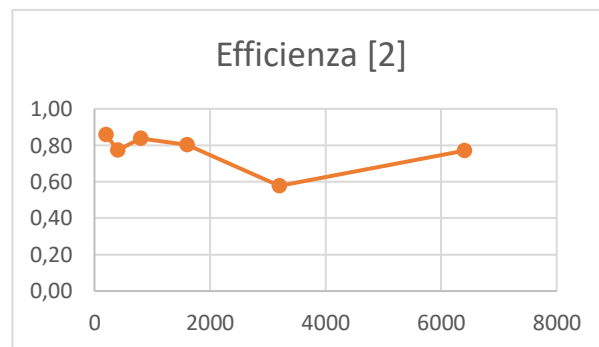
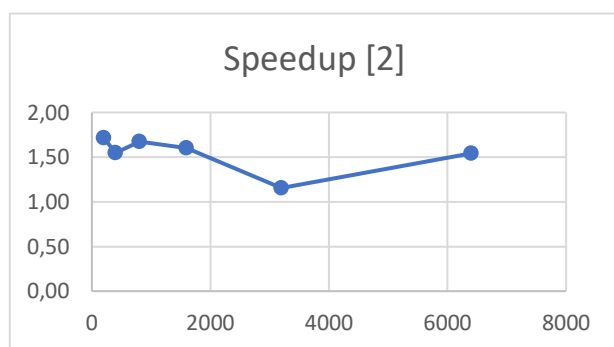
N	Tempo (ms)
200	0,180
400	0,65
800	2,522
1600	8,673
3200	34,961
6400	150,399



### Parallela I strategia (blocchi di righe)

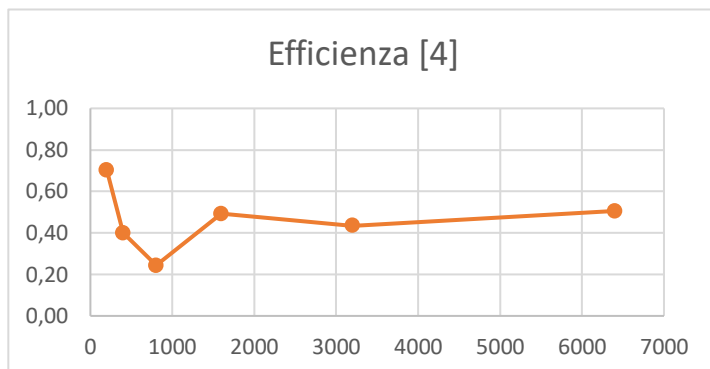
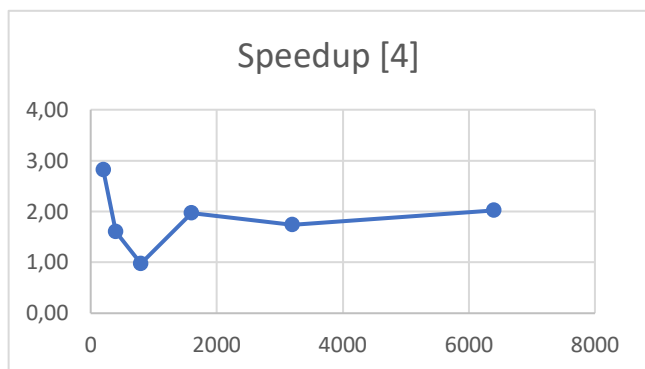
#### 2 processori

N	Tempo (ms)	$S_p$	$E_p$
200	0,113	1,72	0,86
400	0,627	1,55	0,77
800	1,133	1,67	0,84
1600	8,205	1,60	0,80
3200	34,745	1,15	0,58
6400	77,349	1,54	0,77



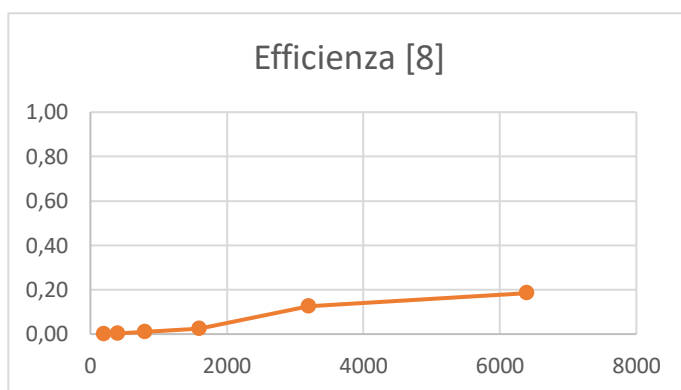
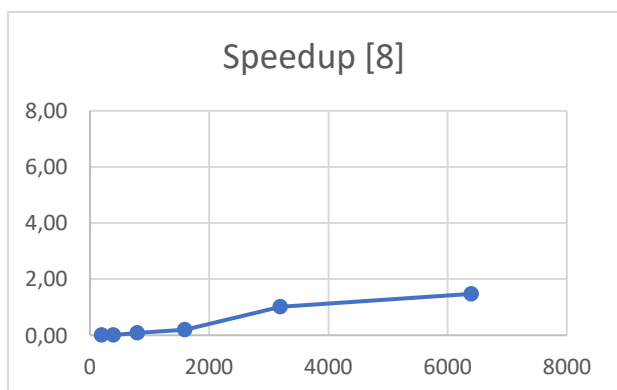
#### 4 processori

