Bibliography

The numbers in parenthesis after each bibliographic entry refer to the pages in which the entry has been mentioned.

from "Logic Engineering," Carlos Areces

[Abadi and Manna, 1985] (75) M. Abadi and Z. Manna. Nonclausal temporal deduction. *Lecture Notes in Computer Science*, 193:1–15, 1985.

[Ackermann, 1954] (6) W. Ackermann. *Solvable Cases of the Decision Problem.* North-Holland Publishing Co., Amsterdam, 1954. Studies in Logic and the Foundations of Mathematics.

[Aiello and van Benthem, 1999] (17) M. Aiello and J. van Benthem. Logical patterns in space. Technical Report PP-99-24, Institute for Logic, Language and Computation, University of Amsterdam, Amsterdam, 1999. Submitted to CSLI for publication. Available at `http://www.wins.uva.nl/~aiellom/publications/lops.ps.gz`.

[Aiello *et al.*, 1999] (17, 23) M. Aiello, C. Areces, and M. de Rijke. Spatial reasoning for image retrieval. In P. Lambrix, A. Borgida, M. Lenzerini, R. Möller, and P. Patel-Schneider, editors, *Proceedings of the International Workshop on Description Logics (DL'99)*, pages 23–27, 1999.

[Allen, 1984] (36, 38) J. Allen. Towards a general theory of action and time. *Artificial Intelligence*, 23(2):123–154, July 1984.

[Andréka *et al.*, 1995] (138) H. Andréka, J. van Benthem, and I. Németi. Back and forth between modal logic and classical logic. *Journal of the IGPL*, 3(5):685–720, 1995.

[Andréka *et al.*, 1998] (11, 12, 13, 114) H. Andréka, J. van Benthem, and I. Németi. Modal languages and bounded fragments of predicate logic. *Journal of Philosophical Logic*, 27(3):217–274, 1998.

[Andréka, 1991] (12) H. Andréka. Complexity of the equations valid in algebras of relations, 1991. Thesis for D.Sc. (a post–habilitation degree) at the Institute of Mathematics, Hungarian Academy of Sciences, Budapest, Hungary.

[Areces and de Rijke, 1998] (18) C. Areces and M. de Rijke. Expressiveness revisited. In Franconi et al. [1998], pages 35–43. Available at `http://sunsite.informatik.rwth-aachen.de/publications/ceur-ws`.

[Areces and de Rijke, 2000] (18) C. Areces and M. de Rijke. Description $^{\text{and}}/_{\text{or}}$ hybrid logics. In *Proceedings of AiML 2000. Advances in Modal Logic*, Leipzig. Germany, October 2000. University of Leipzig.

[Areces and Marx, 1998] (11, 138) C. Areces and M. Marx. Failure of interpolation in combined modal logics. *Notre Dame Journal of Formal Logic*, 39(2):253–273, 1998.

[Areces *et al.*, 1999a] (18) C. Areces, P. Blackburn, and M. Marx. A road-map on complexity for hybrid logics. In J. Flum and M. Rodríguez-Artalejo, editors, *Computer Science Logic*, number 1683 in LNCS, pages 307–321. Springer, 1999. Proceedings of the 8th Annual Conference of the EACSL, Madrid, September 1999.

[Areces *et al.*, 1999b] (17, 23) C. Areces, W. Bouma, and M. de Rijke. Feature interaction as a satisfiability problem. In *Proceedings of MASCOTS'99*, pages 339–346, Los Alamitos, California, October 1999. IEEE Computer Society.

[Areces *et al.*, 1999c] (18, 68) C. Areces, H. de Nivelle, and M. de Rijke. Prefixed resolution: a resolution method for modal and description logics. In *Automated Deduction—CADE-16 (Trento, 1999)*, pages 187–201. Springer, Berlin, 1999.

[Areces *et al.*, 2000a] (18, 38, 70) C. Areces, P. Blackburn, and M. Marx. The computational complexity of hybrid temporal logics. *Logic Journal of the IGPL*, 8(5):653–679, 2000.

[Areces *et al.*, 2000b] (18) C. Areces, P. Blackburn, and M. Marx. Hybrid logics: Characterization, interpolation and complexity. *Journal of Symbolic Logic*, 2000. To appear.

[Areces *et al.*, 2000c] C. Areces, E. Franconi, R. Goré, M. de Rijke, and H. Schlingloff, editors. *Methods for Modalities 1*, volume 8(3). Logic Journal of the IGPL, 2000.

[Areces *et al.*, 2000d] (74, 87) C. Areces, J. Heguiabehere R. Gennari, and M. de Rijke. Tree-based heuristics in modal theorem proving. In *Proceedings of ECAI'2000*, Berlin, Germany, 2000.

[Auffray *et al.*, 1990] (87) Y. Auffray, P. Enjalbert, and J. Hebrard. Strategies for modal resolution: results and problems. *Journal of Automated Reasoning*, 6(1):1–38, 1990.

[Baader and Hollunder, 1991] (22, 28, 30) F. Baader and B. Hollunder. A terminological knowledge representation system with complete inference algorithm. In Springer-Verlag, editor, *Proceedings of the Workshop on Processing Declarative Knowledge (PDK-91)*, number 567 in Lecture Notes in Artificial Intelligence, pages 67–86, 1991.

[Baader *et al.*, 1994] (30, 86) F. Baader, B. Hollunder, B. Nebel, H. Profitlich, and E. Franconi. An empirical analysis of optimization techniques for terminological representation systems or: Making KRIS get a move on. *Journal of Applied Intelligence*, 4:109–132, 1994.

[Baader, 1990] (26, 66) F. Baader. Terminological cycles in KL-ONE-based knowledge representation languages. In *Proceedings of the 8th National Conference on Artificial Intelligence (AAAI-90)*, pages 621–626, 1990.

[Baader, 1996] (61) F. Baader. A formal definition for the expressive power of terminological knowledge representation languages. *Journal of Logic and Computation*, 6:33–54, 1996.

