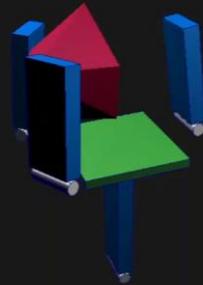
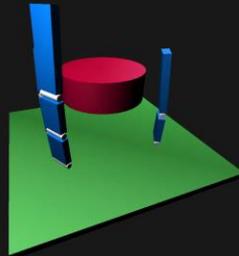
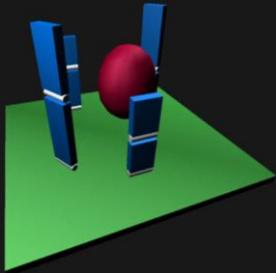
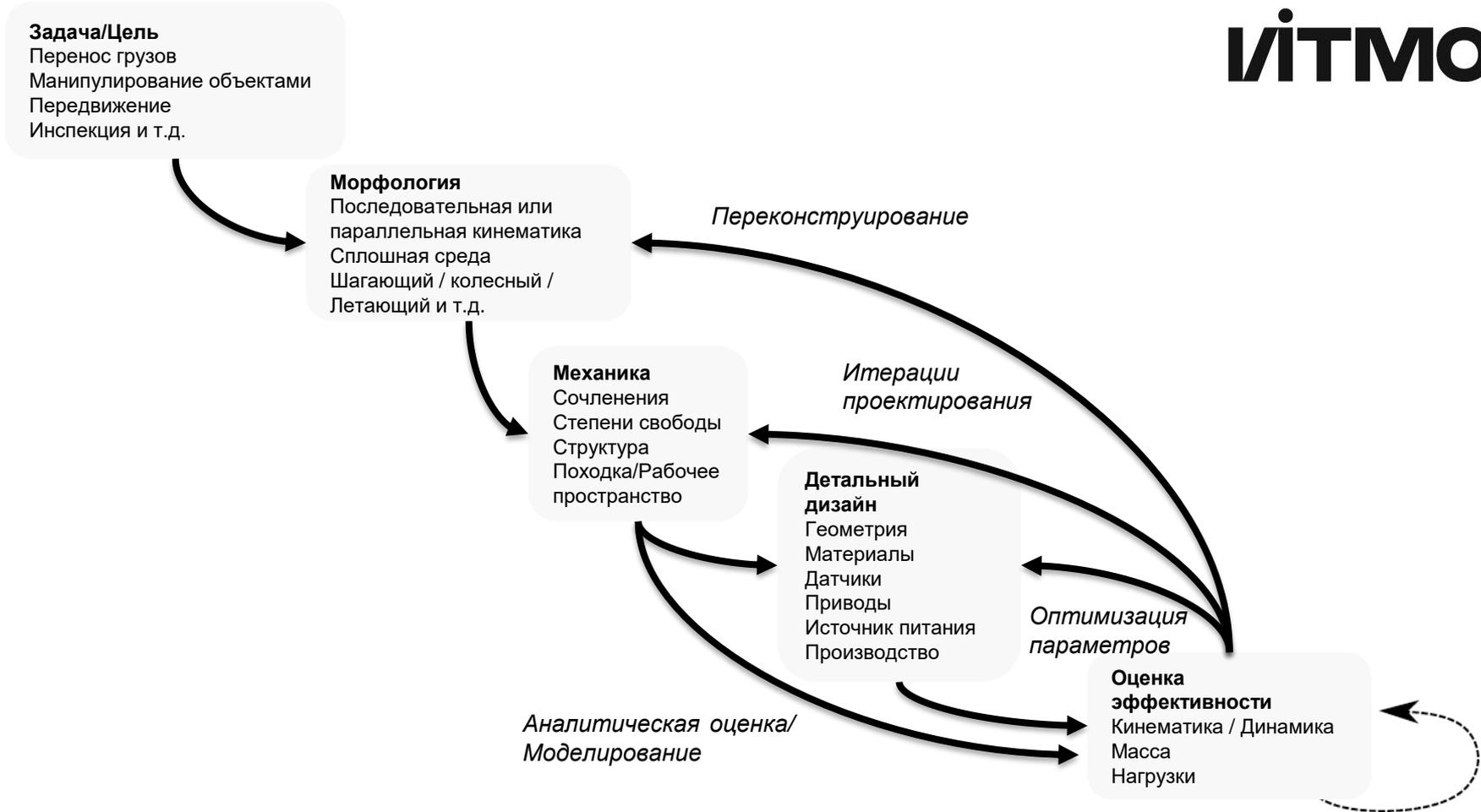


