ΤΥΠΟΛΟΓΙΟ $[K, \Omega, \Phi]$

Horner with L/S $\Rightarrow [K, \Omega, \Phi] = [O(n), 2n, n+3]$

Horner with JIT L/S $\Rightarrow [K, \Omega, \Phi] = [O(1), 2n, n+3]$

BLAS daxpy with L/S $\Rightarrow [K, \Omega, \Phi_{min}] = [2n+O(1), 2n, 3n+1]$

$$\Phi_{min} = \frac{3}{2} + \frac{1}{2n}$$

BLAS dot with L/S $\Rightarrow [K, \Omega, \Phi_{min}] = [2n+O(1), 2n, 2n+2]$

$$\Phi_{min} = 1 + \frac{1}{n}$$

BLAS daxpy with JIT L/S $\Rightarrow [K, \Omega, \Phi] = [O(1), 2n, 3n+1]$

$$\Phi = \frac{3}{2} + \frac{1}{2n} = \Phi_{min}$$

BLAS-2 rank-1 update with L/S $\Rightarrow [K, \Omega, \Phi_{min}] = [O(n_1 n_2), 2n_1 n_2, 2n_1 n_2 + n_1 + n_2]$

1ος τρόπος

$$\Phi_{min} = 1 + \frac{1}{2n_1} + \frac{1}{2n_2}$$

BLAS-2
rank-1 update
with L/S

$\Rightarrow$

$[\mu, \Omega, \phi] = [O(n_1), 2n_1n_2, 3n_1n_2 + n_2]$

$\mu = \frac{3}{2} + \frac{1}{2n_1}$

2ος τρόπος

BLAS-2
rank-1 update $\Rightarrow$ $[\mu, \Omega, \phi] = [O(n_1), 2n_1n_2, 2n_1n_2 + n_1 + n_2 \Rightarrow \phi_{min}]$
with L/S

$\mu = 1 + \frac{1}{2n_1} + \frac{1}{2n_2} = \underline{\mu_{min}}$

3ος τρόπος

GER
BLAS-2 block $\Rightarrow$
with L/S

αξιολόγηση των εναλλακτικών
επιφωλεύσεων των βρόχων
για εύρεση της καλύτερης
υλοποίησης.

DGEMM
BLAS-3 block $\Rightarrow$
with L/S

$[\mu, \Omega, \phi_{min}] =$

$= [O(n_1n_2 + n_1n_3 + n_2n_3), 2n_1n_2n_3,$
$2n_1n_2 + (n_1 + n_2)n_3]$

$\mu_{min} = \frac{1}{n_3} + \frac{1}{2n_1} + \frac{1}{2n_2}$