

References

- Adachi, H., Kamekawa, H., and Iwata, S. (1987). Shogi on $n \times n$ Board is Complete in Exponential Time. *Transactions of the Institute of Electronics, Information and Communication Engineers*, Vol. J70-D, No. 10, pp. 1843–1852. In Japanese. [2]
- Adelson-Velskiy, G. M., Arlazarov, V. L., and Donskoy, M. V. (1975). Some Methods of Controlling the Tree Search in Chess Programs. *Artificial Intelligence*, Vol. 6, No. 4, pp. 361–371. [69]
- Akl, S. G. and Newborn, M. M. (1977). The Principal Continuation and the Killer Heuristic. *1977 ACM Annual Conference Proceedings*, pp. 466–473, ACM Press, New York, NY, USA. [15, 77, 101]
- Allis, L. V. (1988). *A Knowledge-Based Approach of Connect-Four. The Game is Solved: White Wins*. M.Sc. thesis, Faculty of Mathematics and Computer Science, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands. [7, 42]
- Allis, L. V. (1994). *Searching for Solutions in Games and Artificial Intelligence*. Ph.D. thesis, Department of Computer Science, Rijksuniversiteit Limburg, Maastricht, The Netherlands. [27, 42, 47, 53]
- Allis, L. V. and Schoo, P. N. A. (1992). Qubic Solved Again. *Heuristic Programming in Artificial Intelligence 3: The Third Computer Olympiad* (eds. H. J. van den Herik and L. V. Allis), pp. 192–204, Ellis Horwood Limited, Chichester, United Kingdom. [42]
- Allis, L. V., Herik, H. J. van den, and Herschberg, I. S. (1991). Which Games Will Survive? *Heuristic Programming in Artificial Intelligence 2: The Second Computer Olympiad* (eds. D. N. L. Levy and D. F. Beal), pp. 232–243, Ellis Horwood Limited, Chichester, United Kingdom. [60]
- Allis, L. V., Herik, H. J. van den, and Huntjes, M. P. H. (1993). Go-Moku and Threat-Space Search. Technical Report CS 93-02, Department of Computer Science, Faculty of General Sciences, Rijksuniversiteit Limburg, Maastricht, The Netherlands. [42]
- Allis, L. V., Meulen, M. van der, and Herik, H. J. van den (1994). Proof-Number Search. *Artificial Intelligence*, Vol. 66, No. 1, pp. 91–124. [6, 8, 43, 50, 52]

- Allis, L. V., Herik, H. J. van den, and Huntjes, M. P. H. (1996). Go-Moku Solved by New Search Techniques. *Computational Intelligence*, Vol. 12, No. 1, pp. 7–23. [42, 43]
- Anshelevich, V. V. (2000). The Game of Hex: An Automatic Theorem Proving Approach to Game Programming. *Proceedings of the 17th National Conference on Artificial Intelligence (AAAI-00)*, pp. 189–194, AAAI Press, Menlo Park, CA, USA. [42]
- Arneson, B., Hayward, R. B., and Henderson, P. (2010). Monte Carlo Tree Search in Hex. *IEEE Transactions on Computational Intelligence and AI in Games*, Vol. 2, No. 4, pp. 251–258. [6]
- Arts, A. F. C. (2010). Competitive Play in Stratego. M.Sc. thesis, Maastricht University, Maastricht, The Netherlands. [75]
- Ash, R. B. and Bishop, R. L. (1972). Monopoly[®] as a Markov process. *Mathematics Magazine*, Vol. 45, No. 1, pp. 26–29. [4]
- Audibert, J.-Y. and Bubeck, S. (2009). Minimax Policies for Adversarial and Stochastic Bandits. *Proceedings of the 22nd Annual Conference on Learning Theory (COLT 2009)* (eds. S. Dasgupta and A. Klivans), pp. 217–226, Omnipress, Eastbourne, United Kingdom. [20]
- Bakkes, S. C. J. (2010). *Rapid Adaptation of Video Game AI*. Ph.D. thesis, Tilburg Centre for Cognition and Communication, Universiteit van Tilburg, Tilburg, The Netherlands. [4, 5]
- Ballard, B. W. (1983). The *-Minimax Search Procedure for Trees Containing Chance Nodes. *Artificial Intelligence*, Vol. 21, No. 3, pp. 327–350. [66, 67, 71, 77]
- Beal, D. F. (1989). Experiments with the Null Move. *Advances in Computer Chess 5* (ed. D. F. Beal), pp. 65–89, Elsevier Science Publishers, Amsterdam, The Netherlands. [8, 63, 69, 101, 108, 114]
- Beal, D. F. and Smith, M. C. (1996). Multiple Probes of Transposition Tables. *ICCA Journal*, Vol. 19, No. 4, pp. 227–233. [18]
- Beal, D. F. and Smith, M. C. (2000). Temporal Difference Learning for Heuristic Search and Game Playing. *Information Sciences*, Vol. 122, No. 1, pp. 3–21. [33]
- Bell, R. C. (1980). *Board and Table Games from Many Civilizations*. Dover Publications, New York, NY, USA. [1, 43]
- Benthem, J. van (2001). Games in Dynamic-Epistemic Logic. *Proceedings of LOFT-4* (eds. G. Bonanno and W. van der Hoek), Vol. 53, No. 4 of *Bulletin of Economic Research*, pp. 219–248. [2]
- Benthem, J. van, Girard, P., and Roy, O. (2008). Everything Else Being Equal: A Modal Logic for Ceteris Paribus Preferences. *Journal of Philosophical Logic*, Vol. 38, No. 1, pp. 83–125. [90]

- Berlekamp, E. R., Conway, J. H., and Guy, R. K. (1982). *Winning Ways*, Vol. 1–2. Academic Press, Inc., London, United Kingdom. [2]
- Biedl, T. C., Demaine, E. D., Demaine, M. L., Fleischer, R., Jacobsen, L., and Munro, J. I. (2002). The Complexity of Clickomania. *More Games of No Chance, Proceedings of the 2002 MSRI Workshop on Combinatorial Games* (ed. R. J. Nowakowski), Vol. 42 of *MSRI Publications*, pp. 389–404, Cambridge University Press, Cambridge, United Kingdom. [27, 28]
- Billings, D. (2007). Personal Communication, University of Alberta, Canada. [28]
- Billings, D., Papp, D., Schaeffer, J., and Szafron, D. (1998a). Poker as Testbed for AI Research. *Canadian Conference on AI* (eds. R. E. Mercer and E. Neufeld), Vol. 1418 of *Lecture Notes in Computer Science (LNCS)*, pp. 228–238, Springer-Verlag, Berlin, Germany. [4, 64]
- Billings, D., Papp, D., Schaeffer, J., and Szafron, D. (1998b). Opponent Modeling in Poker. *Proceedings of the 15th National Conference on Artificial Intelligence (AAAI-98)* (eds. J. Mostow, C. Rich, and B. Buchanan), pp. 493–499, AAAI Press, Menlo Park, CA, USA. [4, 64]
- Billings, D., Peña, L., Schaeffer, J., and Szafron, D. (1999). Using Probabilistic Knowledge and Simulation to Play Poker. *Proceedings of the 16th National Conference on Artificial Intelligence (AAAI-99)*, pp. 697–703, AAAI Press, Menlo Park, CA, USA. [4, 18]
- Bjarnason, R., Tadepalli, P., and Fern, A. (2007). Searching Solitaire in Real Time. *ICGA Journal*, Vol. 30, No. 3, pp. 131–142. [4]
- Björnsson, Y. (2002). *Selective Depth-First Game-Tree Search*. Ph.D. thesis, Department of Computing Science, University of Alberta, Edmonton, Canada. [6, 69]
- Björnsson, Y. and Finnsson, H. (2009). CadiaPlayer: A Simulation-Based General Game Player. *IEEE Transactions on Computational Intelligence and AI in Games*, Vol. 1, No. 1, pp. 4–15. [76]
- Björnsson, Y. and Marsland, T. A. (1999). Multi-Cut Alpha-Beta Pruning. *Computers and Games (CG 1998)* (eds. H. J. van den Herik and H. Iida), Vol. 1558 of *Lecture Notes in Computer Science (LNCS)*, pp. 15–24, Springer-Verlag, Berlin, Germany. [63, 69]
- Björnsson, Y. and Marsland, T. A. (2000). Risk Management in Game-Tree Pruning. *Information Sciences*, Vol. 122, No. 1, pp. 23–41. [63]
- Björnsson, Y. and Marsland, T. A. (2001). Multi-Cut $\alpha\beta$ -Pruning in Game-Tree Search. *Theoretical Computer Science*, Vol. 252, Nos. 1–2, pp. 177–196. [8, 63, 69, 101, 108, 114]
- Boer, V. de (2007). Invincible. A Stratego Bot. M.Sc. thesis, Delft University of Technology, Delft, The Netherlands. [63, 77]

