



**BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE  
PILANI - 333031 (RAJASTHAN) INDIA**

## **CERTIFICATE**

This is to certify that the thesis entitled “**Some Investigations on Vision Based Detection and Tracking of Mobile Robot during Navigation in Structured Environment**” submitted by **SANGRAM KESHARI DAS**, ID.No: **2012PHXF0402P** for award of Ph.D. of the Institute embodies original work done by him under my supervision.

Signature of the Supervisor:

Name in Capital Letters : **PROF. BIJAY KUMAR ROUT**  
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