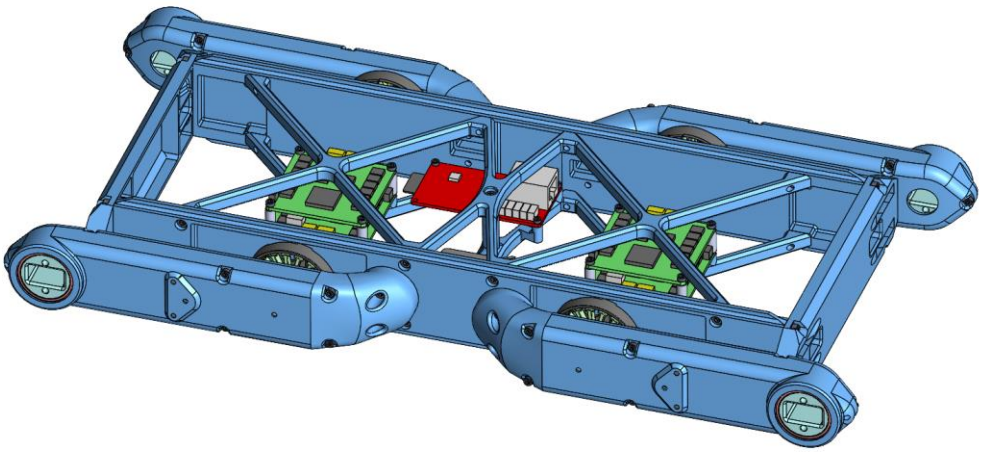
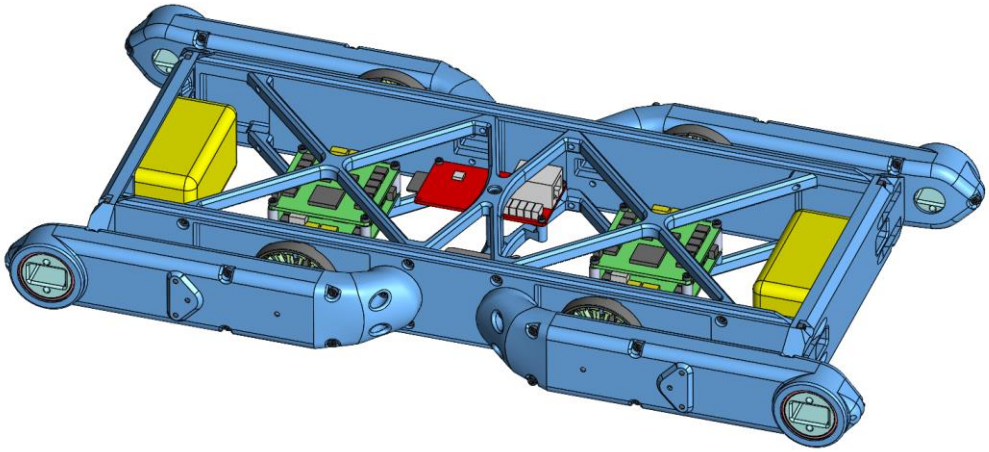
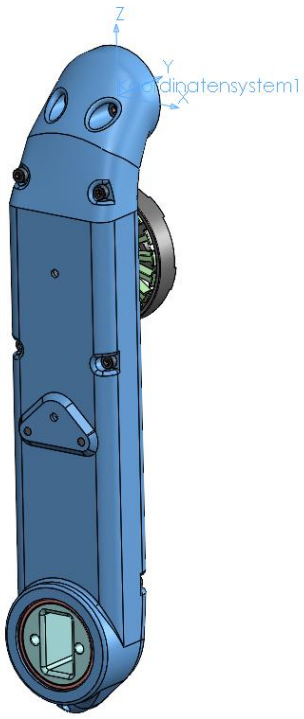
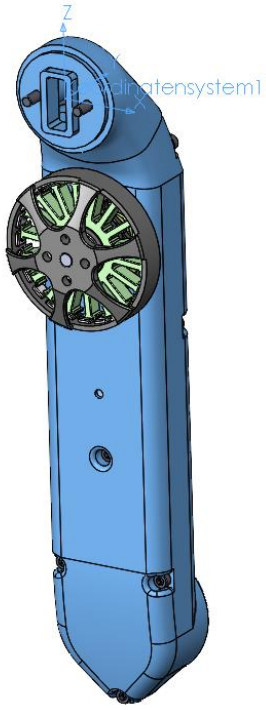
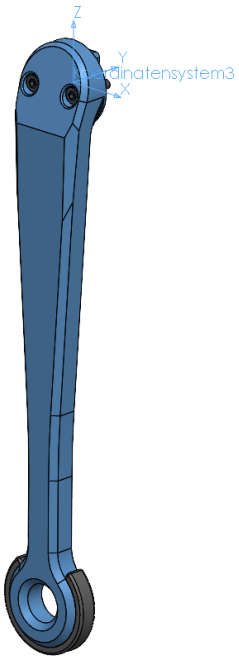
