

# MANiBOT

Advancing the physical intelligence and performance of roBOTs towards human-like bi-manual objects MANipulation



## Pioneering Bimanual Mobile Robots for Challenging Work Environments




MANiBOT aims to empower bi-manual, mobile, service robots with enhanced manipulation capabilities. This will enable them to adeptly handle diverse objects in a human-like manner, in diverse, challenging environments.

### MANiBOT TECHNOLOGIES

- New environment understanding and object/pose recognition methods, fusing vision, proximity and tactile sensing.
- A novel suite of manipulation primitives including non-prehensile manipulations.
- Innovative cognitive mechatronics, fusing advanced tactile and proximity sensors with the bi-manual mobile manipulator.
- A new approach for robot cognitive functions, based on multi-level robot cycles that allow learning, composing and swiftly adapting robot behaviours.



### EXPECTED IMPACT

-  MANiBOT innovations will unlock the potential of mobile service robots and boost their impact in major industry and service sectors.
-  MANiBOT robots will possess improved abilities to operate safely in challenging, human-populated spaces; increasing robot acceptance.
-  MANiBOT will reduce human involvement in difficult physical tasks, improving workers' health and job quality.



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