[Balsiger and Heuerding, 1998] (29) P. Balsiger and A. Heuerding. Comparison of theorem provers for modal logics — introduction and summary. In H. de Swart, editor, *Proceedings of the Conference on Tableaux Calculi and Related Methods (TABLEAUX), Berlin, Germany*, volume 1397 of *LNAI*, pages 25–26. Springer Verlag, 1998.

[Ben-Ari *et al.*, 1983] (125) M. Ben-Ari, A. Pnueli, and Z. Manna. The temporal logic of branching time. *Acta Informatica*, 20(3):207–226, 1983.

[Berger, 1966] (5) R. Berger. The undecidability of the domino problem. *Memoirs of the American Mathematical Society*, 66:72, 1966.

[Beth, 1953] (100) E. Beth. On Padoa's method in the theory of definition. *Proceedings of the Nederland Akaddemie van Wetenschappen, Series A., 56(4)*, 15:330–339, 1953.

[Bibel and Schmitt, 1998] (74) W. Bibel and P. Schmitt, editors. *Automated Deduction: A Basis for Applications.* Kluwer, 1998.

[Blackburn and Seligman, 1995] (109, 110) P. Blackburn and J. Seligman. Hybrid languages. *Journal of Logic, Language and Information*, 4(3):251–272, 1995. Special issue on decompositions of first-order logic.

[Blackburn and Seligman, 1998] (36, 37) P. Blackburn and J. Seligman. What are hybrid languages? In M. Kracht, M. de Rijke, H. Wansing, and M. Zakharyaschev, editors, *Advances in Modal Logic*, volume 1, pages 41–62. CSLI Publications, Stanford University, 1998.

[Blackburn and Spaan, 1993] (39) P. Blackburn and E. Spaan. A modal perspective on the computational complexity of attribute value grammar. *Journal of Logic, Language and Information*, pages 129–169, 1993.

[Blackburn and Tzakova, 1998a] (37, 38, 43, 97, 105) P. Blackburn and M. Tzakova. Hybrid completeness. *Logic Journal of the IGPL*, 6:625–650, 1998.

[Blackburn and Tzakova, 1998b] (96, 137) P. Blackburn and M. Tzakova. Hybrid languages and temporal logics (full version). Technical Report CLAUS-Report 96, Computerlinguistik, Universität des Saarlandes, 1998. `http://www.coli.uni-sb.de/cl/claus`.

[Blackburn and Tzakova, 1998c] (57) P. Blackburn and M. Tzakova. Hybridizing concept languages. *Annals of Mathematics and Artificial Intelligence*, 24:23–49, 1998.

[Blackburn and Tzakova, 1999] (37, 38, 46, 103, 104) P. Blackburn and M. Tzakova. Hybrid languages and temporal logic. *Logic Journal of the IGPL*, 7(1):27–54, 1999.

[Blackburn *et al.*, 2000] (13) P. Blackburn, M. de Rijke, and Y. Venema. *Modal Logic.* Cambridge University Press, 2000. To appear.

[Blackburn, 1990] (38) P. Blackburn. *Nominal Tense Logic and Other Sorted Intensional Frameworks.* PhD thesis, Centre for Cognitive Science, University of Edinburgh, Edinburgh, United Kingdom, 1990.

[Blackburn, 1993] (39) P. Blackburn. Modal logic and attribute value structures. In M. de Rijke, editor, *Diamonds and Defaults*, Synthese Language Library, pages 19–65. Kluwer Academic Publishers, Dordrecht, 1993.

[Blackburn, 1994] (39, 70) P. Blackburn. Tense, temporal reference and tense logic. *Journal of Semantics*, 11:83–101, 1994.

[Blackburn, 2000a] (38, 69, 115) P. Blackburn. Internalizing labelled deduction. *Journal of Logic and Computation*, 10:136–168, 2000.

[Blackburn, 2000b] (37) P. Blackburn. Representation, reasoning, and relational structures: a Hybrid Logic manifesto. In Areces et al. [2000c], pages 339–365.

[Börger *et al.*, 1997] (6, 10) E. Börger, E. Grädel, and Y. Gurevich. *The Classical Decision Problem.* Springer-Verlag, Berlin, 1997. With an appendix by Cyril Allauzen and Bruno Durand.

[Borgida *et al.*, 1989] (22) A. Borgida, R. Brachman, D. McGuinness, and L. Alperin Resnick. CLASSIC: a structural data model for objects. In *Proceedings of the ACM SIGMOD International Conference of Management of Data*, pages 59–67, 1989.

[Borgida, 1995] (22) A. Borgida. Description logics in data management. *IEEE Transactions on Knowlede and Data Engineering*, 7:671–682, 1995.

[Borgida, 1996] (32, 61) A. Borgida. On the relative expressiveness of description logics and predicate logics. *Artificial Intelligence*, 82:353–367, 1996.

[Brachman and Levesque, 1984] (24, 28) R. Brachman and H. Levesque. The tractability of subsumption in frame-based description languages. In *AAAI-84*, pages 34–37, 1984.

[Brachman and Schmolze, 1985] (19, 22) R. Brachman and J. Schmolze. An overview of the KL-ONE knowledge representation system. *Cognitive Science*, 9(2):171–216, 1985.

[Brachman *et al.*, 1985] (22) R. Brachman, V. Pigman Gilbert, and H. Levesque. An essential hybrid reasoning system: knowledge and symbol level accounts in KRIPTON. In *Proceedings of the 8th International Joint Conference on Artificial Intelligence (IJCAI-85)*, pages 532–539, Los Angeles, 1985.

[Brachman, 1977] (22) R. Brachman. What's in a concept: structural foundations for semantic networks. *International Journal of Man-Machine Studies*, 9:127–152, 1977.

[Brachman, 1979] (22) R. Brachman. On the epistemological status of semantic networks. In N. Findler, editor, *Associative Networks: Representation and Use of Knowledge by Computers*, pages 3–50. Academic Press, 1979.

