Symmetry: A Basis for
Sensorimotor Reconstruction

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Abstract

Given a set of unknown sensors and actuators, sensorimotor reconstruction is achieved by exploiting relations between the sensor data and the actuator control data to determine sets of similar sensors, sets of similar actuators, necessary relations between them, as well as sensorimotor relations to the environment. Several authors have addressed this problem, and we propose here a principled approach that exploits various symmetries and that achieves more efficient and robust results. A theoretical position is defined, the approach shown more efficient than previous work, and experimental results given.