

Socially-Motivated Partial Cooperation in Multi-Agent Local Search

Simulation Source Code – Read Me File

This GitHub repository contains source code for the simulations described in the paper "Socially-Motivated Partial Cooperation in Multi-Agent Local Search" to be presented at the 2018 International Joint Conference on Artificial Intelligence (IJCAI 2018).

The development was done in Java using the 'AgentZero' framework for simulating and evaluating Multi-agent algorithms. Additional information about the 'AgentZero' framework and code-writing options can be found in the following links:

Type	Description	Link
Academic Paper	An academic article describing the framework, discusses its capabilities and compares it to the alternatives.	Lutati, B., Gontmakher, I., Lando, M., Netzer, A., Meisels, A., & Grubshtein, A. (2014). Agentzero: A framework for simulating and evaluating multi-agent algorithms. In <i>Agent-Oriented Software Engineering</i> (pp. 309-327). Springer, Berlin, Heidelberg.
Tutorial	Contains installation information and user guide accompanied by examples.	AgentZero Tutorial

This GitHub repository includes three folders each of which contains source code for a different element in the simulation as described below:

Folder Name	Description	Files
agents	Contains source code for partial cooperation algorithms.	AGC.java GOODS_MGM.java SM_AGC.java
modules	Contains source code for DCOP problems.	AbstractSeedableProbGen.java AsGraphColoringConnectedNoiseGen.java GeneralDCOPGen.java GraphColoringConnectedNoiseGen.java KRegularGraphsADCOPGen.java MeetingSchedulingDCOPGen.java MeetingSchedulingDCOPNoiseGen.java RandomUniformADCOPGen.java ScaleFreeADCOPGen.java SeedableProbGen.java
utils	A data structure to be used in the AGC algorithm.	Request.java

To run the simulations described in the paper, or other variations, use the above files and follow the installation and implementation instructions given in the [AgentZero Tutorial](#), no further data is needed.

Best regards.