

# Project Talk: Multiagent Behaviors in Neural Network

**Jimmy Lin**  
**Barry Feigenbaum**

Prof. Risto Miikkulainen

Department of Computer Science  
The University of Texas At Austin

**November 28, 2014**

# Table of Contents

## 1 Overview of Multiagent System




# Motivation

# Introduction

# References I

-  Bobby D. Bryant and Risto Miikkulainen (2003). Neuroevolution for Adaptive Teams. *Proceedings of the 2003 Congress on Evolutionary Computation* 1:2194-2201.
-  Tan, Ming. "Multi-agent reinforcement learning: Independent vs. cooperative agents." *Proceedings of the Tenth International Conference on Machine Learning*. Vol. 337. 1993.
-  Rawal, A.; Rajagopalan, P.; Miikkulainen, R., "Constructing competitive and cooperative agent behavior using coevolution," *Computational Intelligence and Games (CIG), 2010 IEEE Symposium on*, vol., no., pp.107,114, 18-21 Aug. 2010
-  Rajagopalan, P.; Rawal, A.; Miikkulainen, R.; Wiseman, M.A.; Holecamp, K.E., "The role of reward structure, coordination mechanism and net return in the evolution of cooperation," *Computational Intelligence and Games (CIG), 2011 IEEE Conference on*, vol., no., pp.258,265, Aug. 31 2011-Sept. 3 2011

# References II

-  Risto Miikkulainen and Eliana Feasley and Leif Johnson and Igor Karpov and Padmini Rajagopalan and Aditya Rawal and Wesley Tansey (2012). *Multiagent Learning through Neuroevolution. Advances in Computational Intelligence* LNCS 7311:24-46.
-  Yanli Yang; Polycarpou, M.M.; Minai, A.A., "Opportunistically cooperative neural learning in mobile agents," *Neural Networks, 2002. IJCNN '02. Proceedings of the 2002 International Joint Conference on*, vol.3, no., pp.2638,2643, 2002
-  Yong, C.H.; Miikkulainen, R., "Coevolution of Role-Based Cooperation in Multiagent Systems," *Autonomous Mental Development, IEEE Transactions on*, vol.1, no.3, pp.170,186, Oct. 2009

# Acknowledgement

Thanks.