

# Bibliography

- [1] Grigoris Antoniou, A tutorial on default reasoning, *The Knowledge Engineering Review*, Volume 13 Issue 3, 225 - 246, October 1998.
- [2] Grigoris Antoniou, Paul Groth, Frank van Harmelen and Rinke Hoekstra, *A Semantic Web Primer*, 3rd ed., MIT Press, 2012.
- [3] K. R. Apt, H. Blair, and A. Walker, Towards a Theory of Declarative Knowledge, in: J. Minker (ed.), *Foundations of Deductive Databases and Logic Programming*, Morgan Kaufman, Los Altos, CA, pp. 89-148, 1988.
- [4] Joe Armstrong, Robert Virding, Claes Wikstrom, Mike Williams, *Concurrent Programming in Erlang*, (2nd ed.), Prentice-Hall International, 1996.  
Part 1 available from [www.erlang.org/download/erlang-book-part1.pdf](http://www.erlang.org/download/erlang-book-part1.pdf)
- [5] W. Ross Ashby, *Design for a Brain*, Chapman and Hall, 1952. At: <https://archive.org/details/designforbrainor00ashb>
- [6] L. Atzori, A. Iera, G. Morabito, The Internet of Things: A Survey, *Computer networks*, 54(16), pp. 2787-2805, 2010.  
At: [numenor.cicese.mx/cursos/CMU/atzori-iotsurvey.pdf](http://numenor.cicese.mx/cursos/CMU/atzori-iotsurvey.pdf)
- [7] R. Baldoni, M. Contenti, and A. Virgillito. *The Evolution of Publish/Subscribe Communication Systems. Future Directions of Distributed Computing*, Springer Verlag LNCS Vol. 2584, 2003.
- [8] Chitta Baral, *Knowledge Representation, Reasoning and Declarative Problem Solving*, Cambridge University Press, 2004.
- [9] P. Barnaghi, W. Wei Wang, C. Henson, K. Taylor, Semantics for the Internet of Things: Early Progress and Back to the Future, *International Journal on Semantic Web and Information Systems*, 8(1), 1-21, 2012
- [10] K. Barth, D. A. Henrich, GOTO-based concept for intuitive robot programming, *International Conference on Intelligent Robots and Systems (IROS)*, IEEE/RSJ , 2012.
- [11] M. Ben-Ari, *Principles of Concurrent and Distributed Programming* (2nd ed.), Addison-Wesley, 2006.
- [12] S. Benson, Learning Action Models for Autonomous Reactive Agents, PhD Thesis, Stanford University, 1996, At:

<http://i.stanford.edu/pub/cstr/reports/cs/tr/97/1589/CS-TR-97-1589.pdf>

- [13] S. Benson, and N. Nilsson, Reacting, Planning and Learning in an Autonomous Agent, in *Machine Intelligence 14*, K. Furukawa, D. Michie, and S. Muggleton, (eds.), Oxford: the Clarendon Press, 1995
- [14] R. H. Bordini, J. F. Hubner, M. Wooldridge, *Programming multi-agent systems in AgentSpeak using Jason*, Wiley-Interscience, 2007
- [15] Jeffrey M. Bradshaw, *An Introduction to Software Agents*, 1997. At: [agents.umbc.edu/introduction/01-Bradshaw.pdf](http://agents.umbc.edu/introduction/01-Bradshaw.pdf)
- [16] George A. Bekey, *Autonomous Robots*, MIT Press, 2005
- [17] Paul Brna, *Prolog Programming, A first course*, 2001, At: [comp.mq.edu.au/units/comp248/resources/brna-prolog-book.pdf](http://comp.mq.edu.au/units/comp248/resources/brna-prolog-book.pdf)
- [18] K. Broda, C. J. Hogger, Designing effective policies for minimal agents. *Comput Journal* 53:11841209, 2010.
- [19] K. Broda, K. L. Clark, R. Miller, A. Russo, SAGE: A Logical Agent-Based Environment Monitoring and Control System, in *Ambient Intelligence, Proceedings of 3rd European Conference on Ambient Intelligence (AmI09)*, (ed. M Tscheligi et al), Springer, 2009
- [20] R. Brooks, *The Behaviour Language; User's Guide*, MIT AI Memo 1227, 1990.  
At: [people.csail.mit.edu/brooks/papers/AIM-1227.pdf](http://people.csail.mit.edu/brooks/papers/AIM-1227.pdf)
- [21] R. Brooks, *Cambrian Intelligence: The Early History of the New AI*, MIT Press, 1999.
- [22] N. Carrero, D. Gelernter, Linda in context, *CACM*, 32(4), 1989.
- [23] S. Ceri, G. Gottlob, L. Tanca, What you always wanted to know about Datalog (and never dared to ask), *Transactions on Knowledge and Data Engineering (IEEE)* 1 (1): 146-166, 1989.
- [24] Alex J. Champandard, *Teleo-Reactive Programs for Agent Control*, 2007. Review of Nilsson's paper for game developers. At: [aigamedev.com/open/review/teleo-reactive-programs-agent-control/](http://aigamedev.com/open/review/teleo-reactive-programs-agent-control/)

