

Modified Gram-Schmidt

```
1: for  $j = 1$  to  $n$  do  
2:    $u_j = a_j$   
3: end for  
4: for  $j = 1$  to  $n$  do  
5:    $r_{jj} = ||u_j||_2$   
6:    $q_j = u_j / r_{jj}$   
7:   for  $k = j + 1$  to  $n$  do  
8:      $r_{jk} = q_j^* u_k$   
9:      $u_k = u_k - r_{jk} q_j$   
10:  end for  
11: end for
```