N	Tempo (ms)	$S_p$	$E_p$
200	0,064	2,81	0,70
400	0,407	1,60	0,40
800	2,584	0,98	0,24
1600	4,407	1,97	0,49
3200	20,136	1,74	0,43
6400	74,240	2,03	0,51



8 processori

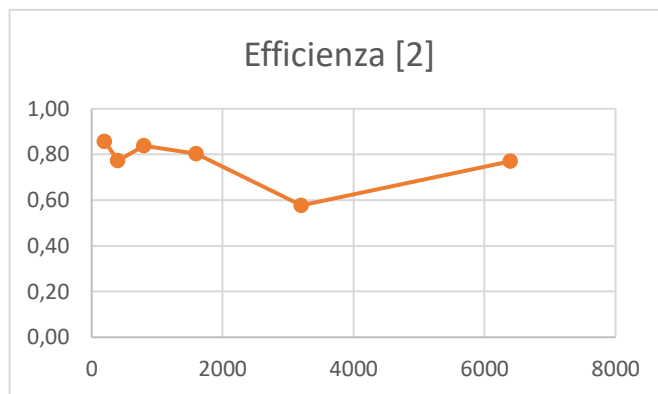
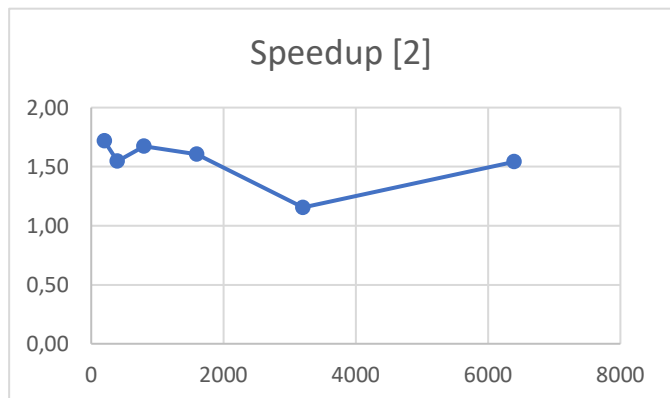
N	Tempo (ms)	$S_p$	$E_p$
200	55,491	0,00	0,00
400	45,031	0,01	0,00
800	32,031	0,08	0,01
1600	43,999	0,20	0,02
3200	34,556	1,01	0,13
6400	101,886	1,48	0,18



Parallela II strategia (blocchi di colonne)

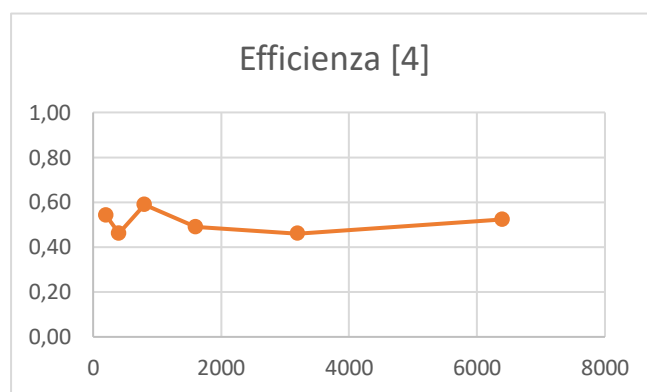
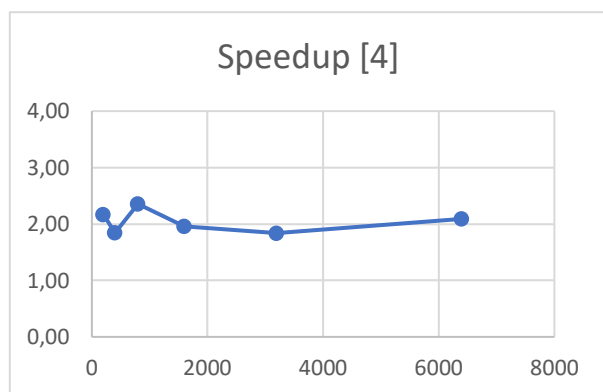
2 processori

N	Tempo (ms)	$S_p$	$E_p$
200	0,083	1,72	0,86
400	0,279	1,55	0,77
800	2,104	1,67	0,84
1600	6,957	1,60	0,80
3200	22,710	1,15	0,58
6400	93,114	1,54	0,77



4 processori

N	Tempo (ms)	$S_p$	$E_p$
200	0,083	2,17	0,54
400	0,352	1,85	0,46
800	1,071	2,35	0,59
1600	4,421	1,96	0,49
3200	19,013	1,84	0,46
6400	71,982	2,09	0,52



8 processori

N	Tempo (ms)	$S_p$	$E_p$
200	43,741	0,00	0,00
400	38,836	0,02	0,00
800	95,698	0,03	0,00
1600	59,838	0,14	0,02
3200	63,977	0,55	0,07
6400	124,246	1,21	0,15