- [25] D. Choi, M. Kaufman, P. Langley, N. Nejati, D. Shapiro, An architecture for persistent reactive behaviour. In *Proceedings of the Third International Joint Conference on Autonomous Agents and Multi-agent Systems-Volume 2* (pp. 988-995). IEEE Computer Society, 2004.
- [26] D. Choi, P. Langley, Learning teleoreactive logic programs from problem solving, *Proceedings of Inductive Logic Programming-05*, Springer, 2005.
- [27] E. Chown, S. Kaplan, D. Kortenkamp, Prototypes, Location, and Associative Networks (PLAN): Towards a Unified Theory of Cognitive Mapping, *Cognitive Science*, Volume 19, Issue 1, pages 151, January 1995
- [28] K. L. Clark, Negation as Failure, in *Logic and Databases*, eds. H. Gallaire and J. Minker, Plenum Press, pp 293-322, 1978. At: [www.doc.ic.ac.uk/~klc/neg.html](http://www.doc.ic.ac.uk/~klc/neg.html)
- [29] K. L. Clark, P. J. Robinson and R. Hagen, Programming internet distributed, reactive and rational agents in Qu-Prolog, *Proceedings of 4th Australian International DAI Workshop, published as Multi-agent Systems*, (ed C. Zhang and D. Lukose), Springer-Verlag LNAI 1544, 1999.
- [30] K. L. Clark, P. J. Robinson, R. Hagen, Multi-threading and Message Communication in Qu-Prolog, *Theory and Practice of Logic Programming*, 1(3), pp 283-301, 2001.
- [31] K. L. Clark and P. J. Robinson, Agents as Multi-threaded Logical Objects, *Computational Logic: From Logic Programming into the Future*, A. Kakis and F. Sadri (Eds), Springer-Verlag, 2002.
- [32] K. L. Clark, P. J. Robinson, S. Zappacosta-Amboldi, Multi-threaded communicating agents in Qu-Prolog, in *Computational Logic in Multi-agent systems*. eds. F Toni and P. Torroni, LNAI 3900, Springer, 2006, At: [www.doc.ic.ac.uk/~klc/auctionsInQuP.html](http://www.doc.ic.ac.uk/~klc/auctionsInQuP.html)
- [33] K. L. Clark, P. J. Robinson, Video showing a multi-tasking agent controlling two robot arms, 2013. Link on web page: [www.doc.ic.ac.uk/~klc/](http://www.doc.ic.ac.uk/~klc/)
- [34] K. L. Clark, P. J. Robinson, *Engineering Agent Applications in QuLog*, to be published by Springer, 2015.

