

**Ministry of Higher Education and  
Scientific Research  
University of Technology  
Mechanical Engineering Department**



# **Singularity Free Positioning of Gough Stewart Robot Platform**

**A Thesis Submitted to the Mechanical Engineering Department in  
the University of Technology in Partial Fulfillment of the  
Requirements for the Degree of Doctor of Philosophy in Mechanical  
Engineering**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَيَسْأَلُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي وَمَا

أُوتِيتُمْ مِنَ الْعِلْمِ إِلَّا قَلِيلًا

صدق الله العلي العظيم

سُورَةُ الْاِسْرَاءِ الْاِيَةِ (85)

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