

▲ System maintenance is scheduled for Wednesday, August 29, 2018 from 14:30-15:30 UTC. Courses might not be available during this time.

<u>Course</u> > <u>Week</u>... > <u>4.6 W</u>... > 4.6.3 ...

4.6.3 LAFF Routines (so far)

laff routines encountered so far:

Operation Abbrev.	Definition	Function	Approx. cost			
		laff_	flops	memo ps		
Vector-vector operations						
Copy (copy)	y := x	copy(x, y)	0	2n		
Vector scaling (scal)	x := lpha x	scal(alpha, x)	n	2n		
Vector scaling (scal)	x:=x/lpha	invscal(alpha, x)	n	2n		
Scaled addition (axpy)	y := lpha x + y	axpy(alpha, x, y)	2n	3n		
Dot product (dot)	$lpha := x^T y$	alpha = dot(x, y)	2n	2n		

Dot product (dots)	$lpha := x^T y + lpha$	dots(x, y, alpha)	2n	2n
Length (norm2)	$lpha := \ x\ _2$	alpha = norm2(x)	2n	n
Matrix-vector opera	tions			
General matrix- vector	y:=lpha Ax+eta y	<pre>gemv('No transpose', alpha, A, x, beta, y)</pre>	2mn	mn
multiplication (gemv)	$y := lpha A^T x + eta y$	gemv('Transpose', alpha, A, x, beta, y)	2mn	mn
Rank-1 update (ger)	$A := lpha xy^T + A$	ger(alpha, x, y, A)	2mn	mn

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