[Buchheit *et al.*, 1993] (28) M. Buchheit, F. Donini, and A. Schaerf. Decidable reasoning in terminological knowledge representation systems. *Journal of Artificial Intelligence Research*, 1:109–138, 1993.

[Bull, 1970] (20, 36, 70) R. Bull. An approach to tense logic. *Theoria*, 36:282–300, 1970.

[Calvanese *et al.*, 1997] (85) D. Calvanese, G. De Giacomo, and M. Lenzerini. Conjunctive query containment in description logics with n-ary relations. In *Proceedings of DL-97*, pages 5–9, June 1997.

[Chang and Keisler, 1990] (52, 101) C. Chang and H. Keisler. *Model Theory*, volume 73 of *Studies in Logic and the Foundations of Mathematics*. North-Holland Publishing Co., Amsterdam, third edition, 1990.

[Chlebus, 1986] (5, 116) B. Chlebus. Domino-tiling games. *Journal of Computer and System Sciences*, 32(3):374–392, 1986.

[Church, 1936] (5) A. Church. A note on the Entscheidungsproblem. *Journal of Symbolic Logic*, 1:40–41, 1936.

[Clarke and Emerson, 1982] (15) E. Clarke and E. Emerson. Design and synthesis of synchronization skeletons using branching time temporal logic. In *Logics of Programs (Yorktown Heights, N.Y., 1981)*, pages 52–71. Springer, Berlin, 1982.

[Clarke and Sistla, 1985] (125) E. Clarke and A. Sistla. Complexity of propositional linear temporal logics. *Journal of the Association for Computing Machinery*, 32(3):733–749, 1985.

[Craig, 1957] (99) W. Craig. Three uses of the Herbrand-Gentzen theorem in relating model theory and proof theory. *Journal of Symbolic Logic*, 22:269–285, 1957.

[Cresswell, 1990] (37, 39) M. Cresswell. *Entities and Indices.* Reidel, Dordrecht, 1990.

[Cresswell, 1996] (39) M. Cresswell. *Semantic Indexicality.* Kluwer, Dordrecht, 1996.

[Czelakowski, 1982] (99) J. Czelakowski. Logical matrices and the amalgamation property. *Studia Logica*, XLI(4):329–341, 1982.

[Davidson *et al.*, 1994] (1) G. Davidson, M. Seaton, and J. Simpson, editors. *The Wordsworth Concise English Dictionary.* Wordsworth Reference. Wordsworth Editions Ltd., Hertfordshire, 1994.

[De Giacomo and Lenzerini, 1994] (49, 54, 55) G. De Giacomo and M. Lenzerini. Boosting the correspondence between description logics and propositional dynamic logics. In *Proceedings of the 12th National Conference on Artificial Intelligence (AAAI'94)*, pages 205–212, 1994.

[De Giacomo, 1995] (49, 109, 119) G. De Giacomo. *Decidability of Class-based Knowledge Representation Formalisms.* PhD thesis, Università di Roma "La Sapienza", 1995.

[de Nivelle *et al.*, 2000] (74) H. de Nivelle, R. Schmidt, and U. Hustadt. Resolution-based methods for modal logics. In Areces et al. [2000c], pages 239–264.

[de Nivelle, 1994] (75, 77) H. de Nivelle. *Ordering Refinements of Resolution.* PhD thesis, Technische Universiteit Delft, Delft. The Netherlands, October 1994.

[de Rijke and Sturm, 2000] (69) M. de Rijke and H. Sturm. Global definability in basic modal logic. In H. Wansing, editor, *Essays on Non-classical Logic.* King's College University Press, 2000.

[de Rijke and van der Hoek, 1995] (14, 68) M. de Rijke and W. van der Hoek. Counting objects. *Journal of Logic and Computation*, 5(3):325–345, 1995.

[de Rijke *et al.*, 2000] (73) M. de Rijke, D. Gabbay, A. Nonnengart, and H. Ohlbach. Encoding two-valued non-classical logics in classical logic. In A. Robinson and A. Voronkov, editors, *Handbook of Automated Reasoning.* Elsevier Science Publishers, 2000. To appear.

[de Rijke, 1992] (14, 69, 114) M. de Rijke. The modal logic of inequality. *Journal of Symbolic Logic*, 57(2):566–584, 1992.

[de Rijke, 2000] (68) M. de Rijke. A note on graded modal logic. *Studia Logica*, 64(2):271–283, 2000.

[Demri, 1999] (38) S. Demri. Sequent calculi for nominal tense logics: a step towards mechanization? In N. Murray, editor, *Conference on Tableaux Calculi and Related Methods (TABLEAUX), Saratoga Springs, USA*, volume 1617 of *LNAI*, pages 140–154. Springer Verlag, 1999.

[Devanbu and Jones, 1997] (23) P. Devanbu and M. Jones. The use of description logics in KBSE systems. *ACM Transactions on Software Engineering and Methodology (TOSEM)*, 6(2):141–172, April 1997.

[Dionne *et al.*, 1992] (26) R. Dionne, E. Mays, and F. Oles. A non-well-founded approach to terminological cyles. In *Proceedings of the 10th National Conference on Artificial Intelligence (AAAI-92)*, pages 761–766. AAAI Press / The MIT Press, 1992.

[Dixon *et al.*, 2000] (75) C. Dixon, M. Fisher, and M. Peim. Clausal temporal resolution. *ACM Transactions on Computational Logic*, 2000. To appear.

[Donini *et al.*, 1991] (30) F. Donini, M. Lenzerini, D. Nardi, and W. Nutt. Tractable concept languages. In *Proceedings of the 12th International Joint Conference on Artificial Intelligence (IJCAI'91)*, pages 458–463, Sidney, 1991.

[Donini *et al.*, 1992] (28, 30) F. Donini, M. Lenzerini, D. Nardi, B. Hollunder, W. Nutt, and A. Marchetti-Spaccamela. The complexity of existential quantification in concept languages. *Artificial Intelligence*, 53(2-3):309–327, 1992.

