



ISTITUTO ITALIANO  
DI TECNOLOGIA

## TITLE

Attractor-based Whole-Body Motion Control (WBMC) System for an Articulated Robot

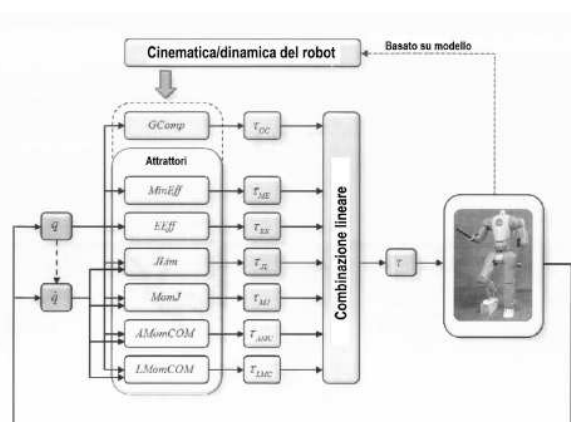
## INVENTORS

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## DESCRIPTION

A Model-Based, Whole-Body Motion-Control (WBMC) system for an articulated robot required to perform simultaneous tasks is described, the system comprising:

- one or more attractors each of which is an operationally independent closed-loop, model-based torque/force-control module associated with a corresponding robot's controlled task, and is designed to receive a quantity computed based on one or more representing the state of the robot, and to output robot's joint torques which are to be applied to robot's active joints to attract the robot's current state to a robot's target state;
- a torque and/or linear force command generator designed to receive the robot's joint torques and/or linear forces from the one or more attractors and to generate a torque and/or linear force command for the robot based on the received robot's joint torques to cause the robot's current state to converge to the robot's target state.



## APPLICATIONS

Robotics

## KEYWORDS

Full-Body, Motion Control, attractor, articulated robot

## BIBLIOGRAPHIC DATA

Sistema di controllo del movimento di tutto il corpo basato su attrattori per un robot articolato

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