A16-166
Application Group

求救「球」救
SOS! Ball Rescue

隊伍名稱　求救「球」救 / SOS! Ball Rescue
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作品摘要

球救機器人結構由兩個同心圓鋁環以及兩組壓克力半球所組成的陀螺儀結構，可使機器人的動力裝置永遠在下方，這兩個球形結構的組合，能使球救機器人共有 720 度的旋轉自由度，以利在救援溺水者時，不因求救者掙扎胡亂拍打或球體翻轉移動，一樣能夠自由移動達到救生的目標。本研究的球救機器人能讓有意識的溺水者，在球體上使用遙控器自行操控，失去意識的溺水者則可由救難人員遙控，移動至安全地點。此機器人球體上的 LED 會發出 SOS 的閃爍燈號，以便救難人員在夜間也能清楚判斷出溺水者的位置；底部的移動裝置也能夠更換成排水型或是螺旋槳型的動力裝置；球頂有磁扣式的充電模組，平常時能持續充電讓機器人保持最佳電力，拔開充電磁扣後，機器人自動進入運行模式，達到隨時待命在需要使用時能以最佳的狀況完成任務，進而達到「求救『球』救」的功能，本研究主題也是以這作為作品名稱。

Abstract

The spherical SOS robot rescuer is a gyroscope structure composed of two concentric aluminum rings and two acrylic hemispheres, allowing its power unit to stay at the bottom. The combination of these two spherical structures enables the robot rescuer to have a 720 degree rotation which move freely and carry out lifesaving tasks. The spherical SOS robot rescuer allows drowning victims who remain conscious to control the robot with a remote controller. For drowning victims who lose their consciousness, the robot could be control by rescuers or witness. The LED in the robot rescuer has flashing SOS signals and it is visible for rescuers to judge the drowning victim's spot even at night. The moving device at the bottom could be replaced with displacement or propeller power unit. On top of the robot rescuer is a magnetic button-like charging module. Once the charging magnetic button is unplugged, the robot rescuer automatically switches to the operating mode and always remains standby whenever needs for emergent cases. Thus, it fulfills the lifesaving job and is what we called the SOS robot.

圖 1.「求救『球』救」作品實體圖