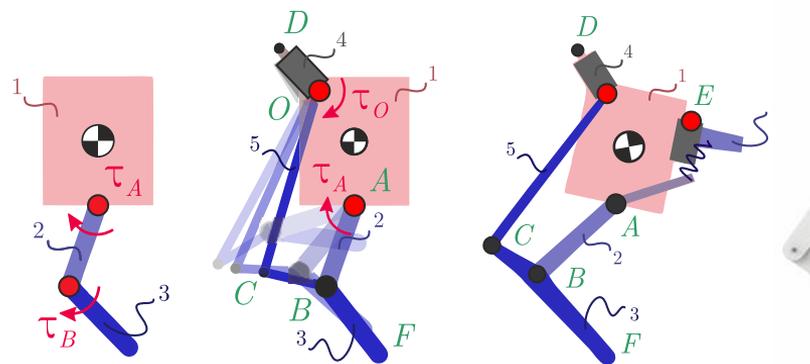
Фреймворк генеративного ко-дизайна робототехнических систем *rostok*

Жарков Кирилл





Адаптивная оптимизация



Детализация

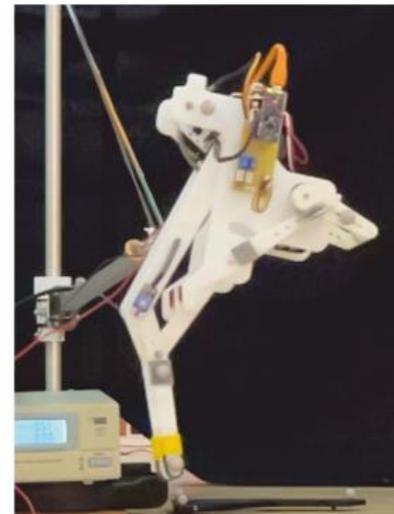
(a)

(б)

(в)

(г)

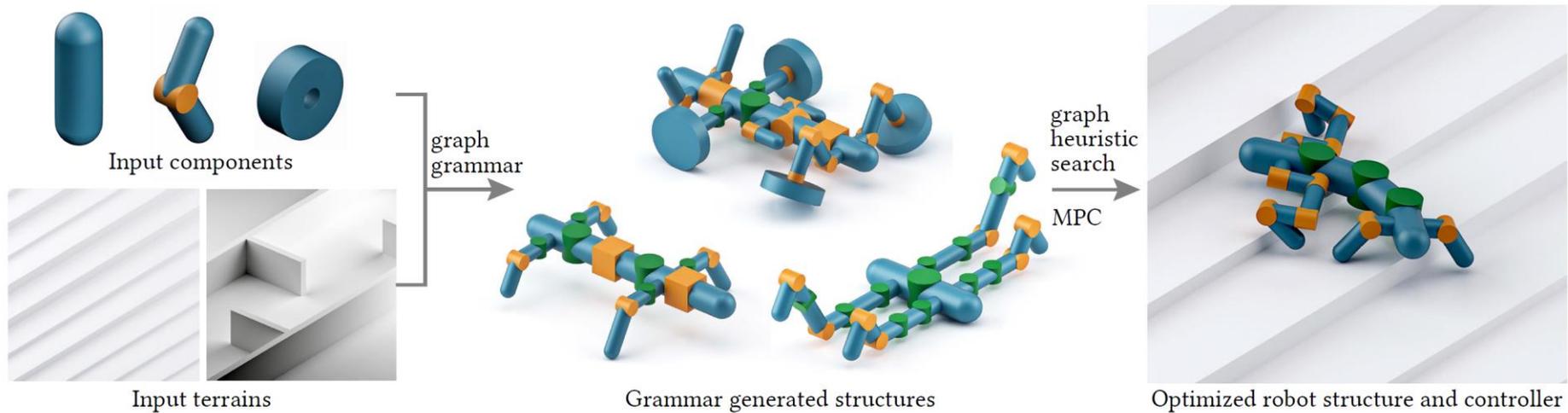
(д)



