BTP_dynamic matrix

SIX BAR MECHANISM

AX=B

We have 16 equations and 16 unknowns

For reference

A=

F_DX	F_DY	F_CX	F_CY	F_A4X	F_A4Y	F_A1X	F_A1Y	F_OX	F_OY	F_A2X	F_A2Y	F_BX	F_BY	N	T
1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	-1	0	1	0	0	0	0	0	0	0	0	0	0	0
0	0	0	-1	0	1	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
0	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	-1	1	0
0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0
0	0	-L_DC*(sin_tet5)	L_DC*(cos_tet5)	0	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	-L_AC*(sin_tet4)	-L_AC*(cos_tet4)	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	-L_AO*(sin_tet1)	L_AO*(cos_tet1)	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	L_AB*(sin_tet2)	-L_AB*(cos_tet2)	0	0

X=

	B=
F_DX	m_5*(a_c5x)
F_DY	(m_5*g)+(m_5*(a_c5y))
F_CX	m_4*(a_c4x)
F_CY	(m_4*g)+(m_4*(a_c4y))
F_A4X	m_1*(a_c1x)
F_A4Y	(m_1*g)+(m_1*(a_c1y))
F_A1X	m_2*(a_c2x)
F_A1Y	(m_2*g)+(m_2*(a_c2y))
F_OX	-m_3*(a_B)
F_OY	m_3*g
F_A2X	0
F_A2Y	0
F_BX	[L_(dc/d)*(alpha_dc)]+[0.5*(L_dc)*(cos_tet5)*(m_5)*(g+a_c5y)]+[0.5*(L_dc)*(sin_tet5)*(m_5*a_c5x)]
F_BY	[L_(ac/c)*(alpha_ac)]+[0.5*(L_ac)*(cos_tet4)*(m_4)*(g+a_c4y)]+[0.5*(L_ac)*(sin_tet4)*(m_4*a_c4x)]
N	[L_(ao/o)*(alpha_ao)]+[0.5*(L_ao)*(cos_tet1)*(m_1)*(g+a_c1y)]+[0.5*(L_ao)*(sin_tet1)*(m_1*a_c1x)]
T	[L_(ab/a)*(alpha_ab)]+[0.5*(L_ab)*(cos_tet2)*(m_2)*(g+a_c2y)]+[0.5*(L_ab)*(sin_tet2)*(m_2*a_c2x)]