- Boer, V. de, Rothkrantz, L. J. M., and Wiggers, P. (2008). Invincible: A Stratego Bot. *International Journal of Intelligent Games & Simulation*, Vol. 5, No. 1, pp. 22–28. [75]
- Bono, E. de (1968). *The Five-Day Course in Thinking*. Penguin, New York, NY, USA. [1]
- Borel, É. (1921). La Théorie du Jeu et les Equations Intégrales à Noyau Symétrique Gauche. *Comptes Rendus de l'Académie des Sciences*, Vol. 173, pp. 1304–1308. In French. Translated by L. J. Savage (1953) as The Theory of Play and Integral Equations with Skew Symmetric Kernels. *Econometria*, Vol. 21, No.1, pp. 97–100. [2]
- Borsboom, J., Saito, J.-T., Chaslot, G. M. J.-B., and Uiterwijk, J. W. M. H. (2007). A Comparison of Monte-Carlo Methods for Phantom Go. *Proceedings of the 19th BeNeLux Conference on Artificial Intelligence (BNAIC'07)* (eds. M. M. Dastani and E. de Jong), pp. 57–64, University of Utrecht, Utrecht, The Netherlands. [3]
- Bouzy, B. (2005). Associating Domain-Dependent Knowledge and Monte-Carlo Approaches within a Go Program. *Information Sciences, Heuristic Search and Computer Game Playing IV*, Vol. 175, No. 4, pp. 247–257. [20, 31]
- Bouzy, B. and Helmstetter, B. (2003). Monte-Carlo Go Developments. *Advances in Computer Games (ACG 10)* (eds. H. J. van den Herik, H. Iida, and E. A. Heinz), pp. 159–174, Kluwer Academic, Dordrecht, The Netherlands. [18]
- Breuker, D. M. (1998). *Memory versus Search in Games*. Ph.D. thesis, Department of Computer Science, Maastricht University, Maastricht, The Netherlands. [18, 101]
- Breuker, D. M., Uiterwijk, J. W. H. M., and Herik, H. J. van den (1994). Replacement Schemes for Transposition Tables. *ICCA Journal*, Vol. 17, No. 4, pp. 183–193. [18]
- Breuker, D. M., Uiterwijk, J. W. H. M., and Herik, H. J. van den (1996). Replacement Schemes and Two-Level Tables. *ICCA Journal*, Vol. 19, No. 3, pp. 175–180. [18]
- Breuker, D. M., Uiterwijk, J. W. H. M., and Herik, H. J. van den (2000). Solving 8×8 Domineering. *Theoretical Computer Science*, Vol. 230, Nos. 1–2, pp. 195–206. [42]
- Breuker, D. M., Herik, H. J. van den, Uiterwijk, J. W. H. M., and Allis, L. V. (2001a). A Solution to the GHI Problem for Best-First Search. *Theoretical Computer Science*, Vol. 252, Nos. 1–2, pp. 121–149. [60]
- Breuker, D. M., Uiterwijk, J. W. H. M., and Herik, H. J. van den (2001b). The PN^2 -Search Algorithm. *Advances in Computer Games 9* (eds. H. J. van den Herik and B. Monien), pp. 115–132, Maastricht University, Maastricht, The Netherlands. [53]

- Brügmann, B. (1993). Monte Carlo Go. Technical report, Physics Department, Syracuse University, Syracuse, NY, USA. [18, 22]
- Bullock, N. (2002). Domineering: Solving Large Combinatorial Search Spaces. *ICGA Journal*, Vol. 25, No. 2, pp. 67–84. [42]
- Buro, M. (1995). ProbCut: An Effective Selective Extension of the Alpha-Beta Algorithm. *ICCA Journal*, Vol. 18, No. 2, pp. 71–76. [6, 8, 63, 64, 69, 70, 71, 101, 108, 111, 114]
- Buro, M. (2000). Experiments with Multi-ProbCut and a New High-Quality Evaluation Function for Othello. *Games in AI Research* (eds. H. J. van den Herik and H. Iida), pp. 77–96, Maastricht University, Maastricht, The Netherlands. [8, 63, 69, 88, 114]
- Buro, M. (2003). The Evolution of Strong Othello Programs. *Entertainment Computing - Technology and Applications* (eds. R. Nakatsu and J. Hoshino), Vol. 112 of *IFIP Advances in Information and Communication Technology*, pp. 81–88, Kluwer Academic Publishers, Dordrecht, The Netherlands. [100, 101]
- Campbell, M. (1985). The Graph-History Interaction: On Ignoring Position History. *Proceedings of the 1985 ACM Annual Conference on the Range of Computing: Mid-80's Perspective*, pp. 278–280, ACM Press, New York, NY, USA. [17, 60]
- Carmel, D. and Markovitch, S. (1993). Learning Models of Opponent's Strategies in Game Playing. *Proceedings of the AAAI Fall Symposium on Games: Planning and Learning* (eds. R. Levinson and S. Epstein), pp. 140–147, AAAI Press, Menlo Park, CA, USA. [4, 64]
- Carter, R. G. (2007). *An Investigation into Tournament Poker Strategy using Evolutionary Algorithms*. Ph.D. thesis, School of Informatics, University of Edinburgh, Edinburgh, United Kingdom. [4, 63]
- Cazenave, T. (2006). A Phantom-Go Program. *Advances in Computer Games (ACG 11)* (eds. H. J. van den Herik, S.-C. Hsu, T.-S. Hsu, and H. H. L. M. Donkers), Vol. 4250 of *Lecture Notes in Computer Science (LNCS)*, pp. 120–125, Springer-Verlag, Berlin Heidelberg, Germany. [3]
- Cazenave, T. (2008). Multi-player Go. *Computers and Games (CG 2008)* (eds. H. J. van den Herik, X. Xu, Z. Ma, and M. H. M. Winands), Vol. 5131 of *Lecture Notes in Computer Science (LNCS)*, pp. 50–59, Springer-Verlag, Berlin, Germany. [108]
- Cazenave, T. (2009). Nested Monte-Carlo Search. *Proceedings of the Twenty-first International Joint Conferences on Artificial Intelligence (IJCAI-09)* (ed. C. Boutilier), pp. 456–461, Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. [28, 34, 40, 110]
- Cazenave, T. and Jouandeau, N. (2007). On the Parallelization of UCT. *Proceedings of the Computer Games Workshop 2007 (CGW 2007)* (eds. H. J. van den Herik,

- J. W. H. M. Uiterwijk, M. H. M. Winands, and M. P. D. Schadd), pp. 93–101, Maastricht University, Maastricht, The Netherlands. [22, 23]
- Cazenave, T. and Saffidine, A. (2009). Utilisation de la Recherche Arborescente Monte-Carlo au Hex. *Revue d'Intelligence Artificielle*, Vol. 23, Nos. 2–3, pp. 183–202. In French. [6, 108]
- Chaslot, G. M. J.-B. (2010). *Monte-Carlo Tree Search*. Ph.D. thesis, Department of Knowledge Engineering, Maastricht University, Maastricht, The Netherlands. [19, 20, 22, 31]
- Chaslot, G. M. J.-B., Jong, S. de, Saito, J.-T., and Uiterwijk, J. W. H. M. (2006a). Monte-Carlo Tree Search in Production Management Problems. *Proceedings of the 18th BeNeLux Conference on Artificial Intelligence (BNAIC'06)* (eds. P.-Y. Schobbens, W. Vanhoof, and G. Schwanen), pp. 91–98, University of Namur, Namur, Belgium. [19, 26, 30]
- Chaslot, G. M. J.-B., Saito, J.-T., Bouzy, B., Uiterwijk, J. W. H. M., and Herik, H. J. van den (2006b). Monte-Carlo Strategies for Computer Go. *Proceedings of the 18th BeNeLux Conference on Artificial Intelligence (BNAIC'06)* (eds. P.-Y. Schobbens, W. Vanhoof, and G. Schwanen), pp. 83–90, University of Namur, Namur, Belgium. [6, 19, 20, 21, 30, 32]
- Chaslot, G. M. J.-B., Hoock, J.-B., Rimmel, A., Teytaud, O., Lee, C.-S., Wang, M.-H., Tsai, S.-R., and Hsu, S.-C. (2008a). Human-Computer Go Revolution 2008. *ICGA Journal*, Vol. 31, No. 3, pp. 179–185. [6]
- Chaslot, G. M. J.-B., Winands, M. H. M., and Herik, H. J. van den (2008b). Parallel Monte-Carlo Tree Search. *Computers and Games (CG 2008)* (eds. H. J. van den Herik, X. Xu, Z. Ma, and M. H. M. Winands), Vol. 5131 of *Lecture Notes in Computer Science (LNCS)*, pp. 60–71, Springer-Verlag, Berlin, Germany. [22, 23, 32]
- Chaslot, G. M. J.-B., Winands, M. H. M., Szita, I., and Herik, H. J. van den (2008c). Cross-Entropy for Monte-Carlo Tree Search. *ICGA Journal*, Vol. 31, No. 3, pp. 145–156. [33, 34]
- Chaslot, G. M. J.-B., Winands, M. H. M., Uiterwijk, J. W. H. M., Herik, H. J. van den, and Bouzy, B. (2008d). Progressive Strategies for Monte-Carlo Tree Search. *New Mathematics and Natural Computation*, Vol. 4, No. 3, pp. 343–357. [6, 19, 21, 22, 40, 108, 113]
- Chauvicourt, J. and Chauvicourt, S. (1980). *Le Fanorona – Jeu National Malgache*. Nouvelle Imprimerie des Arts Graphiques, Tananarive, Madagascar. In French. [43]
- Chen, K.-H. and Zhang, P. (2008). Monte-Carlo Go with Knowledge-Guided Simulations. *ICGA Journal*, Vol. 31, No. 2, pp. 67–76. [20, 31]
- Ciancarini, P. and Favini, G. P. (2007). A Program to Play Kriegspiel. *ICGA Journal*, Vol. 30, No. 1, pp. 3–24. [3, 63]