- [35] S. Coffey, K. L. Clark, A Hybrid, Teleo-Reactive Architecture for Robot Control, *Proceedings of the Second International Workshop on Multi-Agent Robotic Systems (MARS-06)*, 2006. At: [www.doc.ic.ac.uk/~klc/mars06new.pdf](http://www.doc.ic.ac.uk/~klc/mars06new.pdf)
- [36] Diane J. Cook, How Smart Is Your Home, *Science*, Vol 335, pp 1579-1581, 2012. At: [www.eecs.wsu.edu/~cook/pubs/science12.pdf](http://www.eecs.wsu.edu/~cook/pubs/science12.pdf)
- [37] Diane J. Cook, Juan C. Augusto, Vikramaditya R. Jakkula, Ambient Intelligence: Technologies, Applications, and Opportunities, *Pervasive and Mobile Computing*, 5(4):277-298, 2009. At: [www.eecs.wsu.edu/~cook/pubs/pmc10.pdf](http://www.eecs.wsu.edu/~cook/pubs/pmc10.pdf)
- [38] Peter Corke, *Robotics, Vision and Control*, Springer, 2011.
- [39] P. Cousot, *Abstract Interpretation*, 2008. At: <http://www.di.ens.fr/~cousot/AI/>
- [40] Brad Darrach, Meet Shaky, the first electronic person, *Life*, 20th November, 1970
- [41] Marc Denecker and Danny De Schreye, SLDNFA: an Abductive Procedure for Abductive Logic Programs, *The Journal of Logic programming*, 34 (2) (1998) 111-167.
- [42] J.P. Diprose, B.A. MacDonald, J.G. Hosking, Ruru: A spatial and interactive visual programming language for novice robot programming, *IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*, 2011.
- [43] Pedro Domingos and Daniel Lowd, *Markov Logic: An Interface Layer for Artificial Intelligence*, Synthesis Lectures on Artificial Intelligence and Machine Learning, Morgan & Claypool Publishers, 2009
- [44] B. Dongol, I. J. Hayes, P. J. Robinson, Reasoning about Goal-Directed Real-Time Teleo-Reactive Programs, *Formal Aspects of Computing*, Vol. 25, No. 1, pages 1-27, Springer, 2013.
- [45] Allen B. Downey, *The Little Book of Semaphores*, 2008, At: [www.greenteapress.com/semaphores/downey08semaphores.pdf](http://www.greenteapress.com/semaphores/downey08semaphores.pdf)
- [46] R. Fikes, N. Nilsson, A New Approach to the Application of Theorem Proving to Problem Solving, *Artificial Intelligence*, 2, 3-4, 1979, At: [ai.stanford.edu/users/OnlinePubsNils/PublishedPapers/strips.pdf](http://ai.stanford.edu/users/OnlinePubsNils/PublishedPapers/strips.pdf)

- [47] T. Finin, Y. Labrou and J. Mayfield, KQML as an Agent Communication Language, *Software Agents*, (ed J. Bradshaw), AAAI/MIT Press, 1997.
- [48] FIPA Agent Communication Language Specification.  
See [www.fipa.org/repository/aclspecs.html](http://www.fipa.org/repository/aclspecs.html)
- [49] FIPA Agent Discovery Service Specification, 2003.  
At: [www.fipa.org/specs/fipa00095/PC00095.pdf](http://www.fipa.org/specs/fipa00095/PC00095.pdf)
- [50] C. Forgy, Rete: A Fast Algorithm for the Many Pattern/Many Object Pattern Match Problem, *Artificial Intelligence*, 19, pp 1737, 1982
- [51] D. Gaertner, K. L. Clark, M. Sergot, Ballroom etiquette: a case study for norm-governed multi-agent systems, *Proceedings of AAMAS06 Workshop on Coordination, Organization, Institutions and Norms in agent systems*, LNCS 4386, Springer, 2006.
- [52] Michael Gelfond, Answer Set Programming and the Design of Deliberative Agents, In Bart Demoen and Vladimir Lifschitz, editors, *Procs. of 20th International Conference on Logic Programming*, Lecture Notes in Artificial Intelligence (LNCS) 3132, pages 19-26, Springer, 2004.
- [53] E. Gordon, B. Logan, A Goal Processing Architecture for Game Agents, *Proceedings of AAMAS*, 2003, full paper at [www.cs.nott.ac.uk/WP/2003/2003-1.pdf](http://www.cs.nott.ac.uk/WP/2003/2003-1.pdf)
- [54] G. Gubisch, G. Steinbauer, M. Weiglhofer, F. Wotawa, A Teleo-Reactive architecture for fast, reactive and robust control of mobile robots. In: *New Frontiers in Applied Artificial Intelligence* , pp 541-550, 2008.
- [55] J. Hawthorne, R. J. Anthony, A Methodology for the Use of the Teleo-Reactive Programming Technique in Autonomic Computing, *11th ACIS International Conference on Software Engineering Artificial Intelligence Networking and Parallel/Distributed Computing (SNPD)*, IEEE, 2010.
- [56] J. Hawthorne, R. J. Anthony, M. Petridis, Improving the Development Process for Teleo-Reactive Programming Through Advanced Composition, *The Seventh International Conference on Autonomic and Autonomous Systems*, 2011.

