

2010 IEEE Symposium on Computational Intelligence and Games

(CIG 2010)

**Copenhagen, Denmark
18-21 August 2010**



**IEEE Catalog Number: CFP10CIG-PRT
ISBN: 978-1-4244-6295-7**

Acknowledgements

Authors Index

Table of Contents

Program

Keynotes

Tutorials

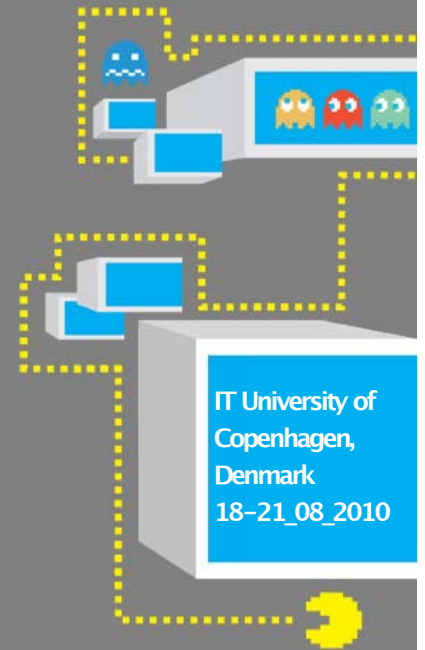
Special Sessions

Competitions

Organising Committee

Sponsors

Pages	Paper
1-8	Eric Beaudry, Francis Bisson, Simon Chamberland and Froduald Kabanza. <i>Using Markov Decision Theory to Provide a Fair Challenge in a Roll-and-Move Board Game</i>
9-16	Ondrej Vanek, Branislav Bosansky, Michal Jakob and Michal Pechoucek. <i>Transiting Areas Patrolled by a Mobile Adversary</i>
17-22	Anton Chertov, Ziad Kobti and Scott D. Goodwin. <i>Weighted SCAN for Modeling Cooperative Group Role Dynamics</i>
23-29	Yuji Sato and Hazuki Inoue. <i>Solving Sudoku with Genetic Operations that Preserve Building Blocks</i>
30-37	Amit Benbassat and Moshe Sipper. <i>Evolving Lose-Checkers Players using Genetic Programming</i>
38-45	Jl Merelo, Antonio M. Mora, Thomas P. Runarsson and Carlos Cotta. <i>Assessing efficiency of different evolutionary strategies playing MasterMind</i>
46-53	Simon Butler and Yiannis Demiris. <i>Partial Observability During Predictions of the Opponent's Movements in an RTS Game</i>
54-61	Jeffrey Tsang. <i>The Structure of a Depth-3 Lookup Table Representation for Prisoner's Dilemma</i>
62-68	Chern Kuan Goh and Alexander Nareyek. <i>Pleasure Propagation to Reward Predictors</i>
69-74	Jongwon Yoon, Su-Hyung Jang and Sung-Bae Cho. <i>Enhanced User Immersive Experience with a Virtual Reality based FPS Game Interface</i>
75-82	Florent Levillain, Joseph Onderi Orero, Maria Rifqi and Bernadette Bouchon-Meunier. <i>Characterizing Player's Experience From Physiological Signals Using Fuzzy Decision Trees</i>
83-90	Slawomir Bojarski and Clare Bates Congdon. <i>REALM: A Rule-Based Evolutionary Computation Agent that Learns to Play Mario</i>
91-98	Adam Smith, Mark Nelson and Michael Mateas. <i>Ludocore: A Logical Game Engine for Modeling Videogames</i>
99-106	Bobby D. Brvant. <i>Virtual Bagging for an Evolved Agent Controller</i>
107-114	Aditya Rawal, Padmini Rajagopalan and Risto Miikkulainen. <i>Constructing Competitive and Cooperative Agent Behavior Using Coevolution</i>
115-122	Ben Weber, Peter Mawhorter, Michael Mateas and Arnav Jhala. <i>Reactive Planning Idioms for Multi-Scale Game AI</i>
123-130	Enrique Onieva, Luigi Cardamone, Daniele Loiacono and Pier Luca Lanzi. <i>Overtaking Opponents with Blocking Strategies Using Fuzzy Logic</i>
131-138	Markus Kemmerling and Mike Preuss. <i>Automatic Adaptation to Generated Content Via Car Setup Optimization in TORCS</i>
139-145	Johan Hagelbäck and Stefan J. Johansson. <i>A Study on Human like Characteristics in Real Time Strategy Games</i>
146-153	Greg Smith, Phillipa Avery, Ramona Houmanfar and Sushil Louis. <i>Using Co-evolved RTS Opponents to Teach Spatial Tactics</i>