- Ciancarini, P. and Favini, G. P. (2009). Monte Carlo Tree Search Techniques in the Game of Kriegspiel. *Proceedings of the Twenty-first International Joint Conferences on Artificial Intelligence (IJCAI-09)* (ed. C. Boutilier), pp. 474–479, Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. [108]
- Condon, A. (1992). The Complexity of Stochastic Games. *Information and Computation*, Vol. 96, No. 2, pp. 203–224. [64]
- Coulom, R. (2007a). Efficient Selectivity and Backup Operators in Monte-Carlo Tree Search. *Computers and Games (CG 2006)* (eds. H. J. van den Herik, P. Ciancarini, and H. H. L. M. Donkers), Vol. 4630 of *Lecture Notes in Computer Science (LNCS)*, pp. 72–83, Springer-Verlag, Heidelberg, Germany. [6, 19, 20, 21, 30, 31, 32, 40, 108, 113]
- Coulom, R. (2007b). Computing “Elo Ratings” of Move Patterns in the Game of Go. *ICGA Journal*, Vol. 30, No. 4, pp. 199–208. [22]
- Crawford, C. (1984). *The Art of Computer Game Design*. McGraw-Hill/Osborne Media, New York, NY, USA. [5]
- Culberson, J. C. and Schaeffer, J. (1998). Pattern Databases. *Computational Intelligence*, Vol. 14, No. 3, pp. 318–334. [29]
- Dekker, S. T., Herik, H. J. van den, and Herschberg, I. S. (1990). Perfect Knowledge Revisited. *Artificial Intelligence*, Vol. 43, No. 1, pp. 111–123. [50]
- Demaine, E. D. and Hearn, R. A. (2001). Playing Games with Algorithms: Algorithmic Combinatorial Game Theory. *Proceedings of the 26th Symposium on Mathematical Foundations in Computer Science (MFCS 2001 Mariánské Lázně)* (eds. J. Sgall, A. Pultr, and P. Kolman), Vol. 2136 of *Lecture Notes in Computer Science (LNCS)*, pp. 18–32, Springer-Verlag, Berlin, Germany. Reprinted (2009) in *Games of No Chance 3*, Proceedings of the 2005 MSRI Workshop on Combinatorial Games (eds. M. H. Albert and K. J. Nowakowski), Vol. 56 of MSRI Publications, pp. 3–56., Cambridge University Press, Cambridge, United Kingdom. [2]
- Demaine, E. D., Hohenberger, S., and Liben-Nowell, D. (2003). Tetris is Hard, Even to Approximate. *Proceedings of the 9th International Computing and Combinatorics Conference (COCOON 2003)* (eds. T. Warnow and B. Zhu), Vol. 2697 of *Lecture Notes in Computer Science (LNCS)*, pp. 351–363, Springer-Verlag, Berlin, Germany. [4]
- District Court of Oregon (2005). *Estate of Gunter Sigmund Elkan, vs. Hasbro, INC. et al.* Case No. 04-1344-KI, Portland, OR, USA. [74]
- Ditmarsch, H. van (2000). *Knowledge Games*. Ph.D. thesis, Faculty of Mathematics and Natural Sciences, University of Groningen, Groningen, The Netherlands. [63]
- Ditmarsch, H. van (2001). Knowledge Games. *Bulletin of Economic Research*, Vol. 53, No. 4, pp. 249–273. [63]

- Doberkat, E.-E., Hasselbring, W., and Pahl, C. (1996). Investigating Strategies for Cooperative Planning of Independent Agents through Prototype Evaluation. *Proceedings of the First International Conference on Coordination Languages and Models (COORDINATION '96)* (eds. P. Ciancarini and C. Hankin), Vol. 1061 of *Lecture Notes in Computer Science (LNCS)*, pp. 416–419, Springer-Verlag, Berlin, Germany. [4]
- Donkers, H. H. L. M. (2003). *Nosce Hostem: Searching with Opponent Models*. Ph.D. thesis, Department of Computer Science, Maastricht University, Maastricht, The Netherlands. [4, 64]
- Edelkamp, S., Kissmann, P., Sulewski, D., and Messerschmidt, H. (2010). Finding the Needle in the Haystack with Heuristically Guided Swarm Tree Search. *Multikonferenz Wirtschaftsinformatik 2010* (eds. M. Schumann, L. M. Kolbe, M. H. Breitner, and A. Frerichs), pp. 2295–2308, Universitätsverlag Göttingen, Göttingen, Germany. [29, 34, 40, 110]
- Emde Boas, P. van (2002). Computational Models of Games. *Lecture Notes*, The Institute for Logic, Language and Computation (ILLC), University of Amsterdam, Amsterdam, The Netherlands. [2]
- Emde Boas, P. van (2003). Games, Complexity and Interaction: The Role of Games in Computer Science. *Practical Foundations of Business System Specifications* (eds. H. Kilov and K. Baclavski), pp. 313–328, Springer-Verlag, Berlin Heidelberg, Germany. [7]
- Enzenberger, M. and Müller, M. (2010). A Lock-free Multithreaded Monte-Carlo Tree Search Algorithm. *Advances in Computer Games (ACG 2009)* (eds. H. J. van den Herik and P. Spronck), Vol. 6048 of *Lecture Notes in Computer Science (LNCS)*, pp. 14–20, Springer-Verlag, Berlin, Germany. [23]
- Felner, A., Zahavi, U., Schaeffer, J., and Holte, R. C. (2005). Dual Lookups in Pattern Databases. *Proceedings of the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI-05)* (eds. L. P. Kaelbling and A. Saffioti), pp. 103–108, Professional Book Center, Denver, CO, USA. [29]
- Fraenkel, A. S. and Lichtenstein, D. (1981). Computing a Perfect Strategy for $n \times n$ Chess Requires Time Exponential in n . *Journal of Combinatorial Theory, Series A*, Vol. 31, No. 2, pp. 199–214. [2]
- Frank, A. (1990). Brute Force Search in Games of Imperfect Information. *Heuristic Programming in Artificial Intelligence 2: The Second Computer Olympiad* (eds. D. N. L. Levy and D. F. Beal), pp. 204–209, Ellis Horwood, Chichester, United Kingdom. [64]
- Frank, A. and Basin, D. (1998). Search in Games with Incomplete Information: A Case Study using Bridge Card Play. *Artificial Intelligence*, Vol. 100, Nos. 1–2, pp. 87–123. [64]