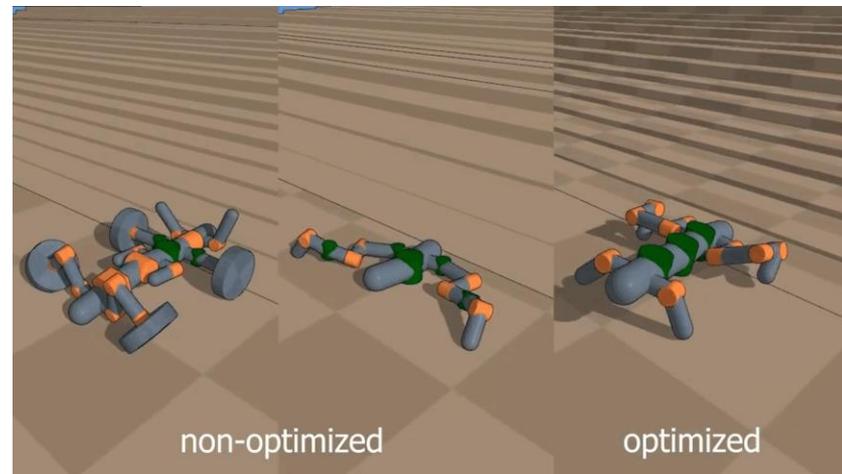
(e)

Cassie

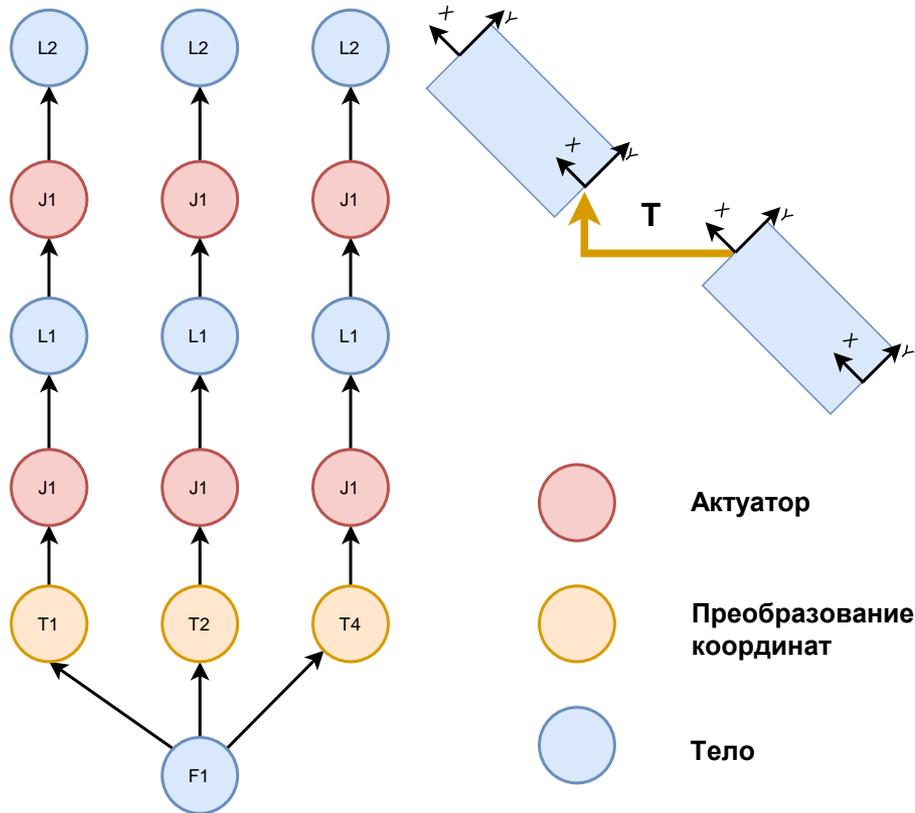
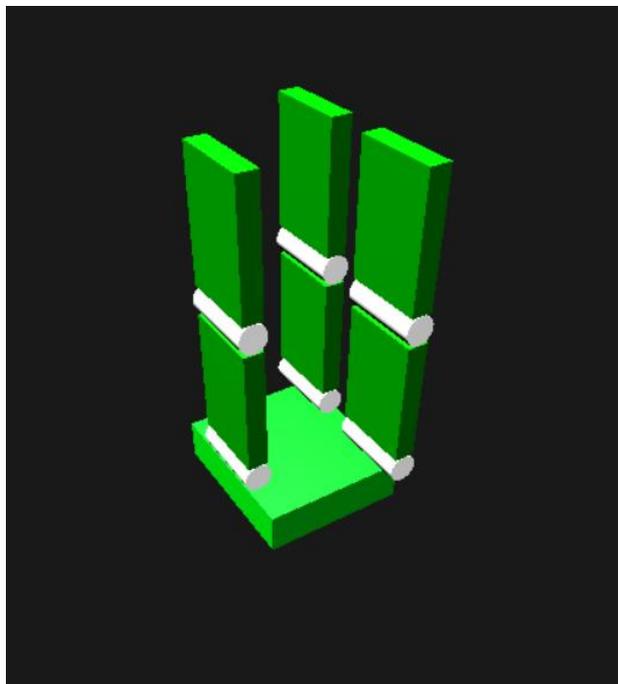