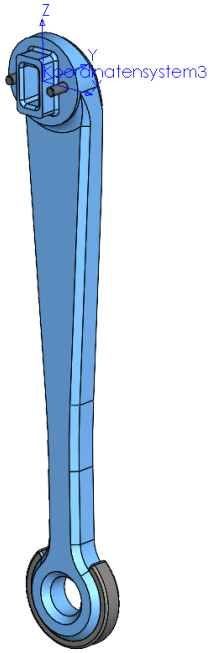
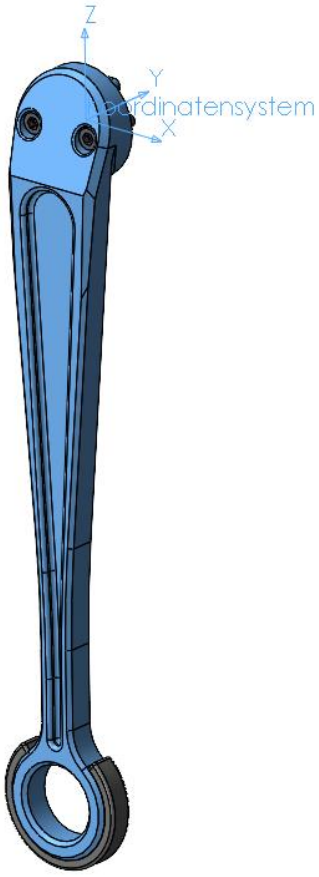
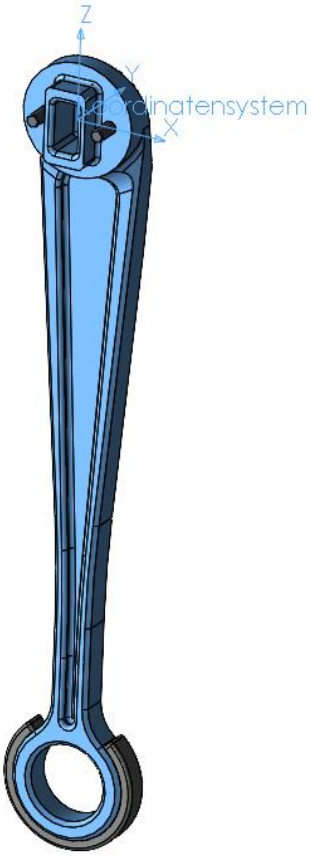
Quadruped Robot 8dof v2 Inertia Parameters 17.8.2022