- Frayn, C. M. (2005). An Evolutionary Approach to Strategies for the Game of Monopoly[®]. *Proceedings of the IEEE 2005 Symposium on Computational Intelligence and Games (CIG 2005)* (eds. G. Kendall and S. M. Lucas), pp. 66–72, IEEE press, Piscataway, NJ, USA. [4]
- Fukushima, K. (1975). Cognitron: A Self-Organizing Multilayered Neural Network. *Biological Cybernetics*, Vol. 20, Nos. 3–4, pp. 121–136. [3]
- Gasser, R. U. (1995). *Harnessing Computational Resources for Efficient Exhaustive Search*. Ph.D. thesis, Department of Computer Science, Swiss Federal Institute of Technology, Zürich, Switzerland. [42]
- Gasser, R. U. (1996). Solving Nine Men’s Morris. *Computational Intelligence*, Vol. 12, No. 1, pp. 24–41. [7]
- Gelly, S. and Silver, D. (2007). Combining Online and Offline Knowledge in UCT. *Proceedings of the 24th International Conference on Machine Learning (ICML ’07)* (ed. Z. Ghahramani), pp. 273–280, ACM Press, New York, NY, USA. [6, 20, 22, 40, 108, 113]
- Gelly, S. and Wang, Y. (2006). Exploration Exploitation in Go: UCT for Monte-Carlo Go. *Neural Information Processing Systems Conference On-line Trading of Exploration and Exploitation Workshop*. [20]
- Gelly, S., Wang, Y., Munos, R., and Teytaud, O. (2006). Modification of UCT with Patterns in Monte-Carlo Go. Technical Report 6062, INRIA, Orsay Cedex, France. [20, 31]
- Ginsberg, M. L. (1996). Partition Search. *Proceedings of the 13th National Conference on Artificial Intelligence (AAAI-96)*, Vol. 1, pp. 228–233, AAAI Press, Menlo Park, CA, USA. [64]
- Ginsberg, M. L. (1999). GIB: Steps Toward an Expert-Level Bridge-Playing Program. *Proceedings of the Sixteenth International Joint Conference on Artificial Intelligence (IJCAI-99)* (ed. T. Dean), pp. 584–589, Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. [4]
- Goetsch, G. and Campell, M. S. (1990). Experiments with the Null-move Heuristic. *Computers, Chess, and Cognition* (eds. T. A. Marsland and J. Schaeffer), pp. 159–168, Springer-Verlag, New York, NY, USA. [63, 69, 101, 108, 114]
- Greenblatt, R. D., Eastlake, D. E., and Crocker, S. D. (1967). The Greenblatt Chess Program. *Proceedings of the AFIPS Fall Joint Computer Conference 31*, pp. 801–810. Reprinted (1988) in *Computer Chess Compendium* (ed. D. N. L. Levy), pp. 56–66. B. T. Batsford Ltd., London, United Kingdom. [17, 77, 101]
- Groot, A. D. de (1965). *Thought and Choice in Chess*. Mouton Publishers, The Hague - Paris - New York. [63, 69]

- Guy, R. K. (1996). What is a Game? *Games of No Chance, Proceedings of the 1994 MSRI Workshop on Combinatorial Games* (ed. K. J. Nowakowski), Vol. 29 of *MSRI Publications*, pp. 43–60, Cambridge University Press, Cambridge, United Kingdom. [2]
- Handscomb, K. (2001). 8×8 Game Design Competition: The Winning Game: Break-through ...and two other Favorites. *Abstract Games Magazine*, No. 7, pp. 8–9. [76]
- Harel, D. (1984). Dynamic Logic. *Handbook of Philosophical Logic* (eds. D. M. Gabbay and F. Guenther), Vol. 2: Extensions of Classical Logic, pp. 497–604, Springer-Verlag, Berlin, Germany. [90]
- Hartmann, D. (1988). Butterfly Boards. *ICCA Journal*, Vol. 11, Nos. 2–3, pp. 64–71. [16]
- Hart, P. E., Nielson, N. J., and Raphael, B. (1968). A Formal Basis for the Heuristic Determination of Minimum Cost Paths. *IEEE Transactions on Systems Science and Cybernetics*, Vol. SSC-4, No. 2, pp. 100–107. [4, 19, 25, 29]
- Hauk, T. (2004). Search in Trees with Chance Nodes. M.Sc. thesis, University of Alberta, Edmonton, Canada. [66, 67, 76, 77, 83, 85]
- Hauk, T., Buro, M., and Schaeffer, J. (2006a). Rediscovering *-Minimax Search. *Computers and Games (CG 2004)* (eds. H. J. van den Herik, Y. Björnsson, and N. S. Netanyahu), Vol. 3846 of *Lecture Notes in Computer Science (LNCS)*, pp. 35–50, Springer-Verlag, Berlin, Germany. [66, 71, 85]
- Hauk, T., Buro, M., and Schaeffer, J. (2006b). *-Minimax Performance in Backgammon. *Computers and Games (CG 2004)* (eds. H. J. van den Herik, Y. Björnsson, and N. S. Netanyahu), Vol. 3846 of *Lecture Notes in Computer Science (LNCS)*, pp. 51–66, Springer-Verlag, Berlin, Germany. [67, 88]
- Hearn, R. A. (2009). Amazons, Konane, and Cross Purposes are PSPACE-complete. *Games of No Chance 3, Proceedings of the 2005 MSRI Workshop on Combinatorial Games* (eds. M. H. Albert and K. J. Nowakowski), Vol. 56 of *MSRI Publications*, pp. 287–306, Cambridge University Press, Cambridge, United Kingdom. [2]
- Heinz, E. A. (1999). Endgame Databases and Efficient Index Schemes. *ICCA Journal*, Vol. 22, No. 1, pp. 22–32. [8, 50]
- Helmstetter, B. (2007). *Analyses de Dépendances et Méthodes de Monte-Carlo dans les Jeux de Réflexion*. Ph.D. thesis, Laboratoire d’Informatique Avancée de Saint-Denis, Université Paris 8, Paris, France. In French. [19]
- Herik, H. J. van den and Herschberg, I. S. (1985). The Construction of an Omniscient Endgame Database. *ICCA Journal*, Vol. 8, No. 2, pp. 66–87. [8, 48, 50]

- Herik, H. J. van den, Uiterwijk, J. W. H. M., and Rijswijk, J. van (2002). Games Solved: Now and in the Future. *Artificial Intelligence*, Vol. 134, Nos. 1–2, pp. 277–311. [42, 48, 111]
- Heule, M. J. H. and Rothkrantz, L. J. M. (2007). Solving Games: Dependence of Applicable Solving Procedures. *Science of Computer Programming*, Vol. 67, No. 1, pp. 105–124. [42]
- Hsieh, M. Y. and Tsai, S.-C. (2007). On the Fairness and Complexity of Generalized k-in-a-row Games. *Theoretical Computer Science*, Vol. 385, Nos. 1–3, pp. 88–100. [2]
- Hsu, F.-H. (2002). *Behind Deep Blue: Building the Computer that Defeated the World Chess Champion*. Princeton University Press, Princeton, NY, USA. [3]
- Huizinga, J. (1955). *Homo Ludens; A Study of the Play-Element in Culture*. Beacon Press, Boston, MA, USA. [1]
- Hyatt, R. M., Grover, A. E., and Nelson, H. L. (1990). Cray Blitz. *Computers, Chess and Cognition* (eds. T. A. Marsland and J. Schaeffer), pp. 111–130, Springer-Verlag, New York, NY, USA. [17]
- Iida, H., Uiterwijk, J. W. H. M., Herik, H. J. van den, and Herschberg, I. S. (1994). Thoughts on the Application of Opponent-Model Search. *Advances in Computer Chess 7* (eds. H. J. van den Herik, I. S. Herschberg, and J. W. H. M. Uiterwijk), pp. 61–78, Rijksuniversiteit Limburg, Maastricht, The Netherlands. [4, 64]
- Irving, G., Donkers, H. H. L. M., and Uiterwijk, J. W. H. M. (2000). Solving Kalah. *ICGA Journal*, Vol. 23, No. 3, pp. 139–147. [42]
- Iwata, S. and Kasai, T. (1994). The Othello Game on an $n \times n$ Board is PSPACE-complete. *Theoretical Computer Science*, Vol. 123, No. 2, pp. 329–340. [2]
- Jansen, P. (1992). *Using Knowledge about the Opponent in Game-Tree Search*. Ph.D. thesis, Department of Computer Science, Carnegie Mellon University, Pittsburgh, PA, USA. [4, 64]
- Johnson, D. S. (1990). A Catalog of Complexity Classes. *Handbook of Theoretical Computer Science* (ed. J. van Leeuwen), Vol. A: Algorithms and Complexity, pp. 67–161. MIT Press, Cambridge, MA, USA. [28]
- Jug, S. and Schadd, M. P. D. (2009). The 3rd Computer Stratego World Championship. *ICGA Journal*, Vol. 32, No. 4, pp. 233–234. [76]
- Julien, D. (2008). Pocket PC Jawbreaker Game. PDA Game Guide.com. <http://www.pdagameguide.com/jawbreaker-game.html>. [27]
- Junghanns, A. (1999). *Pushing the Limits: New Developments in Single Agent Search*. Ph.D. thesis, Department of Computing Science, University of Alberta, Edmonton, Alberta, Canada. [29]