[Donini *et al.*, 1994] (29) F. Donini, M. Lenzerini, D. Nardi, and A. Schaerf. Deduction in concept languages: from subsumption to instance checking. *Journal of Logic and Computation*, 4(4):423–452, 1994.

[Donini *et al.*, 1997] (28, 30, 34) F. Donini, M. Lenzerini, D. Nardi, and W. Nutt. The complexity of concept languages. *Information and Computation*, 134(1):1–58, 1997.

[Ebbinghaus and Flum, 1999] (7, 12) H-D. Ebbinghaus and J. Flum. *Finite Model Theory.* Springer-Verlag, Berlin, second edition, 1999.

[Ehrenfeucht, 1961] (6) A. Ehrenfeucht. An application of games to the completeness problem for formalized theories. *Fundamenta Mathematicae*, 49:129–141, 1961.

[Emerson and Halpern, 1986] (125) E. Emerson and J. Halpern. "Sometimes" and "not never" revisited: on branching versus linear time temporal logic. *Journal of the Association for Computing Machinery*, 33(1):151–178, 1986.

[Enjalbert and Fariñas del Cerro, 1989] (75, 77, 80, 82) P. Enjalbert and L. Fariñas del Cerro. Modal resolution in clausal form. *Theoretical Computer Science*, 65(1):1–33, 1989.

[F. and Zakharyaschev, 1999] (58) Wolter F. and M. Zakharyaschev. Temporalizing description logics. In M. de Rijke and D. Gabbay, editors, *Frontiers of Combining Systems, (FroCoS'98).* Kluwer Academic Publishers, 1999.

[Fariñas del Cerro, 1982] (77) L. Fariñas del Cerro. A simple deduction method for modal logic. *Information Processing Letters*, 14:49–51, April 1982.

[Feferman, 1968] (91) S. Feferman. Persistent and invariant formulas for outer extensions. *Compositio Mathematica*, 20:29–52, 1968.

[Fermüller *et al.*, 1993] (74) C. Fermüller, A. Leitsch, T. Tammet, and N. Zamov. *Resolution Methods for the Decision Problem.* Springer-Verlag, Berlin, 1993. Lecture Notes in Artificial Intelligence.

[Fine, 1972] (68) K. Fine. In so many possible worlds. *Notre Dame Journal Formal Logic*, 13:516–520, 1972.

[Fischer and Ladner, 1979] (49) M. Fischer and R. Ladner. Propositional dynamic logic of regular programs. *Journal of Computer and System Sciences*, 18(2):194–211, 1979.

[Fitting, 1983] (30, 73) M. Fitting. *Proof Methods for Modal and Intuitionistic Logics.* D. Reidel Publishing Co., Dordrecht, 1983.

[Fitting, 1990] (78) M. Fitting. Destructive modal resolution. *Journal of Logic and Computation*, 1(1):83–97, 1990.

[Fraïssé, 1954] (7) R. Fraïssé. Sur quelques classifications des systèmes de relations. *Université d'Alger, Publications Scientifiques, Série A*, 1:35–182, 1954.

[Franconi *et al.*, 1998] E. Franconi, G. De Giacomo, R. MacGregor, W. Nutt, and C. Welty, editors. *Proceedings of the 1998 International Workshop on Description Logics (DL'98)*, 1998. Available at `http://sunsite.informatik.rwth-aachen.de/publications/ceur-ws`.

[Gabbay *et al.*, 1994] (14) D. Gabbay, I. Hodkinson, and M. Reynolds. *Temporal Logic*, volume Volume 1: Mathematical Foundations and Computational Aspects. Oxford University Press, 1994.

[Gabbay, 1976] (39) D. Gabbay. *Investigations in Modal and Tense Logics with Applications to Problems in Philosophy and Linguistics.* Reidel, Dordrecht, 1976.

[Gabbay, 1996] (38) D. Gabbay. *Labelled Deductive Systems. Vol. 1.* The Clarendon Press Oxford University Press, New York, 1996. Oxford Science Publications.

[Gargov and Goranko, 1993] (69, 114) G. Gargov and V. Goranko. Modal logic with names. *Journal of Philosophical Logic*, 22(6):607–636, 1993.

[Gargov and Passy, 1988] (20, 39) G. Gargov and S. Passy. Determinism and looping in combinatory pdl. *Theoretical Computer Science*, 61:259–277, 1988.

[Gargov *et al.*, 1987] (20) G. Gargov, S. Passy, and T. Tinchev. Modal environment for boolean speculations. In D. Scordev, editor, *Mathematical Logic and its Applications*, pages 253–263. Plenum Press, New York, 1987.

[Goble, 1970] (68) L. Goble. Grades of modality. *Logique et Analyse (N.S.)*, 13:323–334, 1970.

[Goranko and Passy, 1992] (14, 53, 69) V. Goranko and S. Passy. Using the universal modality: gains and questions. *Journal of Logic and Computation*, 2:5–30, 1992.

[Goranko, 1994] (37) V. Goranko. Temporal logic with reference pointers. In *Temporal Logic (Bonn, 1994)*, pages 133–148. Springer, Berlin, 1994.

[Goranko, 1996] (37) V. Goranko. Hierarchies of modal and temporal logics with reference pointers. *Journal of Logic, Language and Information*, 5(1):1–24, 1996.

[Goranko, 2000] (70) V. Goranko. Temporal logics with reference pointers and computation tree logics. *Journal of Applied Non-classical Logics*, 2000. To appear.

[Goré, 1999] (30) R. Goré. Tableau methods for modal and temporal logics. In M. D'Agostino, D. Gabbay, R. Haenle, and J. Posegga, editors, *Handbook of Tableau Methods*, pages 297–396. Kluwer Academic Publishers, 1999.

[Grädel and Walukiewicz, 1999] (13) E. Grädel and I. Walukiewicz. Guarded fixed point logic. In *Proceedings of 14th IEEE Symposium on Logic in Computer Science LICS '99, Trento*, 1999.

