

Ian Pratt-Hartmann: Publications

Academic journal articles (all anonymously refereed):

1. Ian Pratt-Hartmann and Ivo Düntsch: “Functions definable by numerical set-expressions”, *Journal of Logic and Computation*, Advanced Access.
2. Ian Pratt-Hartmann: “The Hamiltonian Syllogistic”, *Journal of Logic, Language and Information*, 20(4), 2011, pp. 445–474.
3. Roman Kontchakov, Ian Pratt-Hartmann, Frank Wolter and Michael Zakharyashev: “Spatial logics with connectedness predicates”, *Logical Methods in Computer Science*, 6(3), 2010, pp. 1–43.
4. Ivo Düntsch and Ian Pratt-Hartmann: “Complex algebras of arithmetic”, *Fundamenta Informaticae*, 97 (4), 2009, pp. 347–367.
5. Ian Pratt-Hartmann and Lawrence S. Moss: “Logics for the Relational Syllogistic”, *Review of Symbolic Logic*, 2(4), 2009, pp. 647–683.
6. Ian Pratt-Hartmann: “Data-Complexity of the Two-Variable Fragment with Counting Quantifiers”, *Information and Computation*, 207 (8), 2009, pp. 867–888.
7. “Conditionalization and the Logic of Total Knowledge”, *Journal of Applied Non-Classical Logics*, 18 (2-3), 2008, pp. 247–266.
8. Ian Pratt-Hartmann “On the Computational Complexity of the Numerically Definite Syllogistic and Related Logics”, *Bulletin of Symbolic Logic*, 14(1), 2008, pp. 1–28.
9. Ian Pratt-Hartmann: “Complexity of the guarded two-variable fragment with counting quantifiers”, *Journal of Logic and Computation* 17(1), 2007, pp. 133–155.
10. Ian Pratt-Hartmann and Allan Third: “More fragments of language: the case of ditransitive verbs”, *Notre Dame Journal of Formal Logic*, 47(2), 2006, pp. 151–177.
11. Ian Pratt-Hartmann: “Complexity of the two-variable fragment with counting quantifiers”, *Journal of Logic, Language and Information*, 14(3), 2005, pp. 369–395.
12. Ian Pratt-Hartmann: “Temporal prepositions and their logic”, *Artificial Intelligence* 116(1–2), 2005, pp. 1–36.
13. Ian Pratt-Hartmann: “Fragments of Language”, *Journal of Logic, Language and Information*, 13(2), 2004, pp. 207–223.

14. Ian Pratt-Hartmann: “A two-variable fragment of English”, *Journal of Logic, Language and Information*, 12(1), 2003, pp. 13–45.
15. Ian Pratt-Hartmann: “A Topological Constraint Language with Component Counting”, *Journal of Applied Non-Classical Logics*, 12(3–4), 2002, pp. 441–467.
16. Ian Pratt-Hartmann and Dominik Schoop: “Elementary Polyhedral Mereotopology”, *Journal of Philosophical Logic*, 31(5), 2002, pp. 469–498.
17. Ian Pratt-Hartmann: “Empiricism and rationalism in region-based theories of space”, *Fundamenta Informaticae*, 46, 2001, pp. 159–86.
18. Ian Pratt and Nissim Francez: “Temporal prepositions and temporal generalized quantifiers”, *Linguistics and Philosophy*, 24(2), 2001, pp. 187–222.
19. Ian Pratt and Dominik Schoop: “Expressivity in polygonal, plane mereotopology”, *Journal of Symbolic Logic*, 65(2), 2000, pp. 822–838.
20. Ian Pratt: “First-Order Qualitative Spatial Representation Languages with Convexity”, *Journal of Spatial Cognition and Computation* 1, 1999, pp. 181–204.
21. Lemon, O. and Pratt, I. “Logics for geographic information”, *Journal of Geographical Systems*, 1(1), 1999, pp. 75–90.
22. Ian Pratt: “Shape Representation Using Fourier Coefficients of the Sinusoidal Transform”, *Journal of Mathematical Imaging and Vision* 10, 1999, pp. 221–235.
23. Oliver Lemon and Ian Pratt: “On the insufficiency of linear diagrams for syllogisms”, *Notre Dame Journal of Formal Logic*, 39(4), 1998, pp. 573–580.
24. Ian Pratt and Dominik Schoop: “A complete axiom system for polygonal mereotopology of the real plane”, *Journal of Philosophical Logic* 27, 1998, pp. 621–658.
25. Oliver Lemon and Ian Pratt. Complete Logics for QSR: a guide to plane mereotopology. *International Journal of Visual Languages and Computing* 9, 1998, pp. 5–21.
26. Ian Pratt and Oliver Lemon: “Ontologies for plane polygonal mereotopology”, *Notre Dame Journal of Formal Logic*, 38(2), 1997, pp. 225–245.
27. Oliver Lemon and Ian Pratt: “Spatial Logic and the Complexity of Diagrammatic Reasoning.” *Machine Graphics and Vision*, 6(1), 1997, pp. 89–108.
28. David Brée, Allel Feddag and Ian Pratt: “Towards a formalisation of the semantics of some temporal prepositions”, *Time and Society*, 2(2), 1993, pp. 219–240.
29. “An algorithm for planning ‘sensible’ routes”, *Engineering Applications of Artificial Intelligence* 4(2), 1991, pp. 97–108.
30. “Constraints, Meaning and Information” *Linguistics and Philosophy* 10, 1987, pp. 299–324.