- Kasai, T., Adachi, A., and Iwata, S. (1979). Classes of Pebble Games and Complete Problems. *SIAM Journal on Computing*, Vol. 8, No. 4, pp. 574–586. [2]
- Kendall, G., Parkes, A. J., and Spoerer, K. (2008). A Survey of NP-Complete Puzzles. *ICGA Journal*, Vol. 31, No. 1, pp. 13–34. [25, 26]
- Kishimoto, A. and Müller, M. (2004). A General Solution to the Graph History Interaction Problem. *Proceedings of the 19th National Conference on Artificial Intelligence (AAAI-04)* (eds. D. L. McGuinness and G. Ferguson), pp. 644–649, AAAI Press, Menlo Park, CA, USA. [60]
- Kloetzer, J., Iida, H., and Bouzy, B. (2009). Playing Amazons Endgames. *ICGA Journal*, Vol. 32, No. 3, pp. 140–148. [6, 108]
- Knuth, D. E. (1973). *The Art of Computer Programming. Volume 3: Sorting and Searching*. Addison-Wesley Publishing Company, Reading, MA, USA. [17]
- Knuth, D. E. and Moore, R. W. (1975). An Analysis of Alpha-Beta Pruning. *Artificial Intelligence*, Vol. 6, No. 4, pp. 293–326. [5, 8, 12, 13, 14, 18, 19, 21, 63, 89, 93]
- Kocsis, L. and Szepesvári, C. (2006). Bandit based Monte-Carlo Planning. *Proceedings of the 17th European Conference on Machine Learning (ECML 2006)* (eds. J. Fürnkranz, T. Scheffer, and M. Spiliopoulou), Vol. 4212 of *Lecture Notes in Computer Science (LNCS)*, pp. 282–293, Springer-Verlag, Berlin Heidelberg, Germany. [6, 19, 26, 30, 108]
- Kocsis, L., Uiterwijk, J. W. H. M., and Herik, H. J. van den (2001). Move Ordering using Neural Networks. *Engineering of Intelligent Systems* (eds. L. Montosori, J. Vánca, and M. Ali), Vol. 2070 of *Lecture Notes in Artificial Intelligence*, pp. 45–50, Springer-Verlag, Berlin, Germany. [15]
- Korf, R. E. (1985). Depth-First Iterative Deepening: An Optimal Admissible Tree Search. *Artificial Intelligence*, Vol. 27, No. 1, pp. 97–109. [3, 25, 29]
- Korf, R. E. (1991). Multi-Player Alpha-Beta Pruning. *Artificial Intelligence*, Vol. 48, No. 1, pp. 99–111. [92]
- Korf, R. E. (1997). Finding Optimal Solutions to Rubik’s Cube Using Pattern Databases. *Proceedings of the 14th National Conference on Artificial Intelligence (AAAI-97)*, pp. 700–705, AAAI Press, Menlo Park, CA, USA. [3]
- Kurzen, L. (2009). Reasoning about Cooperation, Actions and Preferences. *Synthese*, Vol. 169, No. 2, pp. 223–240. [90]
- Lake, R., Schaeffer, J., and Lu, P. (1994). Solving Large Retrograde-Analysis Problems using a Network of Workstations. *Advances in Computer Chess 7* (eds. H. J. van den Herik, I. S. Herschberg, and J. W. H. M. Uiterwijk), pp. 135–162, Rijksuniversiteit Limburg, Maastricht, The Netherlands. [50, 51]

- Lee, C.-S., Müller, M., and Teytaud, O. (2010). Special Issue on Monte Carlo Techniques and Computer Go. *IEEE Transactions on Computational Intelligence and AI in Games*, Vol. 2, No. 4, pp. 225–228. [25]
- Levy, D. N. L. and Newborn, M. M. (1991). *How Computers Play Chess*. Computer Science Press, Inc., New York, NY, USA. [3]
- Lidén, L. (2004). Artificial Stupidity: The Art of Intentional Mistakes. *AI Game Programming Wisdom* (ed. S. Rabin), Vol. 2, pp. 41–48, Charles River Media, Inc., Brookline, MA, USA. [5]
- Lorentz, R. J. (2008). Amazons Discover Monte-Carlo. *Computers and Games (CG 2008)* (eds. H. J. van den Herik, X. Xu, Z. Ma, and M. H. M. Winands), Vol. 5131 of *Lecture Notes in Computer Science (LNCS)*, pp. 13–24, Springer-Verlag, Berlin, Germany. [6, 108]
- Lorenz, K. and Lorenzen, P. (1978). *Dialogische Logik*. Wissenschaftliche Buchgesellschaft, Darmstadt, Germany. In German. [2]
- Lorenz, U. and Tscheuschner, T. (2006). Player Modeling, Search Algorithms and Strategies in Multi Player Games. *Advances in Computer Games (ACG 2005)* (eds. H. J. van den Herik, S.-C. Hsu, T.-S. Hsu, and H. H. L. M. Donkers), Vol. 4250 of *Lecture Notes in Computer Science (LNCS)*, pp. 210–224, Springer-Verlag, Berlin, Germany. [91, 92, 108]
- Luckhardt, C. A. and Irani, K. B. (1986). An Algorithmic Solution of N-Person Games. *Proceedings of the 5th National Conference on Artificial Intelligence (AAAI-86)*, pp. 158–162, AAAI Press, Menlo Park, CA, USA. [8, 89, 91, 92]
- Lu, H. and Xia, Z. (2008). AWT: Aspiration with Timer Search Algorithm in Siguo. *Computers and Games (CG 2008)* (eds. H. J. van den Herik, X. Xu, Z. Ma, and M. H. M. Winands), Vol. 5131 of *Lecture Notes in Computer Science (LNCS)*, pp. 264–274, Springer-Verlag, Berlin, Germany. [4, 76]
- Marsland, T. A. (1986). A Review of Game Tree Pruning. *ICCA Journal*, Vol. 9, No. 1, pp. 3–19. [6, 11, 15]
- Marsland, T. A. and Björnsson, Y. (2001). Variable-Depth Search. *Advances in Computer Games (ACG 9)* (eds. H. J. van den Herik and B. Monien), pp. 9–24, Universiteit Maastricht, Maastricht, The Netherlands. [5, 8, 69, 108, 114]
- Marsland, T. A. and Popowich, F. (1985). Parallel Game-Tree Search. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. PAMI-7, No. 4, pp. 442–452. [14, 103]
- Milton Bradley Co. (1986). *Stratego Instructions*. Springfield, MA, USA. Obtained at <http://safemanuals.com/>. [74]
- Méhat, J. and Cazenave, T. (2010). Combining UCT and Nested Monte-Carlo Search for Single-Player General Game Playing. *IEEE Transactions on Computational Intelligence and AI in Games*, Vol. 2, No. 4, pp. 271–277. [40]

- Mesmay, F., Rimmel, A., Voronenko, Y., and Püschel, M. (2009). Bandit-Based Optimization on Graphs with Application to Library Performance Tuning. *Proceedings of the 26th Annual International Conference on Machine Learning (ICML'09)* (eds. A. P. Danyluk, L. Bottou, and M. L. Littman), pp. 729–736, ACM, New York, NY, USA. [19, 26]
- Michie, D. (1966). Game-Playing and Game-Learning Automata. *Advances in Programming and Non-Numerical Computation* (ed. L. Fox), pp. 183–200, Pergamon, New York, NY, USA. [5, 8, 64]
- Millington, I. (2006). *Artificial Intelligence for Games*. Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. [5]
- Montgomery, W. (1886). The Malagasy Game of Fanorona. *The Antananarivo Annual and Madagascar Magazine*, Vol. 10, pp. 148–156. [43]
- Moribe, K. (1985). Chain Shot! *Gekkan ASCII*, No. November issue. In Japanese. [26]
- Mühlenbein, H. (1997). The Equation for Response to Selection and its Use for Prediction. *Evolutionary Computation*, Vol. 5, No. 3, pp. 303–346. [33]
- Myerson, R. B. (1997). *Game Theory: Analysis of Conflict*. Harvard University Press, Cambridge, MA, USA. [2]
- Myerson, R. B. (1999). Nash Equilibrium and the History of Economic Theory. *Journal of Economic Literature*, Vol. 37, No. 3, pp. 1067–1082. [2]
- Nagai, A. (2002). *Df-pn Algorithm for Searching AND/OR Trees and its Applications*. Ph.D. thesis, Department of Information Science, University of Tokyo, Tokyo, Japan. [8]
- Nareyek, A. (2000). Intelligent Agents for Computer Games. *Computers and Games, CG 2000* (eds. T. Marsland and I. Frank), Vol. 2063 of *Lecture Notes in Computer Science (LNCS)*, pp. 414–422, Springer-Verlag, Berlin, Germany. [5]
- Nash, J. (1952). Some Games and Machines for Playing Them. Technical Report D-1164, Rand Corporation, Santa Monica, CA, USA. [42]
- Neumann, J. von (1928). Zur Theorie der Gesellschaftsspiele. *Mathematische Annalen*, Vol. 100, No. 1, pp. 295–320. In German. Translated by S. Bargmann (1959) as On the Theory of Games of Strategy. In *Contributions to the Theory of Games 4*, (eds. A. W. Tucker and R. D. Luce), Vol. 40 of *Annals of Mathematical Studies*, pp. 13–42, Princeton University Press, Princeton, NY, USA. [3, 5]
- Neumann, J. von and Morgenstern, O. (1944). *Theory of Games and Economic Behavior*. Princeton University Press, Princeton, NY, USA. [2, 3, 12]

