Programación Cuadrática con el Método de Mehrota

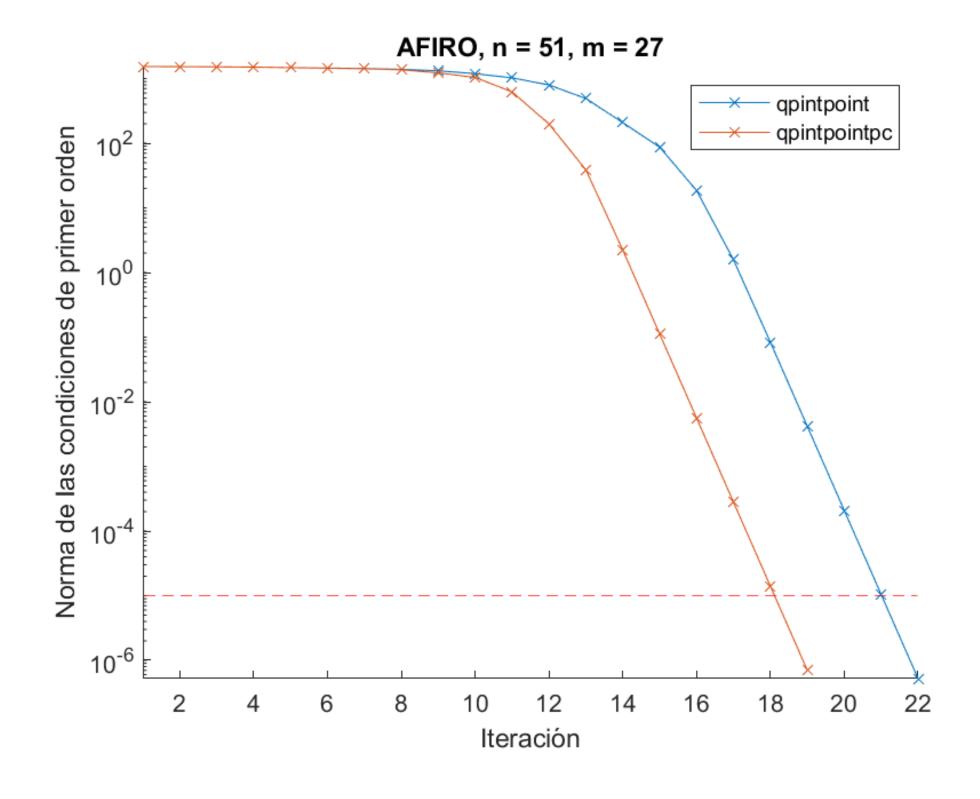
Mónica Alba González Miguel González Borja Jorge Rotter Vallejo

AFIRO

$$n = 51$$
 $m = 27$

$$m = 27$$

| | qpintpoint_full | qpintpoint | qpintpointpc_full | qpintpointpc | quadprog |
|---------------------|-----------------|----------------|-------------------|----------------|------------|
| Iteraciones | 29 | 21 | 18 | 18 | 7 |
| Tiempo (s) | 0.021026 | 0.016536 | 0.028907 | 0.036616 | 0.058853 |
| Valor de la función | 2.0082E+05 | 2.0082E+05 | 2.0082E+05 | 2.0082E+05 | 2.0082E+05 |
| Sistema completo | - | 1 | - | 0 | - |
| Convergencia | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ | |

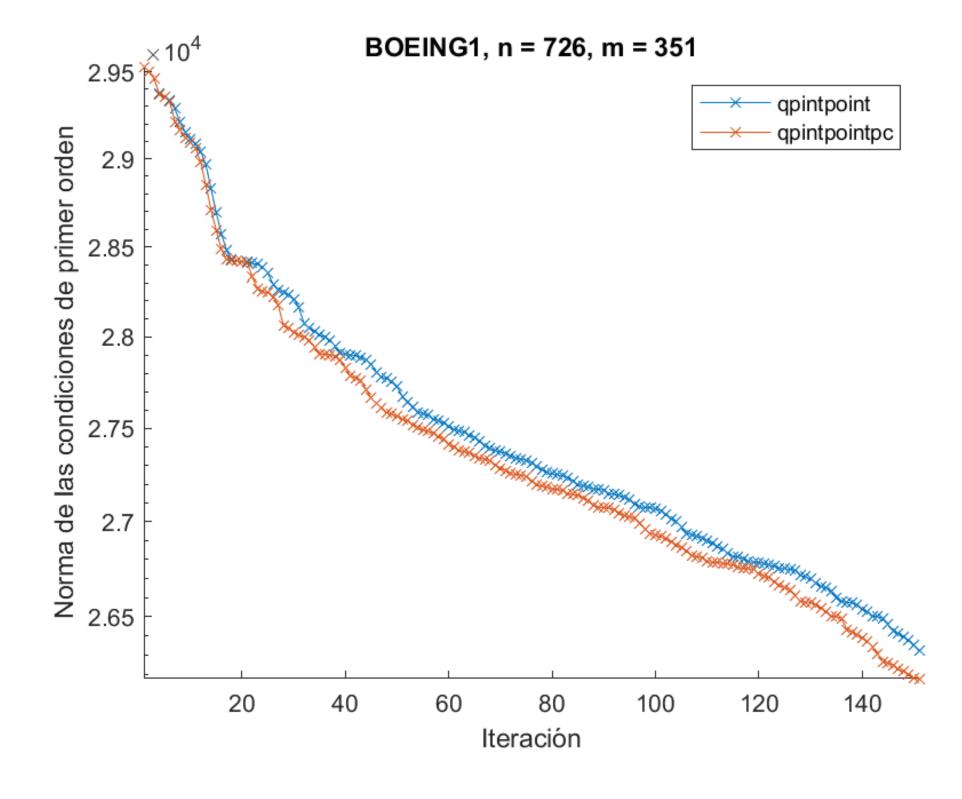


BOEING1

$$n = 726$$

$$n = 726$$
 $m = 351$

| | qpintpoint_full | qpintpoint | qpintpointpc_full | qpintpointpc | quadprog |
|---------------------|-----------------|------------|-------------------|--------------|-----------|
| Iteraciones | 150 | 150 | 150 | 150 | 150 |
| Tiempo (s) | 30.539 | 20.984 | 60.288 | 21.684 | 2.5559 |
| Valor de la función | 1.7284E+08 | 1.763E+08 | 1.7182E+08 | 1.7182E+08 | 4.158E+06 |
| Sistema completo | - | 60 | - | 23 | - |
| Convergencia | × | × | × | × | × |