[Grädel *et al.*, 1997a] (11) E. Grädel, P. Kolaitis, and M. Vardi. On the decision problem for two-variable first-order logic. *The Bulletin of Symbolic Logic*, 3(1):53–69, 1997.

[Grädel *et al.*, 1997b] (11) E. Grädel, M. Otto, and E. Rosen. Two-variable logic with counting is decidable. In *Proceedings of the 12th Annual IEEE Symposium on Logic in Computer Science*, pages 306–317, Warsaw, Poland, 1997. IEEE Computer Society Press.

[Grädel *et al.*, 1999] (11) E. Grädel, M. Otto, and E. Rosen. Undecidability results on two-variable logics. *Archive for Mathematical Logic*, 38(4-5):313–354, 1999. Logic Colloquium '95 (Haifa).

[Grädel, 1999] (13, 138) E. Grädel. Why are modal logics so robustly decidable? *Bulletin of the European Association for Theoretical Computer Science. EATCS*, 68:90–103, 1999.

[Grädel, 2000] (13) E. Grädel. On the restraining power of guards. *Journal of Symbolic Logic*, 2000. To appear.

[Gurevich, 1969] (10) Y. Gurevich. The decision probelm for logic of predicates and operations. *Algebra and Logic*, 8(160–3174), 1969.

[Gurevich, 1976] (5) Y. Gurevich. The decision problem for standard classes. *Journal of Symbolic Logic*, 41(2):460–464, 1976.

[Haarslev and Möller, 1999] (34) V. Haarslev and R. Möller. RACE system description. In Lambrix et al. [1999], pages 130–132.

[Halpern and Moses, 1992] (51, 117) J. Halpern and Y. Moses. A guide to completeness and complexity for modal logics of knowledge and belief. *Artificial Intelligence*, 54:319–379, 1992.

[Harel, 1984] (14, 15, 51) D. Harel. Dynamic logic. In D. Gabbay and F. Guenthner, editors, *Handbook of Philosophical Logic. Vol. II*, volume 165 of *Synthese Library*, pages 497–604. D. Reidel Publishing Co., Dordrecht, 1984. Extensions of classical logic.

[Hemaspaandra, 1996] (61) E. Hemaspaandra. The price of universality. *Notre Dame Journal of Formal Logic*, 37(2):174–203, 1996. Combining logics.

[Henkin, 1967] (10) L. Henkin. *Logical Systems Containing Only a Finite Number of Symbols*, volume 21 of *Séminaire de Mathématiques Supérieures.* Les Presses de l'Université de Montréal, 1967.

[Heuerding and Schwendimann, 1996] (29) A. Heuerding and S. Schwendimann. A benchmark method for the propositional modal logics K, KT , S4. Technical Report IAM-96-015, University of Bern, Switzerland, 1996.

[Hoogland *et al.*, 1999] (13) E. Hoogland, M. Marx, and M. Otto. Beth definability for the guarded fragment. In H. Ganzinger, D. McAllester, and A. Voronkov, editors, *Logic for Programming and Automated Reasoning, 6th International Conference LPAR99, Tbilisi, Georgia*, number 1705 in LNAI, pages 273–285. Springer, 1999.

[Horrocks and Gough, 1997] (51) I. Horrocks and G. Gough. Description logics with transitive roles. In M. Rousset, R. Brachmann, F. Donini, E. Franconi, I. Horrocks, and A. Levy, editors, *Proceedings of the International Workshop on Description Logics*, pages 25–28, Gif sur Yvette, France, 1997.

[Horrocks and Patel-Schneider, 1999] (87) I. Horrocks and P. Patel-Schneider. Optimising description logic subsumption. *Journal of Logic and Computation*, 9(3), 1999.

[Horrocks and Sattler, 1999] (51, 109) I. Horrocks and U. Sattler. A description logic with transitive and inverse roles and role hierarchies. *Journal of Logic and Computation*, 9(3):385–410, 1999.

[Horrocks *et al.*, 1999] (34) I. Horrocks, U. Sattler, and S. Tobies. Practical reasoning for expressive description logics. In Harald Ganzinger, David McAllester, and Andrei Voronkov, editors, *Proceedings of the 6th International Conference on Logic for Programming and*

Automated Reasoning (LPAR'99), number 1705 in Lecture Notes in Artificial Intelligence, pages 161–180. Springer-Verlag, September 1999.

[Horrocks *et al.*, 2000a] (29, 74, 87) I. Horrocks, P. Patel-Schneider, and R. Sebastiani. An analysis of empirical testing for modal decision procedures. In Areces et al. [2000c], pages 293–324.

[Horrocks *et al.*, 2000b] (34, 55, 69) I. Horrocks, U. Sattler, and S. Tobies. Practical reasoning for very expressive description logics. In Areces et al. [2000c], pages 239–264.

[Horrocks *et al.*, 2000c] (34, 68) I. Horrocks, U. Sattler, and S. Tobies. Reasoning with individuals for the description logic $\mathcal{SHIQ}$. In David MacAllester, editor, *Proceedings of the 17th International Conference on Automated Deduction (CADE-17)*, Lecture Notes in Computer Science, Germany, 2000. Springer Verlag.

[Horrocks, 1999] (34) I. Horrocks. FaCT and iFaCT. In Lambrix et al. [1999], pages 133–135. FACT is available under the GNU public license at `http://www.cs.man.ac.uk/~horrocks`.

[Hustadt, 1999] (74) U. Hustadt. *Resolution-Based Decision Procedures for Subclasses of First-Order Logic*. PhD thesis, Universität des Saarlandes, Saarbrücken, Germany, 1999.

[Immerman and Kozen, 1989] (12) N. Immerman and D. Kozen. Definability with bounded number of bound variables. *Information and Computation*, 83(2):121–139, 1989.

[Kalmár, 1936] (9) L. Kalmár. Zurückführung des Entscheidungsproblems auf den Fall von Formeln mit einer einzigen, binären Funktionsvariablen. *Composition Mathematica*, 4:137–144, 1936.

