

Modularity exists everywhere in the natural world. Evolutionary roboticists have long sought to exploit the apparent success of modular designs in evolutionary robotics experiments. Challenges arise when attempting to emulate the mechanisms by which modularity evolves because it is not definitively known how modularity arises spontaneously. In past experiments it has been necessary to hard-code modularity from the start, introducing designer bias. Recent research on gene regulatory networks suggest a possible model for evolving modularity. Further research extrapolated these results to artificial neural controllers which controlled a simulated robotic arm in a kinematic simulator. This research attempts to further extrapolate this model to work in a simulated physical environment, which introduces new complexities and challenges to the problem.