- Newell, A., Shaw, C., and Simon, H. (1958). Chess Playing Programs and the Problem of Complexity. *IBM Journal of Research and Development*, Vol. 4, No. 2, pp. 320–335. Reprinted (1963) in *Computers and Thought* (eds. E. A. Feigenbaum and J. Feldman), pp. 39–70. McGraw-Hill, New York, NY, USA. [3]
- Nijssen, J. A. M. and Winands, M. H. M. (2011). Enhancements for Multi-Player Monte-Carlo Tree Search. *Computers and Games (CG 2010)* (eds. H. J. van den Herik, H. Iida, and A. Plaat), Vol. 6515 of *Lecture Notes in Computer Science (LNCS)*, pp. 238–249, Springer-Verlag, Berlin, Germany. [108]
- Nowakowski, R. J. (2009). The History of Combinatorial Game Theory. *Proceedings of Board Game Studies Colloquium XI* (ed. J. N. Silva), pp. 133–145, Associação Ludus, Lisbon, Portugal. [2]
- Osborne, J. A. (2003). Markov Chains for the RISK Board Game Revisited. *Mathematics Magazine*, Vol. 2, No. 76, pp. 129–135. [64]
- Osborne, M. J. and Rubinstein, A. (1994). *A Course in Game Theory*. MIT Press, Cambridge, MA, USA. [90]
- Palay, A. J. (1983). *Searching with Probabilities*. Ph.D. thesis, Department of Computer Science, Carnegie Mellon University, Pittsburgh, PA, USA. [17, 60]
- Papadimitriou, C. (1994). *Computational Complexity*. Addison-Wesley, Reading, MA, USA. [2]
- Patashnik, O. (1980). Qubic: $4 \times 4 \times 4$ Tic-Tac-Toe. *Mathematics Magazine*, Vol. 53, No. 4, pp. 202–216. [42]
- Pauly, M. (2002). A Modal Logic for Coalitional Power in Games. *Journal of Logic and Computation*, Vol. 1, No. 12, pp. 149–166. [90]
- Pearl, J. (1984). *Heuristics: Intelligent Search Strategies for Computer Problem Solving*. Addison-Wesley, Reading, MA, USA. [12]
- Peters, H. J. M. (2008). *Game Theory: A Multi-Leveled Approach*. Springer-Verlag, Berlin, Germany. [2]
- Peterson, G. L., Reif, J. H., and Azhar, S. (2002). Decision Algorithms for Multi-player Noncooperative Games of Incomplete Information. *Computers & Mathematics with Applications*, Vol. 1–2, No. 43, pp. 179–206. [91]
- Plaat, A. (1996). *Research Re: Search & Re-Search*. Ph.D. thesis, Tinbergen Institute and Department of Computer Science, Erasmus University Rotterdam, Rotterdam, The Netherlands. [53, 103]
- Reif, J. H. (1984). The Complexity of Two-Player Games of Incomplete Information. *Journal of Computer and System Sciences*, Vol. 29, No. 2, pp. 274–301. [64]
- Reisch, S. (1980). Gobang ist PSPACE-vollständig. *Acta Informatica*, Vol. 13, No. 1, pp. 59–66. In German. [2]

- Reisch, S. (1981). Hex ist PSPACE-vollständig. *Acta Informatica*, Vol. 15, No. 2, pp. 167–191. In German. [2]
- Robson, J. M. (1983). The Complexity of Go. *Proceedings of IFIP 9th World Computer Congress* (ed. R. E. A. Mason), Vol. 83 of *Information Processing*, pp. 413–417, Elsevier Science Publishers, Amsterdam, The Netherlands. [2]
- Robson, J. M. (1984). N by N Checkers is Exptime Complete. *SIAM Journal on Computing*, Vol. 13, No. 2, pp. 252–267. [2]
- Romein, J. W. and Bal, H. E. (2003). Solving Awari with Parallel Retrograde Analysis. *IEEE Computer*, Vol. 36, No. 10, pp. 26–33. [42, 43, 50]
- Rubinstein, R. Y. (2003). The Cross-Entropy Method for Combinatorial and Continuous Optimization. *Methodology and Computing in Applied Probability*, Vol. 1, No. 2, pp. 127–190. [4, 33]
- Russell, S. and Norvig, P. (2003). *Artificial Intelligence: A Modern Approach*. Prentice-Hall, Englewood Cliffs, NJ, USA, 2nd edition. [6, 11, 63, 64]
- Sackson, S. (1969). *A Gamut of Games*. Random House, New York, NY, USA. [98]
- Sadikov, A. and Bratko, I. (2007). Solving 20×20 Puzzles. *Proceedings of the Computer Games Workshop 2007 (CGW 2007)* (eds. H. J. van den Herik, J. W. H. M. Uiterwijk, M. H. M. Winands, and M. P. D. Schadd), pp. 157–164, Maastricht University, Maastricht, The Netherlands. [29]
- Saito, J.-T. and Winands, M. H. M. (2010). Paranoid Proof-Number Search. *Proceedings of the 2010 IEEE Conference on Computational Intelligence and Games (CIG 2010)* (eds. G. N. Yannakakis and J. Togelius), pp. 203–210. IEEE press, Piscataway, NJ, USA. [8, 89, 93]
- Samuel, A. L. (1959). Some Studies in Machine Learning Using the Game of Checkers. *IBM Journal of Research and Development*, Vol. 3, No. 3, pp. 210–229. Reprinted in (1963) *Computers and Thought* (eds. E. A. Feigenbaum and J. Feldmann), pp. 71–105. McGraw-Hill Book Company, New York, NY, USA. [12]
- Satz, I. (2008). The 1st Computer Stratego World Championship. *ICGA Journal*, Vol. 31, No. 1, pp. 50–51. [75, 76]
- Sauro, L., Gerbrandy, J., Hoek, W. van der, and Wooldridge, M. (2006). Reasoning about Action and Cooperation. *Proceedings of the fifth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS-06)* (eds. P. Stone and G. Weiss), pp. 185–192, ACM Press, New York, NY, USA. [90]
- Schadd, M. P. D. (2006). Solving Fanorona. M.Sc. thesis, Maastricht University, Maastricht, The Netherlands. [46]
- Schadd, M. P. D. and Satz, I. (2008). The 2nd Computer Stratego World Championship. *ICGA Journal*, Vol. 31, No. 4, pp. 251–252. [76]