Edited books:

1. Marco Aiello, Ian Pratt-Hartmann and Johan van Benthem: *Handbook of Spatial Logics*, Berlin: Springer, 2007, 1080 pp. ISBN 0333 597599.

Authored books:

1. Ian Pratt: *Artificial Intelligence*, London: Macmillan, 1994, 280 pp. ISBN 978-1-4020-5586-7.

Contributions to conference proceedings (all anonymously refereed):

1. Roman Kontchakov, Yavor Nenov, Ian Pratt-Hartmann and Michael Zakharyashev: “On the Decidability of Connectedness Constraints in 2D and 3D Euclidean Spaces”, in T. Walsh (ed.): *Proceedings of the Twenty-second International Joint Conference on Artificial Intelligence (IJCAI 2011)*, AAAI Press, 2011, pp. 957–962.
2. Angelo Montanari, Ian Pratt-Hartmann and Pietro Sala: “Decidability of the Logics of the Reflexive Sub-interval and Super-interval Relations over Finite Linear Orders”, in N. Markey and J. Wijsen (eds.): *Temporal Representation and Reasoning (TIME 2010)*, IEEE Press, 2010, pp. 27–34.
3. Yavor Nenov and Ian Pratt-Hartmann, “On the Computability of Region-Based Spatial Logics”, in A. Dawar and H. Veith (eds.), *Computer Science Logic (CSL 2010)*, Lecture Notes in Computer Science 6247, Berlin: Springer, pp. 439–453, 2010.
4. Ian Pratt-Hartmann: “The Two-Variable Fragment with Counting Revisited”, in A. Dawar and R. de Queiroz (Eds.): *Logic, Language, Information and Computation, WoLLIC 2010*, Lecture Notes in Artificial Intelligence, Berlin: Springer, 6188, pp. 42–54, 2010. (Invited talk: not refereed.)
5. Roman Kontchakov, Michael Zakharyashev and Ian Pratt-Hartmann: “Interpreting Topological Logics over Euclidean Spaces”, in *Proceedings, Knowledge Representation, KR 2010*, AAAI Press, pp. 534–544, 2010.
6. Yevgeny Kazakov and Ian Pratt-Hartmann: “A note on the complexity of graded modal logic”, in *Proceedings, 24th Annual IEEE Symposium on Logic in Computer Science, LICS 2009*, IEEE Press, pp. 407–416, 2009.
7. Ian Pratt-Hartmann and Ivo Düntsch: “Functions definable by arithmetic circuits”, in K. Ambos-Spies, B. Löwe and W. Merkle (eds.), *Mathematical Theory and Computational Practice: Proceedings, 5th Conference on Computability in Europe, CiE 2009*, Lecture Notes in Computer Science 5635, Berlin: Springer, pp. 409–418, 2009.
8. Roman Kontchakov, Ian Pratt-Hartmann, Frank Wolter and Michael Zakharyashev: “On the computational complexity of spatial logics with connectedness constraints”, in I. Cervesato, H. Veith and A. Voronkov (eds.), *Logic for Programming, Artificial Intelligence, and Reasoning (LPAR 2008)*, Lecture Notes in Computer Science 5330, Berlin: Springer, pp. 574–589, 2008.