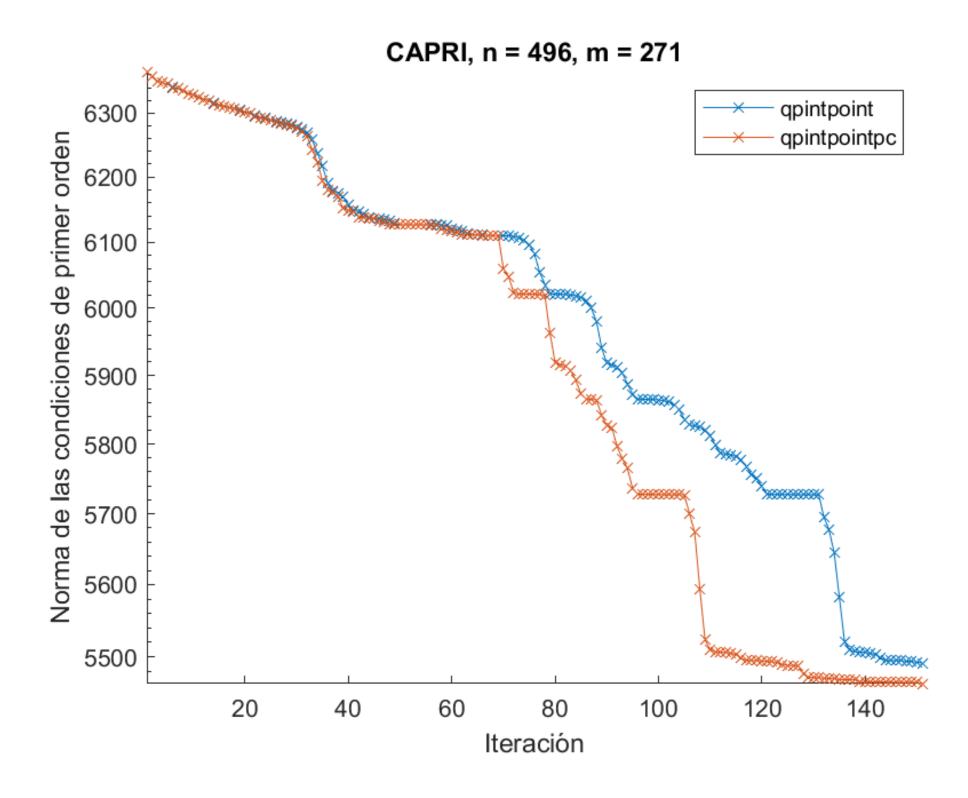


CAPRI

$$n = 496$$

$$n = 496$$
 $m = 271$

| | qpintpoint_full | qpintpoint | qpintpointpc_full | qpintpointpc | quadprog |
|---------------------|-----------------|------------|-------------------|--------------|----------------|
| Iteraciones | 150 | 150 | 150 | 150 | 41 |
| Tiempo (s) | 12.779 | 7. En 7676 | 24.713 | 12.554 | 0.27425 |
| Valor de la función | 1.035+e07 | 1.0297+e07 | 1.0354+e07 | 1.0354+e07 | 9.3979+e07 |
| Sistema completo | - | 52 | - | 49 | - |
| Convergencia | × | × | × | × | $ \checkmark $ |

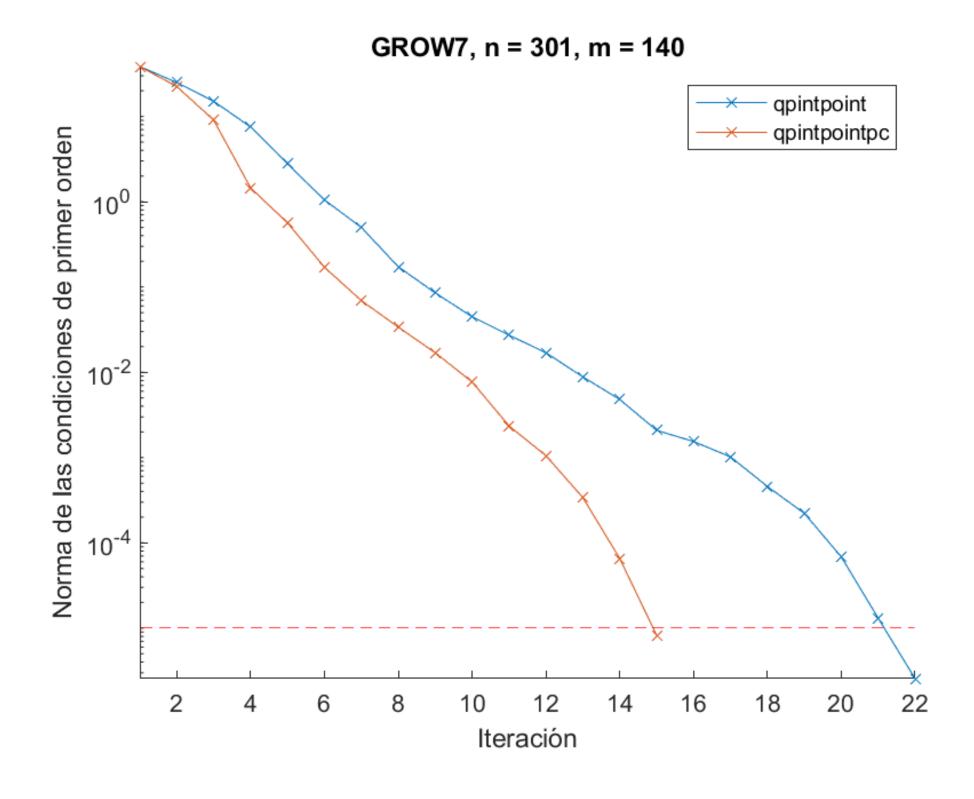


GROW7

$$n = 301$$

$$m = 140$$

| | qpintpoint_full | qpintpoint | qpintpointpc_full | qpintpointpc | quadprog |
|---------------------|-----------------|----------------|-------------------|----------------|----------------|
| Iteraciones | 25 | 21 | 14 | 14 | 11 |
| Tiempo (s) | 0.69438 | 0.15178 | 0.71385 | 0.16869 | 0.039308 |
| Valor de la función | -88.36 | -88.36 | -88.36 | -88.36 | -88.36 |
| Sistema completo | - | 0 | - | 0 | - |
| Convergencia | ♦ | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ |



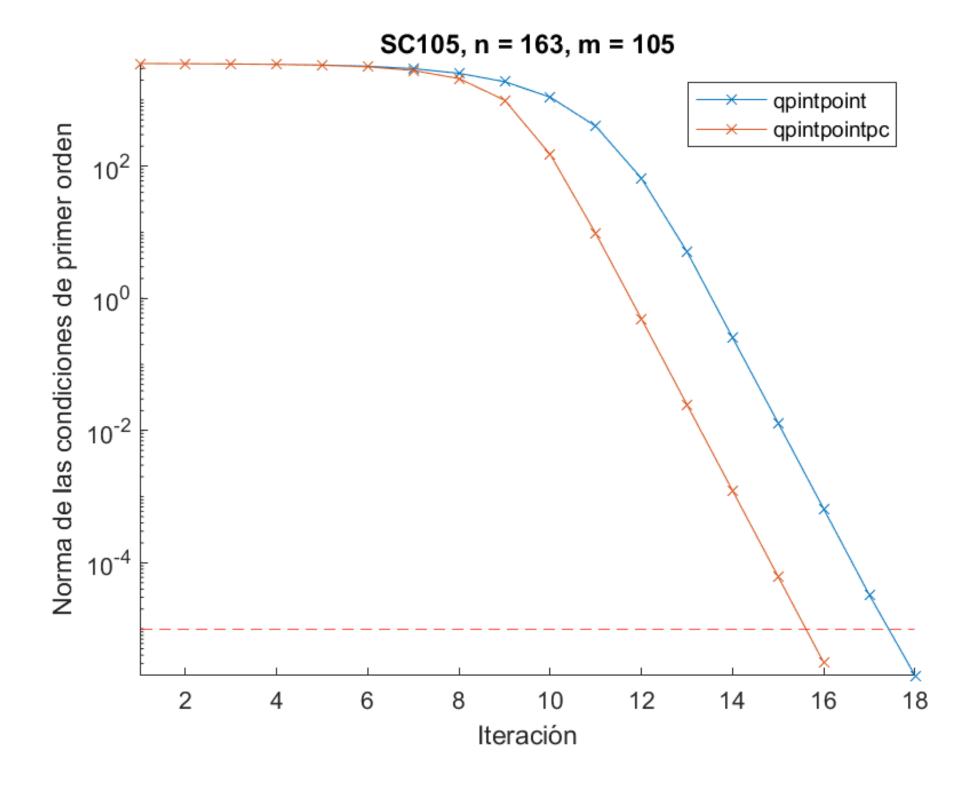
SC105

$$n = 163$$
 $m = 105$

Matriz mal condicionada

$$m = 105$$

| | qpintpoint_full | qpintpoint | qpintpointpc_full | qpintpointpc | quadprog |
|---------------------|-----------------|----------------|-------------------|----------------|----------------|
| Iteraciones | 27 | 17 | 15 | 15 | 8 |
| Tiempo (s) | 0.16364 | 0.045007 | 0.15601 | 0.074281 | 0.0088308 |
| Valor de la función | 1.772E+05 | 1.772E+05 | 1.772E+05 | 1.772E+05 | 1.772E+05 |
| Sistema completo | - | 3 | - | 3 | - |
| Convergencia | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ |



GROW7

$$n = 660$$

$$m = 300$$

| | qpintpoint_full | qpintpoint | qpintpointpc_full | qpintpointpc | quadprog |
|---------------------|-----------------|----------------|-------------------|----------------|----------------|
| Iteraciones | 56 | 87 | 37 | 37 | 17 |
| Tiempo (s) | 8.7194 | 5.8812 | 11.029 | 3.5177 | 0.20946 |
| Valor de la función | 14453 | 14453 | 14453 | 14453 | 14453 |
| Sistema completo | - | 12 | - | 4 | - |
| Convergencia | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ | $ \checkmark $ |

