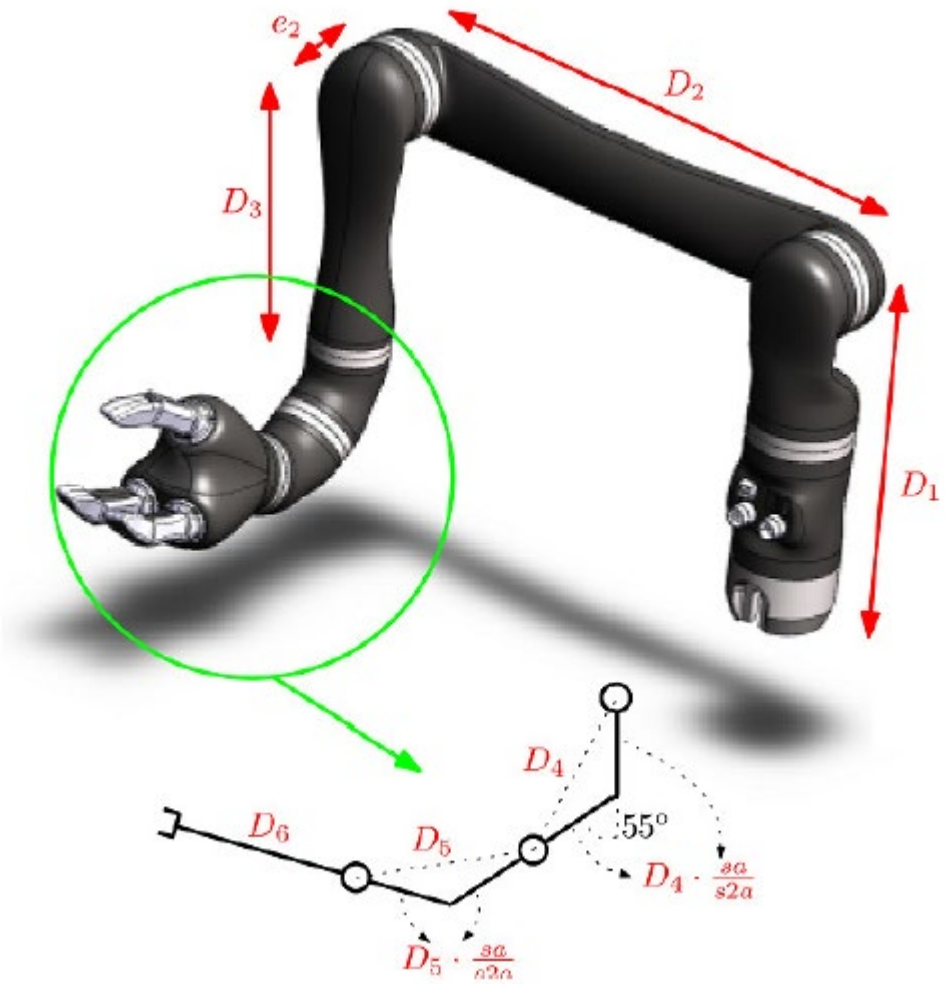
Quiz #3: Robot Arm Forward Kinematics



- Develop a matlab code of the forward kinematics of the robot arm (DH parameters are shown in the next slide)
- Display the robot pose of joint angles of {0, 0, 0, 0, 0, 0 }

DH Parameters of JACO Arm

DH Parameters				
i	**alpha(i-1)**	**a(i-1)**	**di**	**teta1**
1	0	0	D1	q1
2	-pi/2	0	0	q2
3	0	D2	e2	q3
4	-pi/2	0	d4b	q4
5	2*aa	0	d5b	q5
6	2*aa	0	d6b	q6

Robot lenght values (meters)		
D1	0.2755	Base to elbow
D2	0.4100	Arm lengh
D3	0.2073	Front arm lengh
D4	0.0743	First wrist lengh
D5	0.0743	Second wrist lengh
D6	0.1687	Wrist to center of the hand
e2	0.0098	Joint 3-4 lateral offset

Alternate parameters	
aa	((11.0*PI)/72.0)
ca	(cos(aa))
sa	(sin(aa))
c2a	(cos(2*aa))
s2a	(sin(2*aa))
d4b	(D3 + sa/s2a *D4)
d5b	(sa/s2a*D4 + sa/s2a *D5)
d6b	(sa/s2a*D5 + D6)