9. Roman Kontchakov, Ian Pratt-Hartmann, Frank Wolter and Michael Zakharyashev: “Topology, connectedness and modal logic”, in C. Areces and R. Goldblatt (eds.) *Advances in Modal Logic*, 7, College Publications, London, 2008.
10. Ian Pratt-Hartmann: “From TimeML to Interval Temporal Logic”, in J. Geertzen, E. Thijsse, H. Bunt, A. Schiffrin (eds.) *Proceedings of the Seventh International Workshop on Computational Semantics*, Tilburg University, Department of Communication and Information Sciences, ISBN 90-74029-31-0, 2007, pp. 166-180.
11. Ian Pratt-Hartmann: “The Semantic Complexity of some Fragments of English”, in R.T. Ohrle and J. Rogers (eds.) *Proceedings of Mathematics of Language*, 8, 2003, pp. 129-140.
12. David Brée and Ian Pratt-Hartmann: “Temporal semantics of prepositions in context” in S. Feigenbaum and D. Kurzon (eds.) *Prepositions in their Syntactic, Semantic and Pragmatic Context*, Amsterdam: John Benjamins, 2002, pp. 75-113.
13. Ian Pratt-Hartmann and Nissim Francez: “Prepositions and context” in S. Feigenbaum and D. Kurzon (eds.) *Prepositions in their Syntactic, Semantic and Pragmatic Context*, Amsterdam: John Benjamins, 2002, pp. 115-126.
14. Hans de Nivelle and Ian Pratt-Hartmann: “A resolution-based decision procedure for the two-variable fragment with equality”, in R. Goré, A. Leitsch and T. Nipkow (eds.) *Automated Reasoning: Proceedings of the First International Joint Conference, IJCAR 2001*, Berlin: Springer, 2001, pp. 211-225.
15. Ian Pratt and Nissim Francez: “A decidable logic for temporal prepositions” in H. Barringer *et al.* (eds.) *Advances in Temporal Logic*, Dordrecht: Kluwer, 2000. pp. 255-278.
16. Ian Pratt-Hartmann: “Total Knowledge”, *Proceedings of the Seventeenth National Conference on Artificial Intelligence (AAAI 2000)*, Menlo Park, CA: AAAI Press/MIT Press, 2000, pp. 423-428.
17. Oliver Lemon and Ian Pratt: “Putting Channels on the Map: verisimilitude and spatial constraints in a semantics of Geographical Information Systems” in Lawrence Moss, Jonathan Ginzburg and Maarten de Rijke (editors), *Logic, Language, and Computation, Volume 2*. CSLI Publications, Stanford, CA, 1999. pp. 143-164.
18. Oliver Lemon and Ian Pratt: “On the incompleteness of modal logics of space: advancing complete modal logics of place” in M. Kracht, M. de Rijke, H. Wansing, and M. Zakharyashev, editors, *Advances in Modal Logic*. Lecture note # 87, CSLI Publications, Stanford, 1998. pp. 115-132.
19. Oliver Lemon and Ian Pratt: “Logical and Diagrammatic Reasoning: the complexity of conceptual space”. In *19th Conference of the Cognitive Science Society*, 1997, pp. 430-435.