154-161	Vincent Scesa, Clement Raievsy, Stephane Sanchez, Herve Luga and Yves Duthen. <i>Rule Fusion for the Imitation of a Human Tutor</i>
162-169	David Lupien St-pierre, Mark Winands and David Watt. <i>A Selective Move Generator for the Game Axis and Allies</i>
170-177	Christian Thureau and Christian Bauckhage. <i>Analyzing the Evolution of Social Groups in World of Warcraft</i>
178-185	Tobias Mahlmann, Anders Drachen, Julian Togelius, Alessandro Canossa and Georgios N. Yannakakis. <i>Predicting Player Behavior in Tomb Raider: Underworld</i>
186-194	Kyong Jin Shim and Jaideep Srivastava. <i>Behavioral Profiles of Character Types in EverQuest II</i>
195-202	Laetitia Chapel, Dmitri Botvich and David Malone. <i>Probabilistic Approaches to Cheating Detection in Online Games</i>
203-210	Jahn-Takeshi Saito and Mark H. M. Winands. <i>Paranoid Proof-Number Search</i>
211-218	Viljam Lisy, Branislav Bosansky, Roman Vaculin and Michal Pechoucek. <i>Agent Subset Adversarial Search for Complex Non-cooperative Domains</i>
219-226	Daniel Ashlock, Eun-Youn Kim and Wendy Ashlock. <i>Comparison of Different Prisoner's Dilemma Payoff Matrices</i>
227-234	Garry Greenwood. <i>Evolving N-Person Social Dilemma Strategies to Resolve Questions on Participation in Climate Change Programs</i>
235-240	Ruck Thawonmas and Takashi Ashida. <i>Evolution Strategy for Optimizing Parameters in Ms Pac-Man Controller ICE Pambush 3</i>
241-248	A. M. Mora, M. A. Moreno, J. J. Merelo, P. A. Castillo, M. G. Arenas and J. L. J. Laredo. <i>Evolving the Cooperative Behaviour in Unreal</i>
249-256	Matthew Patrick. <i>Online Evolution in Unreal Tournament 2004</i>
257-264	Frederick W. P. Heckel, G. Michael Youngblood and Nikhil S. Ketkar. <i>Representational Complexity of Reactive Agents</i>
265-272	Julian Togelius, Mike Preuss, Nicola Beume, Simon Wessing, Johan Hagelbäck and Georgios N. Yannakakis. <i>Multiobjective Exploration of the StarCraft Map Space</i>
273-280	Adam Smith and Michael Mateas. <i>Variations Forever: Flexibly Generating Rulesets from a Sculptable Design Space of Mini-Games</i>
281-288	Christoph Salge and Tobias Mahlmann. <i>Relevant Information as a Formalised Approach to Evaluate Game Mechanics</i>
289-296	Daniel Ashlock. <i>Automatic Generation of Game Elements via Evolution</i>
297-304	Anja Johansson and Pierangelo Dell'Acqua. <i>Introducing Time in Emotional Behavior Networks</i>
305-312	Cyril Brom, Rudolf Kadlec and Ondrej Burkert. <i>Timing in Episodic Memory for Virtual Characters</i>
313-320	Hector Perez Martinez, Kenneth Hullett and Georgios N. Yannakakis. <i>Extending Neuro-evolutionary Preference Learning through Player Modeling</i>
321-328	Simone Tognetti, Maurizio Garbarino, Andrea Bonarini and Matteo Matteucci. <i>Modeling enjoyment preference from physiological responses in a car racing game</i>
329-336	Giovanni Acampora, Fabio Ferraguto and Vincenzo Loia. <i>Synthesizing Bots Emotional Behaviors through Fuzzy Cognitive Processes</i>
337-344	Rafael Bidarra, Robert Schaap and Kim Goossens. <i>Growing on the Inside: Soulful Characters for Video Games</i>
345-350	Philip Hingston. <i>A New Design for a Turing Test for Bots</i>
351-358	Peter A. Mawhorter and Michael Mateas. <i>Procedural Level Generation Using Occupancy-Regulated Extension</i>

359-364	Fabien Teytaud and Olivier Teytaud. <i>On the Huge Benefit of Decisive Moves in Monte-Carlo Tree Search Algorithms</i>
365-371	Spyridon Samothrakis, David Robles and Simon Lucas. <i>A UCT Agent for Tron: Initial Investigations</i>
372-379	Simon Lucas. <i>Estimating Learning Rates in Evolution and TDL: Results on a Simple Grid-World Problem</i>
380-387	Christopher Hanna, Raymond Hickey, Darryl Charles and Michaela Black. <i>Modular Reinforcement Learning Architectures for Artificially Intelligent Agents in Complex Game Environments</i>
388-394	Luigi Cardamone, Daniele Loiacono, Pier Luca Lanzi and Alessandro Pietro Bardelli. <i>Racing Line Optimization using Genetic Algorithms</i>
395-402	Jan Quadflieg, Mike Preuss, Oliver Kramer and Günter Rudolph. <i>Learning the Track and Planning Ahead in a Car Racing Controller</i>
403-410	Paolo Burelli and Georgios N. Yannakakis. <i>Combining Local and Global Optimisation for Virtual Camera Control</i>
411-418	Paolo Ciancarini and Gian Piero Favini. <i>Retrograde analysis of Kriegspiel endgames</i>
419-426	Aswin Thomas Abraham and Kevin McGee. <i>AI for Dynamic Team-mate Adaptation in Games</i>
427-434	Maria Arinbjarnar and Daniel Kudenko. <i>Bayesian Networks: Real-Time Applicable Decision Mechanisms for Intelligent Agents in Interactive Drama</i>
435-442	Jichen Zhu and Santiago Ontaón. <i>Story Representation in Analogy-Based Story Generation in Riu</i>
443-449	Anna Syberfeldt and Sanny Syberfeldt. <i>A serious game for understanding artificial intelligence in production optimization</i>
450-457	Joost Westra, Frank Dignum and Virginia Dignum. <i>Keeping the Trainee on Track</i>
458-464	Emilio Martin, Moises Martinez, Gustavo Recio and Yago Saez. <i>Pac-mAnt: Optimization Based on Ant Colonies Applied to Developing an Agent for Ms. Pac-Man</i>
465-472	Nathaniel Bell, Xinghong Fang, Rory Hughes, Graham Kendall, Edward O'Reilly and Shenghui Qiu. <i>Ghost Direction Detection and other Innovations for Ms. Pac-Man</i>
473-480	Jorge Muñoz, German Gutierrez and Araceli Sanchis. <i>A human-like TORCS controller for the Simulated Car Racing Championship</i>