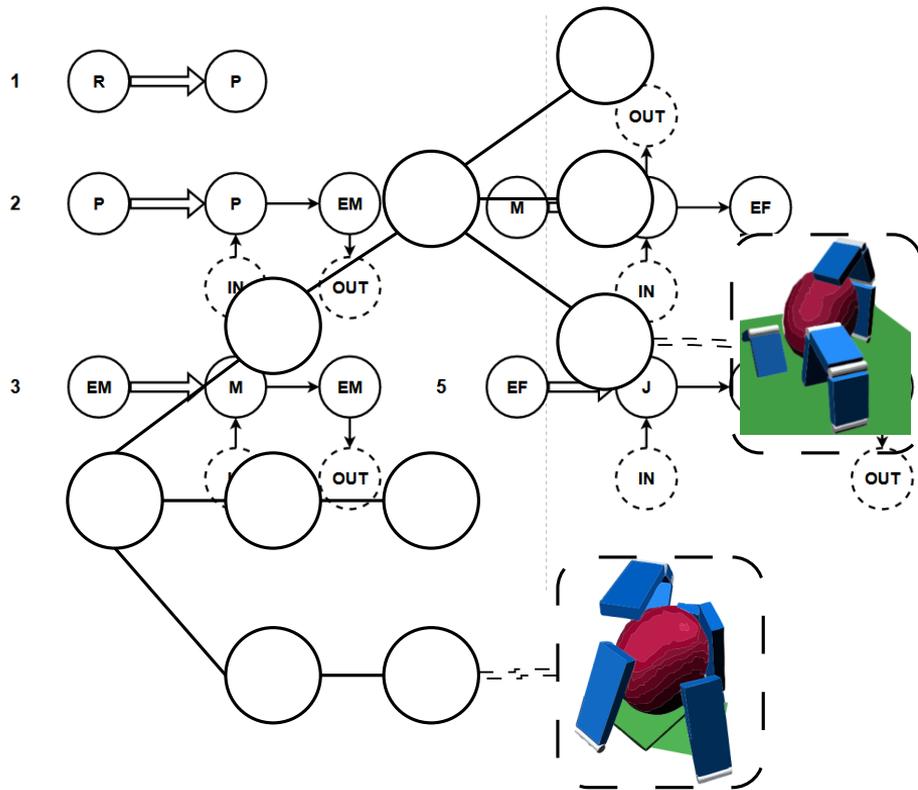
Allan Zhao, Jie Xu, Mina Konaković-Luković, Josephine Hughes, Andrew Spielberg, Daniela Rus, and Wojciech Matusik. 2020. RoboGrammar: Graph Grammar for Terrain-Optimized Robot Design. *ACM Trans. Graph.* 39, 6, Article 188 (December 2020), 16 pages. <https://doi.org/10.1145/3414685.3417831>