- [57] C. Hewitt, P. Bishop, R. Steiger, A Universal Actor Formalism for Artificial Intelligence, *Proceedings of International Conference on Artificial Intelligence'73*, pp 235-245, 1973.
- [58] Zhang Huiliang, Huang Shell Ying, A parallel BDI agent architecture, in *Intelligent Agent Technology*, IEEE/WIC/ACM International Conference on Intelligent Agent Technology, pp 157-160, 2005
- [59] Iris Datalog Reasoner in Java, [iris-reasoner.org](http://iris-reasoner.org)
- [60] J. Jackson, *The Internet of Things gets a protocol – it's called MQTT*, [www.computerworld.com/s/article/9238726](http://www.computerworld.com/s/article/9238726)
- [61] The JavaCC Parser/Scanner Generator, <https://java.net/projects/javacc>
- [62] S. S. Jha, S. B. Nair, A logic programming interface for multiple robots, *Emerging Trends and Applications in Computer Science (NCETACS), 3rd National Conference on Digital Object Identifier*, 152-156, 2012.
- [63] A.C. Kakas, R. Kowalski, F. Toni, Abductive logic programming, *Journal of Logic and Computation* 2(6) pages 719-770 (1992)
- [64] A.C. Kakas, P. Mancarella, F. Sadri, K. Stathis, F. Toni, The KGP model of Agency, Paper presented at *ECAI*, Valencia, Spain, pp. 33–37, 2004.
- [65] S. H. Kim, *Knowledge Systems Through Prolog: An Introduction*, Oxford University Press, 1999.
- [66] R. Kowalski and F. Sadri, Teleo-Reactive Abductive Logic Programs, *Festschrift for Marek Sergot*, (eds: Alexander Artikis, Robert Craven, Nihan Kesim, Babak Sadighi, Kostas Stathis), Springer, 2012.
- [67] R. Kowalski, and M. Sergot, A Logic-based Calculus of Events, *New Generation Computing*, Vol. 4, No.1, pp. 67-95, February 1986.
- [68] D. Kuokka and L. Harada, On using KQML for Matchmaking, *1st International Joint Conf. on Multi-agent Systems*, pp 239-245, MIT Press, 1995.
- [69] Y. Labrou, T. Finin, Y. Peng, Agent communication languages: The current landscape, *Intelligent Systems and Their Applications*, IEEE, 14(2), 45-52, 1999.

