A policy improvement algorithm for discounted two-person zero-sum stochastic game of perfect information

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Abstract

While policy improvement algorithm is key to solving Markov decision processes, the key property that any pair of pure stationary policies that achieve the value of the discounted two-person zero-sum stochastic game of perfect information are themselves optimal for the stochastic game. The so-called patience theorem comes to the rescue.

Speaker Profile

Prof. Raghavan is an emeritus professor at the University of Illinois at Chicago, and a pioneer and globally renowned authority in the field of game theory. He is a Ph.D. from Indian Statistical Institute. His research interests are in game theory, linear and non-linear programming, matrix theory, applied statistics, and operations research. He has published more than 60 remarkable papers in the fields of stochastic games, dynamic games, and cooperative games. "*Stochastic and Differential Games: Theory and Numerical Methods*" and "*Stochastic Games and Related Topics*" are some of the books authored by Prof. Raghavan. He has been running a Gurukulam in Game theory in Pulavanur, a village in Tamil Nadu. Prof. Raghavan's profile can be accessed at https://mscs.uic.edu/profiles/ter/ .