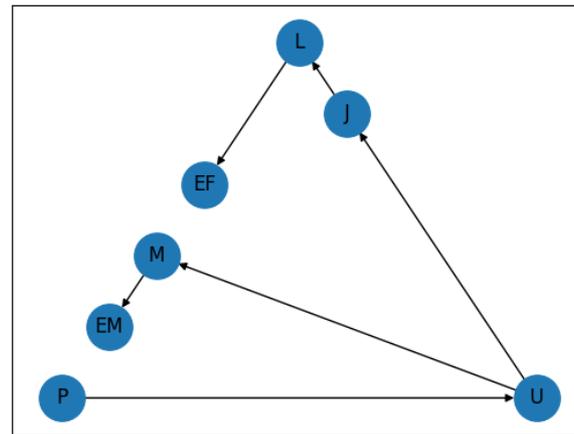
Сборка модели и типы блоков



Правила генерации и MCTS

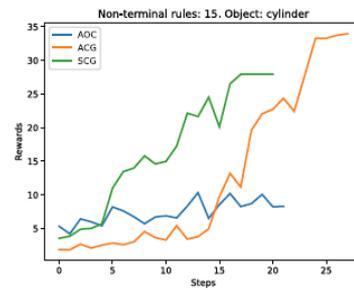
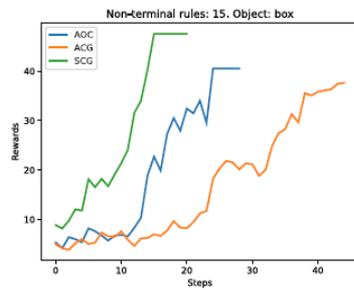
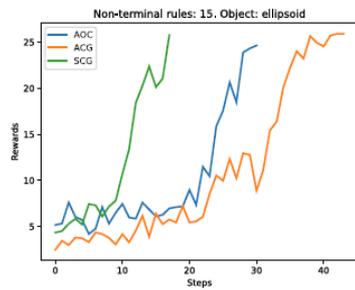
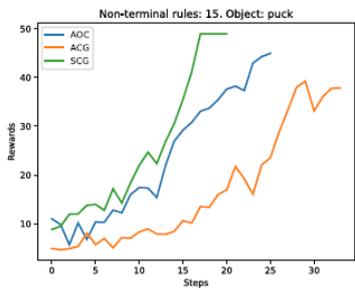
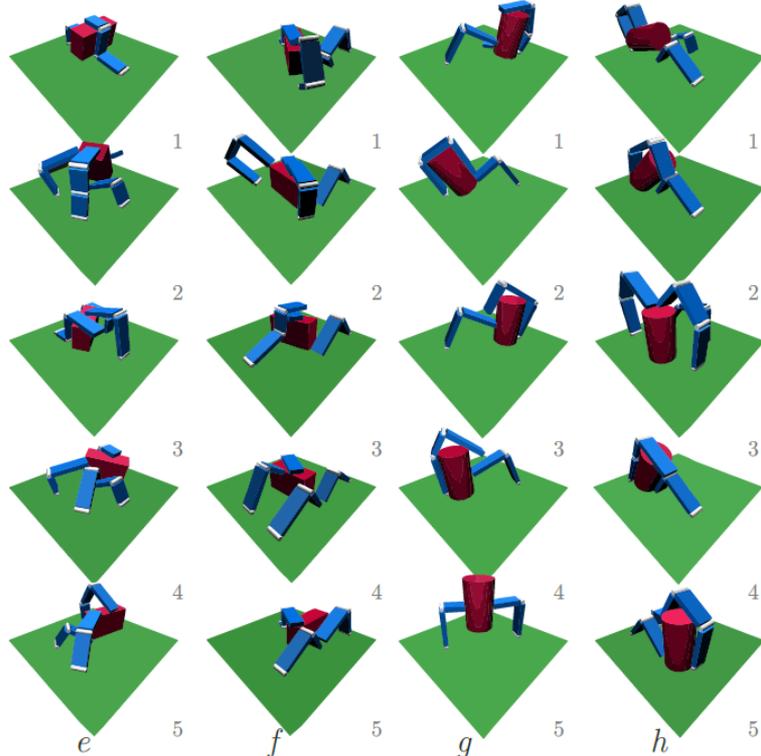
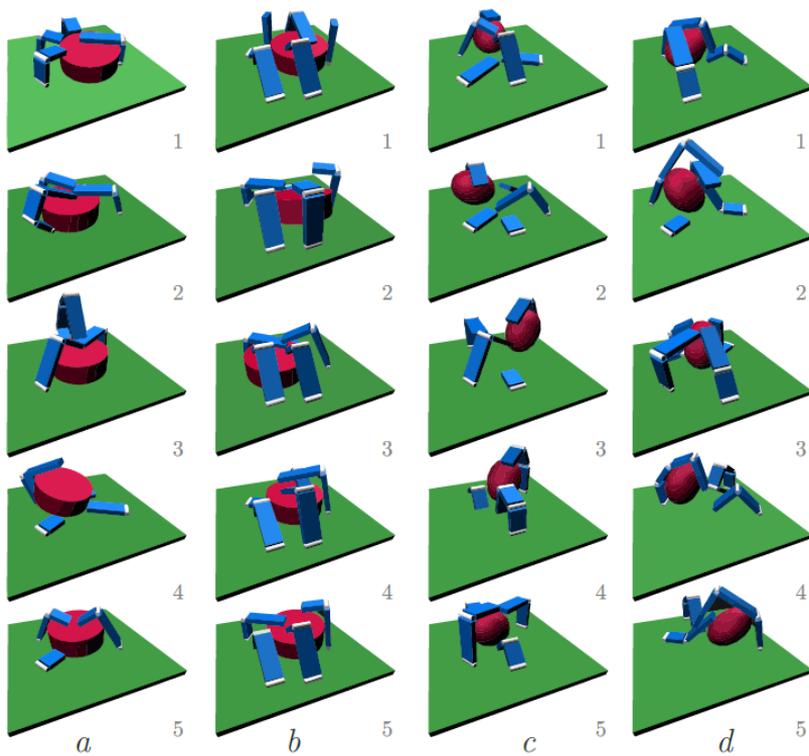