- [70] N. Lavrac, S. Dzeroski, *Inductive Logic Programming: Techniques and Applications*, Ellis Horwood, New York, 1994.  
At: [www-ai.ijs.si/SasoDzeroski/ILPBook/ILPbook.pdf](http://www-ai.ijs.si/SasoDzeroski/ILPBook/ILPbook.pdf)
- [71] J. Lee, E. H. Durfee, Structured circuit semantics for reactive plan execution systems. *Proceedings of AAAI-94*, 1994.
- [72] Hector Levesque, *Thinking as Computation*, MIT Press, 2012.
- [73] J. Ma, A. Russo, K. Broda, K. L. Clark, DARE: A System for Distributed Abductive Reasoning, *Autonomous Agents and Multi-agent Systems Journal*, 16(3), Springer, June, 2008
- [74] F. G. McCabe, K. L. Clark, April - Agent process interaction language, in *Intelligent Agents*, (ed N. Jennings, M. Wooldridge), LNAI, Vol 890, Springer-Verlag, 1995.
- [75] Brian Milch and Stuart Russell, First-Order Probabilistic Languages: Into the Unknown, In *ILP: Proceedings of the 16th International Conference on Inductive Logic Programming*, Berlin: Springer, 2007.
- [76] George A. Miller, E. Galanter, and K. H. Pribram, *Plans and the Structure of Behavior*, New York: Holt, Rinehart and Winston, 1960.
- [77] J. L. Morales, P. Sanchez, D. Alonso, A systematic literature review of the Teleo-Reactive paradigm, *Artificial Intelligence Review*, 1-20, 2012
- [78] MindStorms Web Site:  
[mindstorms.lego.com/en-gb/products/default.aspx](http://mindstorms.lego.com/en-gb/products/default.aspx)
- [79] D. Nau, M. Ghallab, P. Traverso, *Automated Planning: Theory and Practice*, Morgan Kaufmann, 2004.
- ]
- [80] N. J. Nilsson, Toward Agent Programs With Circuit Semantics, Report No. STAN-CS-92-1412, 1992.  
At: [ai.stanford.edu/users/nilsson/trweb/tr.html](http://ai.stanford.edu/users/nilsson/trweb/tr.html)
- [81] N. J. Nilsson, Teleo-reactive programs for agent control. *Journal of Artificial Intelligence Research*, 1, 139-158, 1994.
- [82] N. J. Nilsson, *Learning Strategies for Mid-Level Robot Control: Some Preliminary Considerations and Experiments*, Research Report, At: <http://www.robotics.stanford.edu/users/nilsson/trweb/learningcontrol.pdf>



- [83] N. J. Nilsson, Teleo-reactive programs and the triple-tower architecture. *Electronic Transactions on Artificial Intelligence*, 5:99-110, 2001.
- [84] N. J. Nilsson, A demo interactive block stacking TR agent. At: [ai.stanford.edu/users/nilsson/trweb/tr.html](http://ai.stanford.edu/users/nilsson/trweb/tr.html)
- [85] N. J. Nilsson, *The Quest for Artificial Intelligence*, Cambridge University Press, 2009.
- [86] U. Nilsson, J. Maluszynski, *Logic, Programming and Prolog* (2ed), formally published by Wiley 1995, available from [www.ida.liu.se/~ulfni/lpp/](http://www.ida.liu.se/~ulfni/lpp/)
- [87] S. Overell, TRIDE, Masters Thesis, Department of Computing, Imperial College, London, 2005. Thesis and source code of an IDE for TR programming of Lego Mindstorms Version 1 robots at: <http://www.numenore.co.uk/TRIDE/>
- [88] Gordon D Plotkin, The origins of structural operational semantics, *The Journal of Logic and Algebraic Programming*, Volumes 60-61, July-December 2004, Pages 3-15.
- [89] A. Pollmann, Logic/Object-Oriented Concurrent Robot Programming and Performance Aspects, vol. 9 of *Programming Complex Systems*, F. Belli, (ed.), Walter de Gruyter & Co, Berlin, New York, 1996.
- [90] David Poole, Alan Mackworth, *Artificial Intelligence. Foundations of Computational Agents*, Chapters 6 and 9, Cambridge University Press, 2010. Also at: <http://artint.info/html/ArtInt.html>
- [91] M. Quigley, E. Berger, and A. Y. Ng, STAIR: Hardware and Software Architecture, in *AAAI 2007 Robotics Workshop*, Vancouver, B.C, August, 2007. At: <http://www.aaai.org/Papers/Workshops/2007/WS-07-15/WS07-15-008.pdf>
- [92] Morgan Quigley, Brian Gerkey, Ken Conley, Josh Faust, Tully Foote, Jeremy Leibs, Eric Berger, Rob Wheeler, Andrew Ng. ROS: an open-source Robot Operating System, 2009. At: <http://www.robotics.stanford.edu/~ang/papers/icraoss09-ROS.pdf>
- [93] Bertram Raphael et al., Research and Applications Artificial Intelligence, Part V, SRI Final Report, December 1971. At: <http://www.ai.sri.com/pubs/files/raphael71-p8973-final.pdf>.

