

## Summary

I am a Ph.D. student in the last phase of a Ph.D. in the field of Machine Learning and Artificial Intelligence. My main focus has been to develop a strong parallel A.I. for the game of Go.

## Personal details

Full name: Guillaume Maurice Jean-Bernard Chaslot

Citizenship: French

Language spoken: French (native), English (proficient), Dutch (basic), German (basic)

Preferred programming languages: C++ (main programming language), Java (for side projects and teaching), Matlab (for side projects). My programming environment is Linux.

Programming languages that I experimented with: QBasic, Visual Basic, Pascal, Maple, Lisp, Prolog, StarLogo, Ruby, Action Script.

## Education

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| 2005–2009 | <b>Ph.D. <i>Monte-Carlo Tree Search</i></b> . Maastricht University, The Netherlands.<br><i>Expected defense: June 2010.</i> |
| 2004–2005 | <b>M.Sc. <i>Computer Science and Artificial Intelligence</i></b> . University Lille 1, France.                               |
| 2002–2005 | <b>Engineering School. <i>Ecole Centrale de Lille</i></b> . France.  |

## Main contributions

- Contribution to the Go program **MoGo**. Mogo holds the world record against humans, by defeating a professional player with 6 stones handicap (Taiwan, February 2009). 2008-present  
(cf. <http://www.computer-go.info/h-c/index.html>)  
MoGo was in the best three programs in computer Go competitions.  
(cf. <http://www.grappa.univ-lille3.fr/icga/program.php?id=515>)
- Application of **Monte-Carlo Tree Search** in Go, Production Management Problems, Settlers of Catan, Backgammon, and Poker. Our results were among the world's best in the first three application domains. 2006-present
- First to propose a **Monte-Carlo Tree Search** algorithm (2006, simultaneously to Coulom and Kocsis). Monte-Carlo Tree Search is now the winning methodology in the 2009 game-playing tournaments in Go, Amazons, Hex, and General Game Playing (GGP). 2006

## Peer-reviewed publications

### Journals

- G.M.J-B. Chaslot, M.H.M Winands, I. Szita, and H.J. van den Herik. *Cross-entropy for Monte-Carlo Tree Search*. ICGA Journal, 31(3):145-156. 2008
- G.M.J-B. Chaslot, M.H.M. Winands, J.W.H.M. Uiterwijk, H.J. van den Herik, and B. Bouzy. *Progressive strategies for Monte-Carlo Tree Search*. New Mathematics and Natural Computation, 4(3):343-357. 2008
- C-S. Lee, M-H. Wang, G.M.J-B. Chaslot, J-B. Hoock, A. Rimmel, O. Teytaud, S-R. Tsai, S-C. Hsu, and T-P. Hong. *The Computational Intelligence of MoGo Revealed in Taiwan's Computer Go Tournaments*. IEEE Transactions on Computational Intelligence and AI in games. 1(1):73-89. 2009

