



UR5

Inverse Kinematics wrt Fixed:

```
[[ 8.07467485e-06  9.99999996e-01 -8.65490759e-05 -5.99875823e-01]
 [ 1.66020512e-04 -8.65504152e-05 -9.99999982e-01  9.99806576e-02]
 [-9.99999986e-01  8.06030578e-06 -1.66021210e-04  9.99052455e-02]
 [ 0.00000000e+00  0.00000000e+00  0.00000000e+00  1.00000000e+00]]
[[ 0.  1.  0. -0.6]
 [ 0.  0. -1.  0.1]
 [-1.  0.  0.  0.1]
 [ 0.  0.  0.  1. ]]
```

Iterations:

26

Final Configuration:

```
[ 3.02064715 -223.56720969 441.24477561 -161.12752113  9.30391889
 54.97924648] // this is later passed through modulus to be in [-pi,pi]
```

WAM

Initial Joint Angles:

```
[ 0.04378288  0.01963448 -0.17513453  0.03776945 -0.18636636 -0.04424871
 0.02341173]
```

Inverse Kinematics wrt Fixed:

```
[[ 9.99999780e-01  1.83976047e-04 -6.37367498e-04  3.99869043e-01]
 [-1.84536018e-04  9.99999597e-01 -8.78620720e-04 -4.59371704e-04]
 [ 6.37205596e-04  8.78738144e-04  9.99999411e-01  4.00096386e-01]
 [ 0.00000000e+00  0.00000000e+00  0.00000000e+00  1.00000000e+00]]
[[ 1.  0.  0.  0.4]
 [ 0.  1.  0.  0. ]
 [ 0.  0.  1.  0.4]
 [ 0.  0.  0.  1. ]]
```

Iterations:

12

Final Configuration:

```
[-27.39013371  5.81571918  8.0848724 -16.67859502 -33.9822407
 2.20079269 54.2008066 ]//this is later passed through modulus to be in [-pi,pi]
```