[Kamp, 1971] (39) H. Kamp. Formal properties of "now". *Theoria*, 37:227–273, 1971.

[Konikowska, 1997] (39) B. Konikowska. A logic for reasoning about relative similarity. *Studia Logica*, 58:185–226, 1997.

[Kozen, 1983] (15) D. Kozen. Results on the propositional μ-calculus. *Theoretical Computer Science*, 27(3):333–354, 1983.

[Kracht, 1999] (65, 100) M. Kracht. *Tools and Techniques in Modal Logic*. North-Holland Publishing Co., Amsterdam, 1999.

[Kurtonina and de Rijke, 1999] (61, 62) N. Kurtonina and M. de Rijke. Expressiveness of concept expressions in first-order description logics. *Artificial Intelligence*, 107(2):303–333, 1999.

[Ladner, 1977] (30, 51, 116, 120, 126) R. Ladner. The computational complexity of provability in systems of modal propositional logic. *SIAM Journal of Computing*, 6(3):467–480, 1977.

[Lambrix *et al.*, 1999] P. Lambrix, A. Borgida, R. Möller M. Lenzerini, and P. Patel-Schneider, editors. *Proceedings of the 1999 International Workshop on Description Logics (DL'99)*, 1999.

[Lewis, 1979] (6) H. Lewis. *Unsolvable Classes of Quantificational Formulas*. Addison-Wesley Publishing Co., Reading, Mass., 1979.

[Löwenheim, 1915] (9) L. Löwenheim. Über Möglichkeiten im Relativkalkül. *Math. Annalen*, 76:447–470, 1915. English translation in [van Heijenoort, 1967].

[Lutz, 1999a] (30, 60) C. Lutz. Complexity of terminological reasoning revisited. In *Proceedings of the 6th International Conference on Logic for Programming and Automated Reasoning LPAR'99*, Lecture Notes in Artificial Intelligence, pages 181–200. Springer-Verlag, September 6 – 10, 1999.

[Lutz, 1999b] (30, 60) C. Lutz. On the complexity of terminological reasoning. LTCS-Report 99-04, LuFg Theoretical Computer Science, RWTH Aachen, Germany, 1999.

[MacGregor and Bates, 1987] (22) R. MacGregor and R. Bates. The Loom knowledge representation language. Technical Report ISI/RS-87-188, Information Science Institute, University of Southern California, Marina del Rey, California, 1987.

[Maksimova, 1991a] (64, 105) L. Maksimova. Amalgamation and interpolation in normal modal logics. *Studia Logica*, L(3/4):457–471, 1991.

[Maksimova, 1991b] (64, 100) L. Maksimova. Beth properties, interpolation and amalgamation in varieties of modal algebras. *Doklady Akademii Nauk SSSR*, 319(6):1309–1312, 1991. Translation in *Soviet Mathematics. Doklady.* 44:1 (1992), 327–331.

[Maksimova, 1992a] (64) L. Maksimova. An analogue of Beth's theorem in normal extensions of the modal logic k4. *Rossiĭskaya Akademiya Nauk. Sibirskoe Otdelenie. Sibirskiĭ Matematicheskiĭ Zhurnal*, 33(6):118–130, 231, 1992. translation in *Siberian Mathematical Journal*, 33:6, 1052–1065 (1993).

[Maksimova, 1992b] (64) L. Maksimova. Definability and interpolation in classical modal logics. In *Proceedings of the International Conference on Algebra, Part 3 (Novosibirsk, 1989)*, pages 583–599, Providence, RI, 1992. Amer. Math. Soc.

[Maksimova, 1992c] (64) L. Maksimova. Modal logics and varieties of modal algebras: the Beth, interpolation, and amalgamation properties. *Akademiya Nauk SSSR. Sibirskoe Otdelenie. Institut Matematiki. Algebra i Logika*, 31(2):145–166, 220–221, 1992. Translation in *Algebra and Logic*, 31:2, 90–105 (1993).

[Manna and Pnueli, 1992] (124) Z. Manna and A. Pnueli. *The Temporal Logic of Reactive and Concurrent Systems*. Springer-Verlag, New York, 1992. Specification.

[Marx and Venema, 1997] (39) M. Marx and Y. Venema. *Multidimensional Modal Logic*, volume 4 of *Applied Logic Series*. Kluwer Academic Publishers, Dordrecht, 1997.

[Marx and Venema, 2000] M. Marx and Y. Venema. Local variations on a loose theme: modal logic and decidability. In M. Vardi and S. Weinstein, editors, *Finite Model Theory and its Applications*. Springer-Verlag, 2000. To appear.

[Marx, 1999] (104) M. Marx. Interpolation in (fibered) modal logic. In A. Haeberer, editor, *Proceedings of AMAST 1998*, 1999.

[McTaggart, 1908] (37) J. McTaggart. The unreality of time. *Mind*, pages 457–474, 1908.

[Meghini *et al.*, 1993] (23) C. Meghini, F. Sebastiani, U. Straccia, and C. Thanos. A model of information retrieval based on a terminological logic. In R. Korfhage et al., editor, *Proceedings of SIGIR-93*, pages 298–307. ACM Press, Baltimore, 1993.

[Minsky, 1974] (21) M. Minsky. A framework for representing knowledge. In R. J. Brachman and H. J. Levesque, editors, *Readings in Knowledge Representation*, pages 246–262. Morgan-Kaufmann, Los Altos, 1974.

[Mints, 1989] (75, 77) G. Mints. Resolution calculi for modal logics. *American Mathematical Society Translations*, 143:1–14, 1989.

[Monk, 1969] (12) J. D. Monk. Nonfinitizability of classes of representable cylindric algebras. *Journal of Symbolic Logic*, 34:331–343, 1969.

[Monk, 1993] (12) J. Monk. Lectures on cylindric set algebras. In C. Rauszer, editor, *Algebraic Methods in Logic and in Computer Science*, volume 28, pages 253–290. Banach Center Publications, Polish Academy of Sciences, Warsaw, 1993.