### Conferences

- G.M.J-B. Chaslot, C. Fiter, J-B. Hoock, A. Rimmel, O. Teytaud. *Adding expert knowledge and exploration in Monte-Carlo Tree Search*. In Proceedings of the Twelfth International Advances in Computer Games Conference (ACG'09), Pamplona, Spain, May 11-13, 2009. In Press. 2009
- I. Szita; G.M.J-B. Chaslot, P. Spronck. *Monte-Carlo Tree Search in Settlers of Catan*. In Proceedings of the Twelfth International Advances in Computer Games Conference (ACG'09), Pamplona, Spain, May 11-13, 2009. In Press. 2009
- G.M.J-B. Chaslot, M.H.M. Winands, and H.J. van den Herik. *Parallel Monte-Carlo Tree Search*. In H.J. van d. Herik., X.Xu, Z. Ma, and M.H.M. Winands, editors, Proceedings of the Conference on Computers and Games 2008 (CG 2008), volume 5131 of Lecture Notes in Computer Science, pages 60-71. Springer, Berlin Heidelberg. 2008
- P. Audouard, G.M.J-B. Chaslot, J-B Hoock, A. Rimmel, J. Perez, and O. Teytaud. Grid coevolution for adaptive simulations; application to the building of opening books in the game of Go. In EvoGames, Tuebingen Allemagne, 2009. Springer. 2008
- G.M.J-B. Chaslot, S. Bakkes, I. Szita, and P. Spronck. *Monte-Carlo Tree Search: A New Framework for Game AI*. In M. Mateas and C. Darken, editors, Proceedings of the Fourth Artificial Intelligence and Interactive Digital Entertainment Conference. AAAI Press, Menlo Park, CA, 2008. 2008
- J. Borsboom, J-T Saito, G.M.J-B. Chaslot, and J.W.M.H. Uiterwijk. *A Comparison of Monte-Carlo Methods for Phantom Go*. In M. Dastani and E. de Jong, editors, Proceedings of The 19th Belgian-Dutch Conference on Artificial Intelligence, 2007. 2007
- G.M.J-B. Chaslot, M.H.M. Winands, J.W.H.M. Uiterwijk, H.J. van den Herik, and B. Bouzy. *Progressive Strategies for Monte-Carlo Tree Search*. In P. Wang et al., editors, Proceedings of the 10th Joint Conference on Information Sciences (JCIS 2007), pages 655-661. World Scientific Publishing Co. Pte. Ltd., 2007. 2007
- J-T. Saito, G.M.J-B. Chaslot, Jos W.H.M. Uiterwijk, and H.J. van den Herik. *Monte-Carlo Proof-Number Search*. In Computers and Games, 2007. 2007
- J-T. Saito, G.M.J-B. Chaslot, Jos W. H. M. Uiterwijk, and H. J. van den Herik. *Pattern Knowledge for Proof-Number Search in Computer Go*. In G. Schwanen P-Y. Schobbens, W. Vanhoof, editor, Proceedings of the 18th BeNeLux Conference on Artificial Intelligence, Namur, Belgium, pages 275-281, 2006. 2006
- B. Bouzy and G.M.J-B. Chaslot. *Monte-Carlo Go Reinforcement Learning Experiments*. In G. Kendall and S. Louis, editors, IEEE 2006 Symposium on Computational Intelligence in Games, Reno, USA, pages 187-194., 2006. 2006
- G.M.J-B. Chaslot, S. de Jong, J-T. Saito, and J.W.H.M. Uiterwijk. *Monte-Carlo Tree Search in Production Management Problems*. In P-Y. Schobbens, W. Vanhoof, and G. Schwanen, editors, Proceedings of the 18th BeNeLux Conference on Artificial Intelligence, Namur, Belgium, 2006. 2006

pages 91-98, 2006.

- G.M.J-B. Chaslot, J-T. Saito, B. Bouzy, J.W.H.M. Uiterwijk, and H. Jaap van den Herik. *Monte-Carlo Strategies for Computer Go*. In P-Y. Schobbens, W. Vanhoof, and G. Schwanen, editors, Proceedings of the 18th BeNeLux Conference on Artificial Intelligence, Namur, Belgium, pages 83-91, 2006. 2006
- B. Bouzy and G.M.J-B Chaslot. *Bayesian Generation and Integration of K-nearest-neighbor Patterns for 19x19 Go*. In G. Kendall and Simon Lucas, editors, IEEE 2005 Symposium on Computational Intelligence in Games, Essex, UK, pages 176-181, 2005. 2005

## Teaching Experience

- Object Oriented Modeling (Course coordinator, 30 hours) 2008-2009
- Computer Science 1 (Teaching Assistant, 24 hours) 2008
- Modeling Nature (Teaching Assistant, 96 hours) 2006-2007
- Reasoning Techniques (Teaching Assistant, 36 hours) 2005-2008
- Object Oriented Modeling (Teaching Assistant, 72 hours) 2005-2007
- Foundations of Knowledge Representation & Reasoning (Teaching Assistant, 18 hours) 2005-2006

## Current personal interests

- **Misc:** piano, volleyball, ski, go, board games, cooking.
- **3d video.** I built a 3d slow-motion video camera. I make short movies to be seen with virtual reality glasses.
- **Electronics.** I built an interface using PCBs to control different devices from my computer (e.g., fans, lights, motors, etc...)
- **Technologic art.** I designed an interface to play scents, in synchronization with music and 3d videos.