1, 2, 3, 3, 4, 5

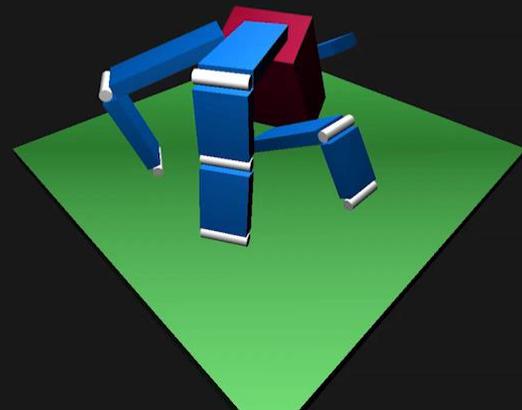
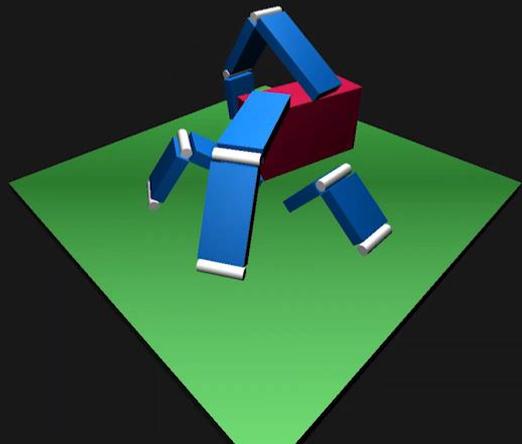
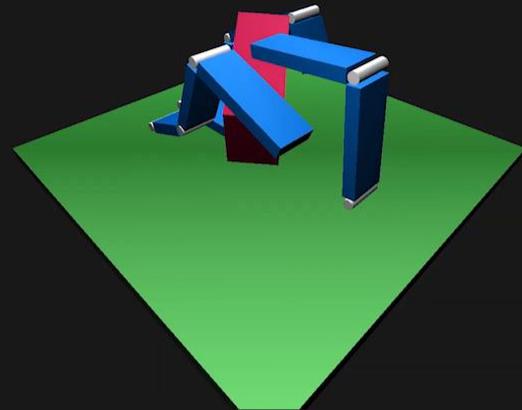
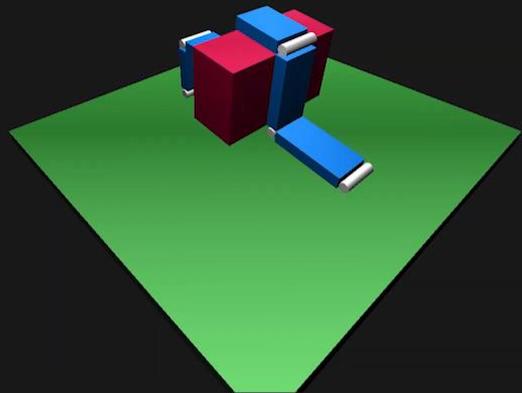