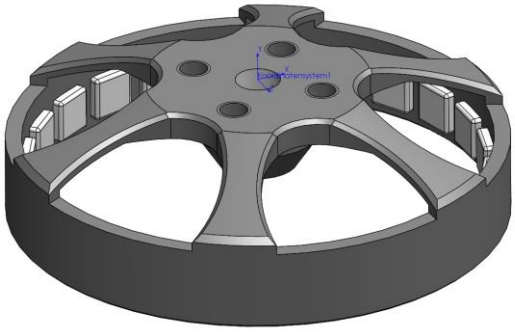
	Body without batteries
Mass [kg]	**1.02195485**
Center of Mass Position [m] with respect to the URDF coordinate system.	**X = -0.00012331** **Y = 0.00031510** **Z = -0.00026969**
Inertia [kg*m^2] with respect to the center of mass aligned to the URDF coordinate system.	**Lxx = 0.00533767** **Lxy = -0.00000516** **Lxz = 0.00000122** **Lyx = -0.00000516** **Lyy = 0.01314118** **Lyz = 0.00000061** **Lzx = 0.00000122** **Lzy = 0.00000061** **Lzz = 0.01821833**
Screenshot	

	Body with batteries (2 x 100g)
Mass [kg]	**1.22108401**
Center of Mass Position [m] with respect to the URDF coordinate system.	**X = -0.00010320** **Y = 0.00026372** **Z = -0.00022571**
Inertia [kg*m^2] with respect to the center of mass aligned to the URDF coordinate system.	**Lxx = 0.00544046** **Lxy = -0.00000517** **Lxz = 0.00000122** **Lyx = -0.00000517** **Lyy = 0.01812777** **Lyz = 0.00000059** **Lzx = 0.00000122** **Lzy = 0.00000059** **Lzz = 0.02326265**
Screenshot	

	Upper Leg Module Right Side	Upper Module Leg Left Side
Mass [kg]	**0.14737324**	**0.14737324**
Center of Mass Position [m] with respect to the URDF coordinate system.	**X = -0.00001530** **Y = -0.01767640** **Z = -0.07838230**	**X = 0.00001530** **Y = 0.01767640** **Z = -0.07838230**
Inertia [kg*m^2] with respect to the center of mass aligned to the URDF coordinate system.	**Lxx = 0.00041540** **Lxy = 0.00000000** **Lxz = -0.00000010** **Lyx = 0.00000000** **Lyy = 0.00041637** **Lyz = 0.00004589** **Lzx = -0.00000010** **Lzy = 0.00004589** **Lzz = 0.00002982**	**Lxx = 0.00041540** **Lxy = 0.00000000** **Lxz = 0.00000010** **Lyx = 0.00000000** **Lyy = 0.00041637** **Lyz = -0.00004589** **Lzx = 0.00000010** **Lzy = -0.00004589** **Lzz = 0.00002982**
Screenshot		

	Lower Leg v2 Right Side	Lower Leg v2 Left Side
Mass [kg]	**0.02318294**	**0.02318294**
Center of Mass Position [m] with respect to the URDF coordinate system.	**X = 0.00000000** **Y = -0.00776716** **Z = -0.07003876**	**X = 0.00000000** **Y = 0.00776716** **Z = -0.07003876**
Inertia [kg*m^2] with respect to the center of mass aligned to the URDF coordinate system.	**Lxx = 0.00008508** **Lxy = 0.00000000** **Lxz = 0.00000000** **Lyx = 0.00000000** **Lyy = 0.00008580** **Lyz = 0.00000200** **Lzx = 0.00000000** **Lzy = 0.00000200** **Lzz = 0.00000139**	**Lxx = 0.00008508** **Lxy = 0.00000000** **Lxz = 0.00000000** **Lyx = 0.00000000** **Lyy = 0.00008580** **Lyz = -0.00000200** **Lzx = 0.00000000** **Lzy = -0.00000200** **Lzz = 0.00000139**
Screenshot		

	Lower Leg v3 Right Side	Lower Leg v3 Left Side
Mass [kg]	**0.02426237**	**0.02426237**
Center of Mass Position [m] with respect to the URDF coordinate system.	**X = 0.00000000** **Y = -0.00794521** **Z = -0.05882309**	**X = 0.00000000** **Y = 0.00794521** **Z = -0.05882309**
Inertia [kg*m^2] with respect to the center of mass aligned to the URDF coordinate system.	**Lxx = 0.00008841** **Lxy = 0.00000000** **Lxz = 0.00000000** **Lyx = 0.00000000** **Lyy = 0.00008916** **Lyz = 0.00000292** **Lzx = 0.00000000** **Lzy = 0.00000292** **Lzz = 0.00000155**	**Lxx = 0.00008841** **Lxy = 0.00000000** **Lxz = 0.00000000** **Lyx = 0.00000000** **Lyy = 0.00008916** **Lyz = -0.00000292** **Lzx = 0.00000000** **Lzy = -0.00000292** **Lzz = 0.00000155**
Screenshot		

Motor Rotor Antigravity 4004	Inertia [kg*m^2]
	Lxx = 0.00000245 Lxy = 0.00000000 Lxz = 0.00000000 Lyx = 0.00000000 **Lyy = 0.00000447** Lyz = 0.00000000 Lzx = 0.00000000 Lzy = 0.00000000 Lzz = 0.00000245 The reflected inertia at the output joint is 81 times higher compared to the inertia of the motor rotor. For rotation around the motor axis only the Lyy value should be relevant.