[Mortimer, 1975] (10) M. Mortimer. On languages with two variables. *Z. Math. Logik Grundlagen Math.*, 21:135–140, 1975.

[Nebel, 1990a] (26, 66) B. Nebel. Terminological cycles: semantics and computational properties. In J. Sowa, editor, *Principles of Semantic Networks*, pages 331–361. Morgan Kaufmann, Los Altos, 1990.

[Nebel, 1990b] (29) B. Nebel. Terminological reasoning is inherently intractable. *Artificial Intelligence*, 43(2):235–249, 1990.

[Ockham, 1969] (125) W. of Ockham. *Predestination, God's Foreknowledge, and Future Contingents.* Appleton-Century-Crofts, New York, 1969.

[Ono and Nakamura, 1980] (125) H. Ono and A. Nakamura. On the size of refutation Kripke models for some linear modal and tense logics. *Studia Logica*, 34:325–333, 1980.

[Orłowska, 1997] (39) E. Orłowska, editor. *Incomplete Information: Rough Set Analysis.* Studies in Fuzziness and Soft Computing. Physica-Verlag, 1997.

[Pacholski *et al.*, 1997] (11) L. Pacholski, W. Szwast, and L. Tendera. Complexity of two-variable logic with counting. In *Proceedings of the 12th Annual IEEE Symposium on Logic in Computer Science*, pages 318–327, Warsaw, Poland, 1997. IEEE Computer Society Press.

[Passy and Tinchev, 1985a] (20, 38, 57) S. Passy and T. Tinchev. PDL with data constants. *Information Processing Letters*, 20(1):35–41, 1985.

[Passy and Tinchev, 1985b] (20, 39) S. Passy and T. Tinchev. Quantifiers in combinatory PDL: completeness, definability, incompleteness. In *Fundamentals of Computation Theory FCT 85*, volume 199 of *LNCS*, pages 512–519. Springer, 1985.

[Passy and Tinchev, 1991] (38, 39, 69, 109, 119) S. Passy and T. Tinchev. An essay in combinatory dynamic logic. *Information and Computation*, 93(2):263–332, 1991.

[Patel-Schneider, 1998] (34) P. Patel-Schneider. DLP system description. In Franconi et al. [1998], pages 87–89. DLP is available at `http://www.bell-labs.com/user/pfps`.

[Pnueli, 1977] (124) A. Pnueli. The temporal logic of programs. In *18th Annual Symposium on Foundations of Computer Science (Providence, R.I., 1977)*, pages 46–57. IEEE Comput. Sci., Long Beach, Calif., 1977.

[Prior, 1967] (20, 36, 37) A. Prior. *Past, Present and Future.* Oxford University Press, 1967.

[Prior, 1968] (36) A. Prior. Now. *Nous*, 2:101–119, 1968.

[Prior, 1977] (37) A. Prior. *Papers on Time and Tense.* University of Oxford Press, 1977.

[Quantz and Kindermann, 1990] (22) J. Quantz and C. Kindermann. Implementation of the BACK system, version 4. Technical Report KIT-Report 78, FB Informatik, Technische Universität Berlin, Berlin, Germany, 1990.

[Quillian, 1967] (21) M. Ross Quillian. Word concepts: a theory and simulation of some basic capabilities. *Behavioral Science*, 12:410–430, 1967.

[Rautenberg, 1983] (30, 65) W. Rautenberg. Modal tableau calculi and interpolation. *Journal of Philosophical Logic*, 12:403–423, 1983.

[Reape, 1994] (39) M. Reape. A feature value logic. In C. Rupp, M. Rosner, and R. Johnson, editors, *Constraints, Language and Computation*, Synthese Language Library, pages 77–110. Academic Press, 1994.

[Renardel de Lavalette, 1989] (99) G. Renardel de Lavalette. Modularisation, parametrisation and interpolation. *Journal of Information Processing and Cybernetics*, 25(5/6):283–292, 1989.

[Rescher and Urquhart, 1971] (36) N. Rescher and A. Urquhart. *Temporal Logic.* Springer, 1971.

[Richards *et al.*, 1989] (37) B. Richards, I. Bethke, J. van der Does, and J. Oberlander. *Temporal Representation and Inference.* Academic Press, London, 1989.

[Robinson and Voronkov, 2000] (74) A. Robinson and A. Voronkov, editors. *Handbook of Automated Reasoning.* Elsevier Science Publishers B. V., 2000. To appear.

[Robinson, 1965] (74) J. Robinson. A machine-oriented logic based on the resolution principle. *Journal of the Association for Computing Machinery*, 12(1):23–41, January 1965.

[Rounds, 1997] (39) W. Rounds. Feature logics. In J. van Benthem and A. ter Meulen, editors, *Handbook of Logic and Language*, pages 475–533. North-Holland Publishing Co., Amsterdam, 1997.

[Russell and Norvig, 1995] (23) S. Russell and P. Norvig. *Artificial Intelligence: A Modern Approach.* Prentice Hall, 1995.

[Sattler, 1996] (51) U. Sattler. A concept language extended with different kinds of transitive roles. In G. Görz and S. Hölldobler, editors, *20. Deutsche Jahrestagung für Künstliche Intelligenz*, number 1137 in Lecture Notes in Artificial Intelligence. Springer Verlag, 1996.

[Schaerf, 1994] (30, 31, 34) A. Schaerf. *Query Answering in Concept-Based Knowledge Representation Systems: Algorithms, Complexity, and Semantic Issues.* PhD thesis, Università di Roma "La Sapienza", 1994.

[Schild, 1991] (49) K. Schild. A correspondence theory for terminological logics. In *Proceedings of the 12th IJCAI*, pages 466–471, 1991.

[Schmidt-Schauss and Smolka, 1991] (25, 28, 30) M. Schmidt-Schauss and G. Smolka. Attributive concept descriptions with complements. *Artificial Intelligence*, 48(1):1–26, 1991.

[Scott, 1962] (10) D. Scott. A decision method for validity of sentences in two variables. *Journal of Symbolic Logic*, 27:377, 1962.