- Schadd, M. P. D. and Winands, M. H. M. (2009). Quiescence Search for Stratego. *Proceedings of the 21st BeNeLux Conference on Artificial Intelligence (BNAIC'09)* (eds. T. Calders, K. Tuyls, and M. Pechenizkiy), pp. 225–232, Technische Universiteit Eindhoven, Eindhoven, The Netherlands. [75, 78]
- Schadd, M. P. D. and Winands, M. H. M. (2011). Best Reply Search for Multiplayer Games. *Transactions on Computational Intelligence and AI in Games*, Vol. 3, No. 1, pp. 57–66. [89]
- Schadd, M. P. D., Winands, M. H. M., Bergsma, M. H. J., Uiterwijk, J. W. H. M., and Herik, H. J. van den (2007a). Fanorona is a Draw. *ICGA Journal*, Vol. 30, No. 1, pp. 43–45. [41]
- Schadd, M. P. D., Winands, M. H. M., Uiterwijk, J. W. H. M., Herik, H. J. van den, and Bergsma, M. H. J. (2007b). Best Play in Fanorona Leads to Draw. *Proceedings of the 10th Joint Conference on Information Sciences (JCIS 2007)* (ed. P. Wang *et al.*), pp. 635–642, World Scientific Publishing Co. Pte. Ltd., Singapore. [41]
- Schadd, M. P. D., Winands, M. H. M., Chaslot, G. M. J.-B., Herik, H. J. van den, and Uiterwijk, J. W. H. M. (2008a). Single-Player Monte-Carlo Tree Search. *Proceedings of the 20st BeNeLux Conference on Artificial Intelligence (BNAIC'08)* (eds. A. Nijholt, M. Pantic, M. Poel, and H. Hondorp), pp. 361–362, University of Twente, Enschede, The Netherlands. [25]
- Schadd, M. P. D., Winands, M. H. M., Herik, H. J. van den, and Aldewereld, H. (2008b). Addressing NP-Complete Puzzles with Monte-Carlo Methods. *Proceedings of the AISB 2008 Symposium on Logic and the Simulation of Interaction and Reasoning*, Vol. 9, pp. 55–61, The Society for the Study of Artificial Intelligence and Simulation of Behaviour, Brighton, United Kingdom. [25]
- Schadd, M. P. D., Winands, M. H. M., Herik, H. J. van den, Chaslot, G. M. J.-B., and Uiterwijk, J. W. H. M. (2008c). Single-Player Monte-Carlo Tree Search. *Computers and Games (CG 2008)* (eds. H. J. van den Herik, X. Xu, Z. Ma, and M. H. M. Winands), Vol. 5131 of *Lecture Notes in Computer Science (LNCS)*, pp. 1–12, Springer-Verlag, Berlin, Germany. [25, 26, 28, 31, 38]
- Schadd, M. P. D., Winands, M. H. M., Uiterwijk, J. W. H. M., Herik, H. J. van den, and Bergsma, M. H. J. (2008d). Best Play in Fanorona Leads to Draw. *New Mathematics and Natural Computation*, Vol. 4, No. 3, pp. 369–387. [41]
- Schadd, M. P. D., Winands, M. H. M., and Uiterwijk, J. W. H. M. (2009). CHANCE-PROBCUT: Forward Pruning in Chance Nodes. *Proceedings of the 2009 IEEE Symposium on Computational Intelligence and Games (CIG 2009)* (ed. P. L. Lanzi), pp. 178–185, IEEE press, Piscataway, NJ, USA. [63]
- Schaeffer, J. (1983). The History Heuristic. *ICCA Journal*, Vol. 6, No. 3, pp. 16–19. [16, 77, 101]

- Schaeffer, J. (1997). *One Jump Ahead: Challenging Human Supremacy in Checkers*. Springer-Verlag, New York, NY, USA. [8, 50, 60]
- Schaeffer, J. (2007). Game Over: Black to Play and Draw in Checkers. *ICGA Journal*, Vol. 30, No. 4, pp. 187–197. [42, 60]
- Schaeffer, J. and Plaat, A. (1996). New Advances in Alpha–Beta Searching. *Proceedings of the 1996 ACM 24th Annual Conference on Computer Science*, pp. 124–130, ACM Press, New York, NY, USA. [18, 76]
- Schaeffer, J., Björnsson, Y., Burch, N., Lake, R., Lu, P., and Sutphen, S. (2003). Building the Checkers 10-Piece Endgame Databases. *Advances in Computer Games 10* (eds. H. J. van den Herik, H. Iida, and E. A. Heinz), pp. 193–210, Kluwer Academic Publishers, Dordrecht, The Netherlands. [50]
- Schaeffer, J., Burch, N., Björnsson, Y., Kishimoto, A., Müller, M., Lake, R., Lu, P., and Sutphen, S. (2007). Checkers is Solved. *Science*, Vol. 317, No. 5844, pp. 1518–1522. [3, 7, 8, 42, 47, 60]
- Scott, B. (2002). The Illusion of Intelligence. *AI Game Programming Wisdom* (ed. S. Rabin), Vol. 1, pp. 16–20, Charles River Media, Inc., Brookline, MA, USA. [5]
- Sevenster, M. (2006). *Branches of Imperfect Information: Logic Games and Computation*. Ph.D. thesis, Institute for Logic, Language and Computation, Universiteit van Amsterdam, Amsterdam, The Netherlands. [2, 4, 63]
- Shannon, C. E. (1950). Programming a Computer for Playing Chess. *Philosophical Magazine*, Vol. 41, No. 7, pp. 256–257. [3]
- Sheppard, B. (2002a). World-Championship-Caliber Scrabble. *Artificial Intelligence*, Vol. 134, Nos. 1–2, pp. 241–275. [3]
- Sheppard, B. (2002b). *Towards Perfect Play of Scrabble*. Ph.D. thesis, Department of Computer Science, Maastricht University, Maastricht, The Netherlands. [3, 18]
- Skowronski, P., Björnsson, Y., and Winands, M. H. M. (2010). Automated Discovery of Search-Extension Features. *Advances in Computer Games (ACG 2009)* (eds. H. J. van den Herik and P. Spronck), Vol. 6048 of *Lecture Notes in Computer Science (LNCS)*, pp. 182–194, Springer-Verlag, Berlin, Germany. [76]
- Slate, J. D. and Atkin, L. R. (1977). CHESS 4.5: The Northwestern University Chess Program. *Chess Skill in Man and Machine* (ed. P. W. Frey), pp. 82–118, Springer-Verlag, New York, NY, USA. [17, 77]
- Smith, S. J. J. and Nau, D. S. (1993). Toward an Analysis of Forward Pruning. Technical Report CS-TR-3096, University of Maryland at College Park, College Park, MD, USA. [70]

- Smith, S. J. J., Nau, D., and Throop, T. (1998). Computer Bridge: A Big Win for AI Planning. *AI Magazine*, Vol. 19, No. 2, pp. 93–105. [64]
- Spronck, P. (2005). *Adaptive Game AI*. Ph.D. thesis, Department of Computer Science, Maastricht University, Maastricht, The Netherlands. [5]
- Stankiewicz, J. A. and Schadd, M. P. D. (2009). Opponent Modeling in Stratego. *Proceedings of the 21st BeNeLux Conference on Artificial Intelligence (BNAIC'09)* (eds. T. Calders, K. Tuyls, and M. Pechenizkiy), pp. 233–240, Technische Universiteit Eindhoven, Eindhoven, The Netherlands. [64]
- Stengård, K. (2006). Utveckling av Minimax-Baserad Agent för Strategispelet Stratego. M.Sc. thesis, Lund University, Sweden. In Swedish. [66, 75]
- Stockman, G. C. (1979). A Minimax Algorithm Better than Alpha-Beta? *Artificial Intelligence*, Vol. 12, No. 2, pp. 179–196. [6]
- Ströhlein, T. (1970). *Untersuchungen über Kombinatorische Spiele*. Ph.D. thesis, Fakultät für Allgemeine Wissenschaften, Technischen Hochschule München, München, Germany. In German. [8, 43, 48, 50]
- Sturtevant, N. R. (2003a). *Multi-Player Games: Algorithms and Approaches*. Ph.D. thesis, Computer Science Department, University of California, Los Angeles, CA, USA. [4, 92, 93, 97, 101, 108, 114]
- Sturtevant, N. R. (2003b). Last-Branch and Speculative Pruning Algorithms for Max^n . *Proceedings of the Eighteenth International Joint Conference on Artificial Intelligence (IJCAI-03)* (eds. G. Gottlob and T. Walsh), pp. 669–678, Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. [8, 89, 92, 101]
- Sturtevant, N. R. (2003c). A Comparison of Algorithms for Multi-Player Games. *Computers and Games (CG 2002)* (eds. J. Schaeffer, M. Müller, and Y. Björnsson), Vol. 2883 of *Lecture Notes in Computer Science (LNCS)*, pp. 108–122, Springer-Verlag, Berlin, Germany. [89, 92, 93, 95, 101, 102]
- Sturtevant, N. R. (2008a). An Analysis of UCT in Multi-Player Games. *Computers and Games (CG 2008)* (eds. H. J. van den Herik, X. Xu, Z. Ma, and M. H. M. Winands), Vol. 5131 of *Lecture Notes in Computer Science (LNCS)*, pp. 37–49, Springer-Verlag, Berlin, Germany. [4, 25, 97, 108, 114]
- Sturtevant, N. R. (2008b). An Analysis of UCT in Multi-Player Games. *ICGA Journal*, Vol. 31, No. 4, pp. 195–208. [22, 97]
- Sturtevant, N. R. and Bowling, M. H. (2006). Robust Game Play Against Unknown Opponents. *5th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2006)* (eds. H. Nakashima, M. P. Wellman, G. Weiss, and P. Stone), pp. 713–719, ACM, Hakodate, Japan. [92]
- Sturtevant, N. R. and Korf, R. (2000). On Pruning Techniques for Multi-Player Games. *Proceedings of the 17th National Conference on Artificial Intelligence (AAAI-00)*, pp. 201–207, AAAI Press, Menlo Park, CA, USA. [4, 5, 8, 89, 91, 92, 93]

