AI Research Summaries

# Feasibility/Desirability Games for Normal Form Games, Choice Models and Evolutionary Games

Link: http://arxiv.org/abs/0907.5469v1

## Summary:

Feasibility/Desirability Games (FD games in short) were designed by Le Roux et al. as a fruitful abstraction of normal form games. They can be seen as a new presentation of games in which Nash equilibria can be found, as choice models in microeconomics or as a model of evolution in games.

## Citation (BibTeX):

@article{lescanne2009,  
 title={"Feasibility/Desirability Games for Normal Form Games, Choice Models and  
 Evolutionary Games"},  
 author={"Pierre Lescanne"},  
 journal={arXiv preprint arXiv:0907.5469v1},  
 year={"2009"}  
}

# The strange algebra of combinatorial games

Link: http://arxiv.org/abs/0912.0448v1

## Summary:

An algebraic framework for the analysis of combinatorial games. This framework embraces the classical theory of partizan games as well as a number of mis`ere games, comply-constrain games, and card games. It focuses on the construction of the quotient monoid of a game.

## Citation (BibTeX):

@article{wästlund2009,  
 title={"The strange algebra of combinatorial games"},  
 author={"Johan Wästlund"},  
 journal={arXiv preprint arXiv:0912.0448v1},  
 year={"2009"}  
}

# Exact Algorithms for Solving Stochastic Games

Link: http://arxiv.org/abs/1202.3898v1

## Summary:

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## Citation (BibTeX):

@article{hansen2012,  
 title={"Exact Algorithms for Solving Stochastic Games"},  
 author={"Kristoffer Arnsfelt Hansen and Michal Koucky and Niels Lauritzen and Peter Bro Miltersen and Elias Tsigaridas"},  
 journal={arXiv preprint arXiv:1202.3898v1},  
 year={"2012"}  
}

# Conversion/Preference Games

Link: http://arxiv.org/abs/0811.0071v1

## Summary:

Conversion/Preference Games (CP games) are generalizations of Nash-style game theory. The ability of the players to change a situation to another is formalised in conversion relations. Another relation called preference compares situations in order for a player to choose a better move or to perform a better conversion.

## Citation (BibTeX):

@article{roux2008,  
 title={"Conversion/Preference Games"},  
 author={"Stéphane Le Roux and Pierre Lescanne and René Vestergaard"},  
 journal={arXiv preprint arXiv:0811.0071v1},  
 year={"2008"}  
}

# Blackwell-Optimal Strategies in Priority Mean-Payoff Games

Link: http://arxiv.org/abs/1006.1402v1

## Summary:

We examine perfect information stochastic mean-payoff games – a class of games containing sub-classes of the usual mean- payoff games and parity games. We show that deterministic strategies that are optimal for discounted games with state-dependent discount factors close to 1 are also optimal for priority mean-Payoff games. This suggests a strong link between these two classes.

## Citation (BibTeX):

@article{gimbert2010,  
 title={"Blackwell-Optimal Strategies in Priority Mean-Payoff Games"},  
 author={"Hugo Gimbert and Wiesław Zielonka"},  
 journal={arXiv preprint arXiv:1006.1402v1},  
 year={"2010"}  
}

# Quantum repeated games revisited

Link: http://arxiv.org/abs/1109.3753v1

## Summary:

The Prisoner’s Dilemma is one of the most fundamental problems in game theory. We show that results not available in classical game can be obtained when the game is played in the quantum way. We prove that both players can beneﬁt from playing game via our protocol.

## Citation (BibTeX):

@article{frackiewicz2011,  
 title={"Quantum repeated games revisited"},  
 author={"Piotr Frackiewicz"},  
 journal={arXiv preprint arXiv:1109.3753v1},  
 year={"2011"}  
}

# Infinite horizon for symetric strategy population game

Link: http://arxiv.org/abs/2211.07708v2

## Summary:

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## Citation (BibTeX):

@article{privat2022,  
 title={"Infinite horizon for symetric strategy population game"},  
 author={"Meziane Privat"},  
 journal={arXiv preprint arXiv:2211.07708v2},  
 year={"2022"}  
}

# Isomorphic Strategy Spaces in Game Theory

Link: http://arxiv.org/abs/1304.5620v1

## Summary:

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## Citation (BibTeX):

@article{gagen2013,  
 title={"Isomorphic Strategy Spaces in Game Theory"},  
 author={"Michael J Gagen"},  
 journal={arXiv preprint arXiv:1304.5620v1},  
 year={"2013"}  
}

# Quantum games of opinion formation based on the Marinatto-Weber quantum game scheme

Link: http://arxiv.org/abs/1507.07966v1

## Summary:

Quantum games of opinion formation based on the Marinatto-Weber quantum game scheme. The results show that the quantization can change fascinatingly the properties of some classical opinion formation game models so as to generate win-win outcomes.Quantum game is a new breakthrough of game theory, inspired by quan-uroustum information theory.

## Citation (BibTeX):

@article{deng2015,  
 title={"Quantum games of opinion formation based on the Marinatto-Weber quantum  
 game scheme"},  
 author={"Xinyang Deng and Yong Deng and Qi Liu and Zhen Wang"},  
 journal={arXiv preprint arXiv:1507.07966v1},  
 year={"2015"}  
}

# A New Algorithm for the Subtraction Games

Link: http://arxiv.org/abs/1208.3832v2

## Summary:

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## Citation (BibTeX):

@article{he2012,  
 title={"A New Algorithm for the Subtraction Games"},  
 author={"Guanglei He and Zhihui Qin"},  
 journal={arXiv preprint arXiv:1208.3832v2},  
 year={"2012"}  
}