[Seligman, 1991] (38, 115) J. Seligman. A cut-free sequent calculus for elementary situated reasoning. Technical Report HCRC-RP 22, HCRC, Edinburgh, 1991.

[Seligman, 1997] (38) J. Seligman. The logic of correct description. In M. de Rijke, editor, *Advances in Intensional Logic*, pages 107–135. Kluwer, 1997.

[Sellink, 1994] (37) M. Sellink. Verifying modal formulae over I/O-automata by means of type theory. Logic group preprint series, Utrecht University, 1994.

[Spaan, 1993] (59, 61, 110, 117, 130, 138) E. Spaan. *Complexity of Modal Logics.* PhD thesis, Institute for Logic, Language and Computation, University of Amsterdam, 1993.

[Tobies, 1999] (68) S. Tobies. A PSpace algorithm for graded modal logic. In *Automated Deduction—CADE-16 (Trento, 1999)*, pages 52–66. Springer, Berlin, 1999.

[Tobies, 2000a] (34, 68, 130) S. Tobies. The complexity of reasoning with cardinality restrictions and nominals in expressive description logics. *Journal of Artificial Intelligence Research*, 2000. To appear.

[Tobies, 2000b] (34) S. Tobies. PSPACE reasoning for graded modal logics. *Journal of Logic and Computation*, 2000. To appear.

[Turing, 1937] (5) A. Turing. On computable numbers, with an application to the 'Entscheidungsproblem'. *Proceedings of the London Mathematical Society 2nd. series*, 42:230–265, 1937.

[Tzakova, 1999a] (36, 37, 45, 46, 69, 96, 134) M. Tzakova. *Hybrid Languages.* PhD thesis, Technischen Fakultät der Universität des Saarlandes, 1999.

[Tzakova, 1999b] (38) M. Tzakova. Tableaux calculi for hybrid logics. In N. Murray, editor, *Proceedings of the Conference on Tableaux Calculi and Related Methods (TABLEAUX), Saratoga Springs, USA*, volume 1617 of *LNAI*, pages 278–292. Springer Verlag, 1999.

[van Benthem, 1983] (42, 52, 91) J. van Benthem. *Modal Logic and Classical Logic.* Bibliopolis, Naples, 1983.

[van Benthem, 1995] (12) J. van Benthem. Temporal logic. In D. Gabbay, C. Hoggar, and J. Robinson, editors, *Handbook of Logic in Artificial Intelligence and Logic Programming*, volume 4, pages 241–350. Oxford University Press,, 1995.

[van Benthem, 1996] (93, 95) J. van Benthem. *Exploring Logical Dynamics.* Studies in Logic, Language and Information. CSLI Publications, Stanford, 1996.

[van Heijenoort, 1967] J. van Heijenoort. *From Frege to Gödel: A Source Book in Mathematical Logic, 1879-1931.* Harvard University Press, Cambridge, Massachusetts, 1967.

[Vardi, 1997] (12, 15, 138) M. Vardi. Why is modal logic so robustly decidable? In *Descriptive Complexity and Finite Models (Princeton, NJ, 1996)*, pages 149–183. Amererican Mathematical Society, Providence, RI, 1997.

[Venema, 1991] (103, 114) Y. Venema. *Many-dimensional modal logic.* PhD thesis, Institute for Logic, Language and Computation. University of Amsterdam, 1991.

[Venema, 1993] (114) Y. Venema. Derivation rules as anti-axioms in modal logic. *Journal of Symbolic Logic*, 58:1003–1034, 1993.

[Venema, 1994] (43) Y. Venema. A modal logic for quantification and substitution. *Bulletin of the IGPL*, 2(1):31–45, 1994.

[Vlach, 1973] (39) F. Vlach. *Now and Then: a formal study in the logic of tense anaphora.* PhD thesis, UCLA, 1973.

[Wadge, 1975] (38) W. Wadge. A complete natural deduction system for the relational calculus. Research Report CS-RR-005, Department of Computer Science, University of Warwick, Coventry, UK, March 1975.

[Wolter and Zakharyaschev, 1998] (58) F. Wolter and M. Zakharyaschev. Satisfiability problem in description logics with modal operators. In A. Cohn, L. Schubert, and S. Shapiro, editors, *Proceedings of the 6th International Conference on Principles of Knowledge Representation and Reasoning (KR'98)*, pages 512–552. Morgan Kaufman, 1998.

[Wolter and Zakharyaschev, 1999a] (58) F. Wolter and M. Zakharyaschev. Dynamic description logics. In M. de Rijke, K. Segerberg, H. Wansing, and M. Zakharyaschev, editors, *Advances in Modal Logic, vol 2*, Stanford, 1999. CSLI Publications.

[Wolter and Zakharyaschev, 1999b] (58) F. Wolter and M. Zakharyaschev. Multi-dimensional description logics. In *Proceedings of IJCAI'99*, pages 104–109, Stockholm, 1999. Morgan Kaufman.

[Wolter and Zakharyaschev, 2000] (58) F. Wolter and M. Zakharyaschev. Modal description logics: modalizing roles. *Fundamenta Informaticae*, 2000. To appear.

[Wolter, 1999] (58) F. Wolter. *The Decision Problem for Combined (Modal) Logics.* Institut für Informatik, Universität Leipzig, 1999. Habilitationsschrift.

[Woods, 1975] (22) W. Woods. What's in a link: foundations for semantic networks. In D. Bobrow and A. Collins, editors, *Representation and Understanding: Studies in Cognitive Science*, pages 35–82. Academic Press, 1975.

[Wright *et al.*, 1993] (23) J. Wright, E. Weixelbaum, K. Brown, G. Vesonder, S. Palmer, J. Berman, and H. Moore. A knowledge-based configurator that supports sales, engineering, and manufacturing at AT&T Network Systems. In *Proceedings of the 5th. Innovative Applications of Artificial Intelligence Conference (IAAI-93)*, pages 183–193, Washington, 1993.