Продвинутая симуляция

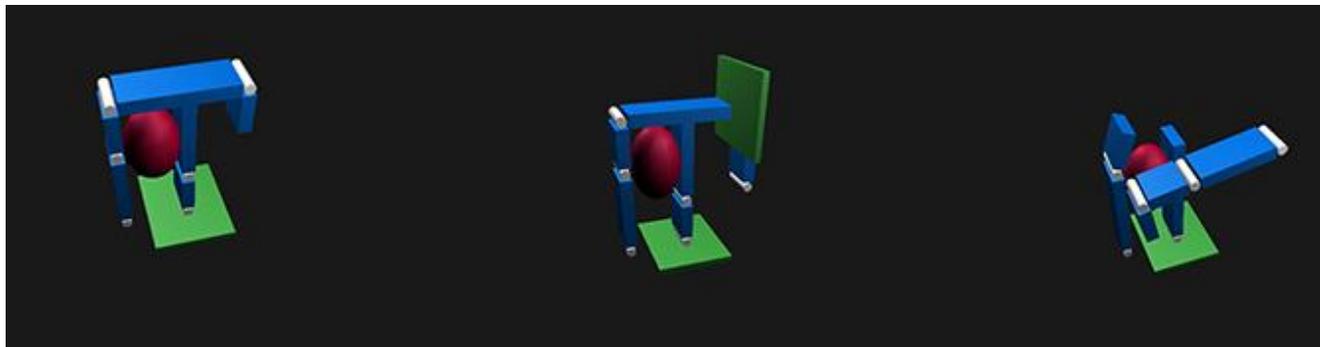
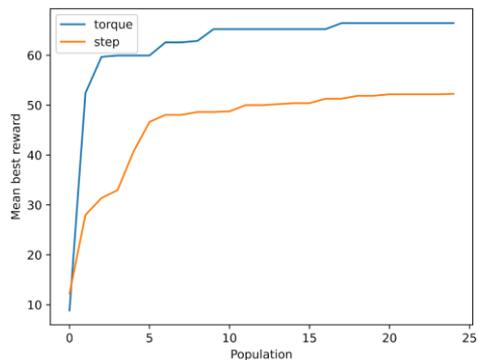
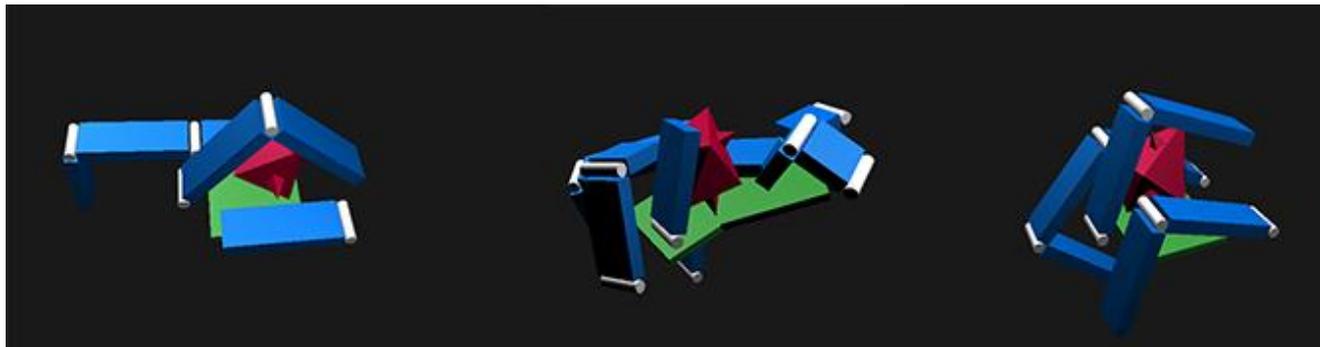
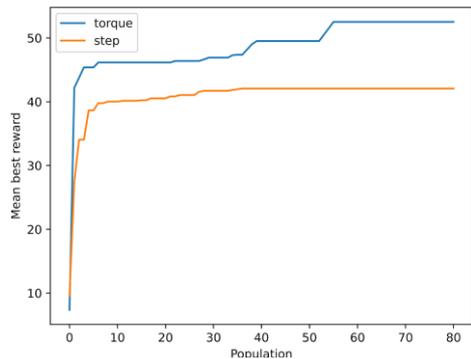




Graph grammar, MCTS, inner loop for torque optimization (AOC)



Применение эволюционных алгоритмов



**Спасибо
за внимание!**

ITMO *re than a*
UNIVERSITY

kdzharkov@itmo.ru

Прямая и обратная задачи проектирования

