

04 Robo_Flower // Burning man proposal

An interactive lighting fixture

Year: 2019 1st master semester. **Function:** Interactive light.
Client: Academic project. **Status:** Prototype. **Digital tools:** Fusion 360, Arduino IDE and AutoCAD.

The Robo-Flowers are basically a smart wind chimes which could be actuated by wind, human or motorized, and also could be programmed for interactive live music shows or can even recognize famous musical pieces by its self and interact with them.

They are equipped with motion sensors, so they open like a flower when they got approached by a human. However sometimes they stay closed based on noise levels and wind intensity (Figure 2).

To minimize power consumption, the design was developed maintaining balance between moving parts; the middle part acts as a counter weight for outer parts (Figure 1).

Meanwhile, to reduce overall mass and maintain stiffness, the whole system was constructed from bended wires and 9 multi-functional 3d printed parts, which were designed specifically to cover all complex joints (Figure 3).

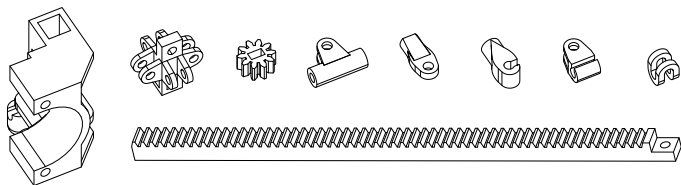


Figure 3: 3d printed parts

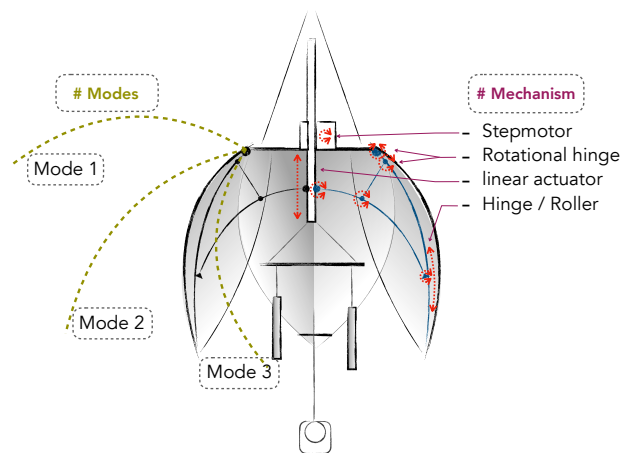


Figure 1: System mechanism

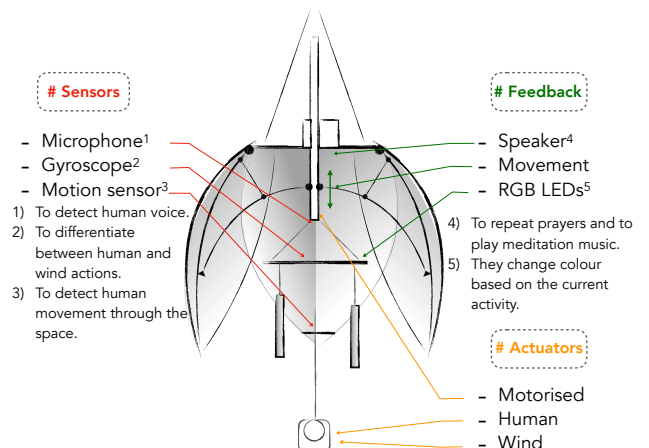


Figure 2: Sensors diagram