Octave (Debugging)

File Edit Debug Window Help News

Current Directory:

Workspace

Filter

Name	Class	Dimen	Value	Attribute
B	double	12x1	[-0.7264; -139.70; 485.41; 0.8356; 967.37; -432.80; -716.92; -263.11; 635.74; -514.65	
A	double	12x3	[3.6436e-05, 4.5070e-03, -7.3167e-03; -3.1362e-05, 0.1467, -0.5214; 8.5941e-03, 0.5213, 0.1467; 3.0328e-07	
B1	double	3x1	[-0.7264; -139.70; 485.41]	
B2	double	3x1	[0.8356; 967.37; -432.80]	
B3	double	3x1	[-716.92; -263.11; 635.74]	
B4	double	3x1	[-514.65; 1163.0; -530.39]	
A1	double	3x3	[3.6436e-05, 4.5070e-03, -7.3167e-03; -3.1362e-05, 0.1467, -0.5214; 8.5941e-03, 0.5213, 0.1467]	
A2	double	3x3	[3.0328e-07, -1.1080e-04, 1.0936e-04; 1.4254e-04, 0.6344, 0.9308; 6.2400e-05, -0.9308, 0.6344]	
A3	double	3x3	[0.5414, -0.7841, 0.4183; 0.4863, 0.3846, -0.6204; -0.7438, 0.081098, 0.3365]	
A4	double	3x3	[1.7831, 0.6172, -0.076948; -0.4918, 1.5387, -0.6840; 0.3807, -0.5735, 0.2746]	
Rp	double	4x1	[400; 0; 0; 1]	
Rp_calc	double	4x1	[-544.58; 801.05; 493.39; 1]	
TCP	double	4x1	[-10.665; -55.259; 272.96; 1]	
P1	double	4x4	[0.9994, -0.035380, 4.0580e-03, -536.98; -0.035423, -0.9993, 0.011033, 742.44; 3.6650e-03, -0.011170	
P2	double	4x4	[0.9993, -0.035314, 0.012651, -538.62; -0.036643, -0.8468, 0.5307, 609.03; -8.0280e-03, -0.5308	
P3	double	4x4	[0.9993, -0.035160, 0.012629, -539.47; -0.020758, -0.8036, -0.5948, 918.87; 0.031062, 0.5941	
P4	double	4x4	[0.4915, 0.8166, -0.3028, -411.43; 0.7682, -0.5703, -0.2909, 857.55; -0.4102, -0.089627	
P5	double	4x4	[0.1491, -0.8857, 0.4395, -711.74; -0.9524, -0.2481, -0.1769, 824.90; 0.2657, -0.3923	
V1	double	4x4	[3.6436e-05, 4.5070e-03, -7.3167e-03, 0.7264; -3.1362e-05, 0.1467, -0.5214, 139.70; 8.5941e-03, 0.5213	
V2	double	4x4	[3.0328e-07, -1.1080e-04, 1.0936e-04, -0.8356; 1.4254e-04, 0.6344, 0.9308, -967.37; 6.2400e-05, -0.9308	
V3	double	4x4	[0.5414, -0.7841, 0.4183, 716.92; 0.4863, 0.3846, -0.6204, 263.11; -0.7438, 0.081098	
V4	double	4x4	[1.7831, 0.6172, -0.076948, 514.65; -0.4918, 1.5387, -0.6840, -1163.0; 0.3807, -0.5735	

Editor

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```
13  %%Robot Position#3
14    P3=[   0.999302 -0.03516  0.012629  -539.472;
15           -0.020758  -0.803611 -0.594792 918.865;
16           0.031062 0.594115  -0.80378  745.96;
17           0  0 0 1];
18  %%Robot Position#4
19    P4=[   0.491481 0.816553  -0.302801 -411.425;
20           0.768211 -0.570271 -0.290934 857.55;
21           -0.410241  -0.089627 -0.907562 732.146;
22           0  0 0 1];
23  %%Robot Position#5
24    P5=[    0.149148  -0.885748 0.43955 -711.74;
25           -0.952442  -0.248144 -0.176859 824.897;
26           0.265724 -0.392268 -0.880634 714.802;
27           0  0 0 1];
28
29  Rp = [400; 0;0;1];
30
31  %%  Calc vector from robot base origin to P*
32  V1 = eye(4)-P1*inv(P2);
33  V2 = eye(4)-P2*inv(P3);
34  V3 = eye(4)-P3*inv(P4);
35  V4 = eye(4)-P4*inv(P5);
36  A1 = V1(1:3,1:3);
37  A2 = V2(1:3,1:3);
38  A3 = V3(1:3,1:3);
39  A4 = V4(1:3,1:3);
40
41  %% A=12x3 Matrix
42  A = [A1;A2;A3;A4];
43  B1 = -V1(1:3,4);
44  B2 = -V2(1:3,4);
45  B3 = -V3(1:3,4);
46  B4 = -V4(1:3,4);
47
48  %% B=12x1 Matrix
49  B = [B1;B2;B3;B4];
50
51  %% "\" = Left division. This is conceptually equivalent to the expression inv (x) * y
52  %% but it is computed without forming the inverse of x.
53  %% If the system is not square, or if the coefficient matrix is singular, a minimum
54  %% norm solution is computed.
55  Rp_calc = A\B
56
57  %% Calc vector from robot flange to tool (XYZ only)
58  Rp_calc(4,1) = 1;
59  TCP = inv(P1)*Rp_calc
```

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Documentation Variable Editor Editor