- Sturtevant, N. R., Zinkevich, M., and Bowling, M. H. (2006). Prob-Maxⁿ: Playing N-player Games with Opponent Models. *Proceedings of the 21st National Conference on Artificial Intelligence (AAAI-06)*, pp. 1057–1063, AAAI Press, Menlo Park, CA, USA. [92]
- Sutton, R. S. (1988). Learning to Predict by the Methods of Temporal Differences. *Machine Learning*, Vol. 3, No. 1, pp. 9–44. [3]
- Sutton, R. S. and Barto, A. G. (1998). *Reinforcement Learning: An Introduction*. MIT Press, Cambridge, MA, USA. [31, 33]
- Tak, M. J. W. (2010). The Cross-Entropy Method Applied to SameGame. Bachelor thesis, Maastricht University, Maastricht, The Netherlands. [31, 34, 37, 38]
- Takes, F. W. and Kusters, W. A. (2009). Solving SameGame and its Chessboard Variant. *Proceedings of the 21st Benelux Conference on Artificial Intelligence (BNAIC'09)* (eds. T. Calders, K. Tuyls, and M. Pechenizkiy), pp. 249–256, Technische Universiteit Eindhoven, Eindhoven, The Netherlands. [28, 29, 31]
- Tesauro, G. (1994). TD-Gammon, a Self-Teaching Backgammon Program, Achieves Master-Level Play. *Neural Computation*, Vol. 6, No. 2, pp. 215–219. [3]
- Tesauro, G. and Galperin, G. R. (1997). On-line Policy Improvement using Monte-Carlo Search. *Advances in Neural Information Processing Systems* (eds. M. C. Mozer, M. I. Jordan, and T. Petsche), Vol. 9, pp. 1068–1074, MIT Press, Cambridge, MA, USA. [18]
- Teytaud, F. and Teytaud, O. (2010). Creating an Upper-Confidence-Tree Program for Havannah. *Advances in Computer Games (ACG 2009)* (eds. H. J. van den Herik and P. Spronck), Vol. 6048 of *Lecture Notes in Computer Science (LNCS)*, pp. 65–74, Springer-Verlag, Berlin, Germany. [22]
- Thiery, C. and Scherrer, B. (2009). Improvements on Learning Tetris with Cross Entropy. *ICGA Journal*, Vol. 32, No. 1, pp. 23–33. [4]
- Thomson, T. (2000). Lambda-Search in Game Trees - With Application to Go. *ICGA Journal*, Vol. 23, No. 4, pp. 203–217. [43]
- Tozour, P. (2002). The Perils of AI Scripting. *AI Game Programming Wisdom* (ed. S. Rabin), Vol. 1, pp. 541–547, Charles River Media, Inc., Brookline, MA, USA. [5]
- Treijtel, C. and Rothkrantz, L. J. M. (2001). Stratego Expert System Shell. *Proceedings of the 2nd International Conference on Intelligent Games and Simulation (GAME-ON 2001)* (eds. Q. H. Mehdi, N. E. Gough, and D. Al-Dabbas), pp. 17–21, The European Multidisciplinary Society for Modelling and Simulation Technology (Eurosis), Ostend, Belgium. [75]
- Tromp, J. T. (2008). Solving Connect-4 on Medium Board Sizes. *ICGA Journal*, Vol. 31, No. 2, pp. 110–112. [42]

- Turing, A. M. (1953). Digital Computers Applied to Games. *Faster than Thought* (ed. B. V. Bowden), pp. 286–297, Pitman, London, United Kingdom. [3]
- Uiterwijk, J. W. H. M. (1992). The Countermove Heuristic. *ICCA Journal*, Vol. 15, No. 1, pp. 8–15. [16]
- Vempaty, N. R., Kumar, V., and Korf, R. E. (1991). Depth-First versus Best-First Search. *Proceedings of the 9th National Conference on Artificial Intelligence (AAAI-91)*, pp. 434–440, AAAI Press, Menlo Park, CA, USA. [30]
- Veness, J. and Blair, A. (2007). Effective Use of Transposition Tables in Stochastic Game Tree Search. *Proceedings of the 2007 IEEE Symposium on Computational Intelligence and Games (CIG 2007)* (eds. A. Blair, S-B. Cho, and S. M. Lucas), pp. 112–116, IEEE press, Piscataway, NJ, USA. [70, 76, 77]
- Wágner, J. and Virág, I. (2001). Solving Renju. *ICGA Journal*, Vol. 24, No. 1, pp. 30–34. [42]
- Winands, M. H. M. (2004). *Informed Search in Complex Games*. Ph.D. thesis, Department of Computer Science, Maastricht University, Maastricht, The Netherlands. [60]
- Winands, M. H. M. (2007). SIA Wins Surakarta Tournament. *ICGA Journal*, Vol. 30, No. 3, p. 162. [60]
- Winands, M. H. M. (2008). 6×6 LOA is Solved. *ICGA Journal*, Vol. 31, No. 4, pp. 234–238. [58]
- Winands, M. H. M. and Björnsson, Y. (2010). Evaluation Function based Monte-Carlo LOA. *Advances in Computer Games (ACG 2009)* (eds. H. J. van den Herik and P. Spronck), Vol. 6048 of *Lecture Notes in Computer Science (LNCS)*, pp. 33–44, Springer-Verlag, Berlin, Germany. [6, 108]
- Winands, M. H. M. and Schadd, M. P. D. (2011). Evaluation-Function Based Proof-Number Search. *Computers and Games (CG 2010)* (eds. H. J. van den Herik, H. Iida, and A. Plaat), Vol. 6515 of *Lecture Notes in Computer Science (LNCS)*, pp. 23–35, Springer-Verlag, Berlin, Germany. [61, 113]
- Winands, M. H. M., Herik, H. J. van den, Uiterwijk, J. W. H. M., and Werf, E. C. D. van der (2005). Enhanced Forward Pruning. *Information Sciences*, Vol. 175, No. 4, pp. 315–329. [69]
- Winands, M. H. M., Werf, E. C. D. van der, Herik, H. J. van den, and Uiterwijk, J. W. H. M. (2006). The Relative History Heuristic. *Computers and Games (CG 2004)* (eds. H. J. van den Herik, Y. Björnsson, and N. S. Netanyahu), Vol. 3846 of *Lecture Notes in Computer Science (LNCS)*, pp. 262–272, Springer-Verlag, Berlin, Germany. [16]

- Winands, M. H. M., Björnsson, Y., and Saito, J.-T. (2008). Monte-Carlo Tree Search Solver. *Computers and Games (CG 2008)* (eds. H. J. van den Herik, X. Xu, Z. Ma, and M. H. M. Winands), Vol. 5131 of *Lecture Notes in Computer Science (LNCS)*, pp. 25–36, Springer-Verlag, Berlin, Germany. [21]
- Xia, Z. Y., Hu, Y. A., Wang, J., Jiang, Y.-C., and Qin, X. L. (2005). Analyze and Guess Type of Piece in the Computer Game Intelligent System. *Fuzzy Systems and Knowledge Discovery, Second International Conference (FSKD 2005)* (eds. L. Wang and Y. Jin), Vol. 3614 of *Lecture Notes in Computer Science, (LNCS/LNAI)*, pp. 1174–1183, Springer-Verlag, Berlin Heidelberg, Germany. [4, 76]
- Xia, Z. Y., Zhu, Y., and Lu, H. (2007). Using the Loopy Belief Propagation in Siguo. *ICGA Journal*, Vol. 30, No. 4, pp. 209–220. [4, 76]
- Zermelo, E. (1913). Über eine Anwendung der Mengenlehre auf die Theorie des Schachspiels. *Proceedings of the Fifth Congress of Mathematicians, Cambridge 1912*, pp. 501–504, Cambridge University Press, Cambridge, United Kingdom. In German. [2]
- Zobrist, A. L. (1970). A New Hashing Method with Application for Game Playing. Technical Report 88, Computer Science Department, The University of Wisconsin, Madison, WI, USA. Reprinted in (1990) *ICCA Journal*, Vol. 13, No. 2, pp. 69–73. [17]
- Zuckerman, I., Felner, A., and Kraus, S. (2009). Mixing Search Strategies for Multi-Player Games. *Proceedings of the Twenty-first International Joint Conferences on Artificial Intelligence (IJCAI-09)* (ed. C. Boutilier), pp. 646–651, Morgan Kaufmann Publishers Inc., San Francisco, CA, USA. [8, 89, 91, 108, 114]