- [94] A. S. Rao, AgentSpeak(L): BDI agents speak out in a logical computable language. In *Seventh European Workshop on Modelling Autonomous Agents in a Multi-Agent World*, LNAI, Springer, pp 42-55, 1996.
- [95] R. Reiter, *Knowledge in Action: Logical Foundations for Specifying and Implementing Dynamical Systems*, MIT Press, 2001.
- [96] S. Riisgaard, M. R. Blas *Slam for Dummies*, 2005, (search for ‘Slam for Dummies’).
- [97] P. J. Robinson, Home Page, <http://itee.uq.edu.au/~pjr/>
- [98] P. J. Robinson, K. L. Clark, Pedro: A Publish/Subscribe Server Using Prolog Technology, *Software Practice and Experience*, 40(4) pp 313-329, Wiley, 2010. At: <http://www.doc.ic.ac.uk/~klc/pedro.pdf>
- [99] Neil C. Rowe, *Artificial Intelligence through Prolog*, Prentice-Hall, 1988. At: [www.cs.millersville.edu/~chaudhary/340/AIThruProlog.pdf](http://www.cs.millersville.edu/~chaudhary/340/AIThruProlog.pdf)
- [100] F. Sadri, Ambient Intelligence: A survey, *ACM Computing Surveys* Volume 43 Issue 4, October 2011.
- [101] Pedro Sanchez, Diego Alonso, Jose Miguel Morales, Pedro Javier Navarro, From Teleo-Reactive specifications to architectural components: A model-driven approach, *The Journal of Systems and Software* 85, pp 2504-2518, 2012.
- [102] The Scala Object Oriented Functional Programming Language Web Site, <http://www.scala-lang.org>
- [103] P. Teller, *A Modern Formal Logic Primer*, formerly published by Prentice Hall, 1989. At: <http://tellerprimer.ucdavis.edu>
- [104] Michael Thielscher, *Reasoning Robots: The Art and Science of Programming Robotic Agents*, Springer-Verlag, 2005.
- [105] K. Stathis, F. Toni, Ambient intelligence using KGP agents, *EUSAI 2004*, Springer Verlag LNCS 3295, pp. 351–362, 2004.
- [106] A. Di Stefano, C. Santoro, Using the Erlang language for multi-agent systems implementation, *Intelligent Agent Technology*, IEEE/WIC/ACM International Conference, pp.679,685, 19-22 Sept. 2005

- [107] P. Suppes, *Introduction to Logic*, Courier Dover Publications, 1999.
- [108] T. Swift, D. S. Warren, XSB: Extending Prolog with Tabled Logic Programming, *Theory and Practice of Logic Programming*, 12 (1-2), CUP, 2012.
- [109] M. Utting, P. J. Robinson, R. Nickson, Ergo 6: A generic proof engine that uses Prolog proof technology, *LMS Journal of Computation and Mathematics*, 5(1), pp 194-219, 2002
- [110] Carlos Varela, Carlos Abalde, Laura Castro, Jos Gulias, *On Modelling Agent Systems with Erlang*, *ACM SIGPLAN Erlang Workshop*, 2004. At: <http://www.erlang.se/workshop/2004/carlosvarela.pdf>
- [111] J. S. Zelek, M. D. Levine, SPOTT: A mobile robot control architecture for unknown or partially unknown environments. In *AAAI Spring Symposium on Planning with Incomplete Information for Robot Problems*, 1996