20. Nissim Francez and Ian Pratt: "Linear logic derivations of temporal preposition phrase meanings in LFG" in M. Butt and T. Holloway King (eds.) *Proceedings, Lexical Functional Grammar'97*, CSLI Publications, 1997.
21. Oliver Lemon and Ian Pratt: "Incomplete Spatial Logics: on the foundations of computational geography." In *1st International Conference on GeoComputation '96: Proceedings volume II*, School of Geography, Leeds, 1996, pp. 504–516.
22. Oliver Lemon and Ian Pratt: "Putting Channels on the Map: imperfect information flow in a formal semantics of (geo)graphical information systems". In *Information Theoretic Approaches to Logic, Language, and Computation*, Proceedings of the 2nd conference on Information Theoretic Approaches to Logic, Language, and Computation (ITALLC), London Guildhall University, Department of Psychology, 1996, pp. 117–128.
23. Ian Pratt and David Brée: "How to translate some English temporal constructions into temporal logic" in Amsili, P., M. Borillo and Laure Vieu (eds.): *Workshop Notes: 5th International Workshop on Time, Space and Motion*, Groupe LRC, University of Toulouse 1995, pp. D28–D38.
24. "An approach to the semantics of some English Temporal Constructions", *Proceedings of the Seventeenth Annual Conference of the Cognitive Science Society*, Lawrence Earlbaum Associates, 1995, pp. 118–123.
25. Ian Pratt and David Brée: "The Expressive Power of the English Temporal Preposition System", *Proceedings, Time-94*, Pensacola: Florida, 1994, pp. 153–160.
26. "Map Semantics" in Frank, Andrew U. and Irene Campari (eds.) *Spatial Information Theory: a theoretical basis for GIS*, Lecture Notes in Computer Science 716, Berlin: Springer Verlag, 1993. pp. 77–91.
27. Ian Pratt and Luoping Xu: "Understanding Detective Stories", *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*, Lawrence Earlbaum Associates, 1992, pp. 1046–51
28. "Psychological Simulation and Beyond", *Proceedings of the Twelfth Annual Conference of the Cognitive Science Society*, Lawrence Earlbaum Associates, 1990, pp. 654–661.
29. "Path Finding in Free Space using Sinusoidal Transforms: III" in Mark, D. and Frank, A. (eds.) *Cognitive and Linguistic Aspects of Geographic Space*, Kluwer, 1991, pp. 219–233.
30. "Path Finding in Free Space using Sinusoidal Transforms", in A.G. Cohn (ed.) *Proceedings of the seventh AISB Conference*, London: Pitman, 1989, pp. 127–136. (Awarded best paper prize.)
31. "Spatial Reasoning using Sinusoidal Oscillations", *Proceedings of the Tenth Annual Conference of the Cognitive Science Society*, Lawrence Earlbaum Associates, 1988, pp. 216–222.
32. Gilbert Harman, Marie Bienkowski, Ken Salem and Ian Pratt: "Measuring Change and Coherence in Evaluating Potential Change in View", *Proceedings of the Ninth Annual Conference of the Cognitive Science Society*, Lawrence Earlbaum Associates, 1987

33. Gilbert Harman, Richard Cullingford, Marie Bienkowski, Ken Salem and Ian Pratt: “Default Defeaters in Explanation-based Reasoning”, *Proceedings of the Eighth Annual Conference of the Cognitive Science Society*, Lawrence Erlbaum Associates, 1986, pp. 283–292.

Contributions to edited works (anonymously refereed or subject only to editorial refereeing):

1. Ian Pratt-Hartmann: “Computational Complexity in Natural Language”, in A. Clark, C. Fox and S. Lappin (eds.), *Handbook of Computational Linguistics and Natural Language Processing*, Oxford: Wiley-Blackwell, 2010, pp. 43–73.
2. Marco Aiello, Ian Pratt-Hartmann and Johan van Benthem: “What is Spatial Logic?” in Marco Aiello, Ian Pratt-Hartmann and Johan van Benthem (eds.): *Handbook of Spatial Logics*, Berlin: Springer, 2007, pp. 1–12.
3. Ian Pratt-Hartmann: “First-order mereotopology” in Marco Aiello, Ian Pratt-Hartmann and Johan van Benthem (eds.): *Handbook of Spatial Logics*, Berlin: Springer, 2007, pp. 13–98.
4. Ian Pratt-Hartmann: “Language: mathematical complexity” in Keith Brown (editor-in-chief) *Encyclopedia of Language & Linguistics*, Second Edition, volume 6, Oxford: Elsevier, 2006, pp. 657–664
5. “Encoding Psychological Knowledge” in Clark, A. and Millican, P. (eds.) *Connectionism, Concepts and Folk Psychology: The legacy of Alan Turing*, Oxford: Clarendon Press, 1996. pp. 249–264.
6. “Analysis and the Attitudes” in Wagner, S. and Warner, S. (eds.): *Naturalism: a critical appraisal*, Notre Dame, IN: University of Notre Dame Press, 1993. pp. 273–294.
7. “Psychological Inference, Constitutive Rationality and Logical Closure” in Hanson, P. (ed.): *Vancouver Studies in Cognitive Science, vol.1*, University of British Columbia Press, 1989, pp. 366–389.

Reviews of single academic books (not refereed):

1. Halpern, J. *Reasoning about Uncertainty*, Bulletin of Symbolic Logic, Vol. 10, 2004, pp. 427–429.
2. Kish, D. (ed.) *Foundations of Artificial Intelligence*, SIGART, Vol. 4, No. 2 - April 1993, pp. 11–14.
3. Brewka, Gerhard: *Nonmonotonic Logic, Logical Foundations of Commonsense*, AISB Quarterly, Summer 1992, pp. 53–4
4. Penrose, R: *The Emperor’s New Mind, Science of Computer Programming*, vol. 15, no. 1, 1990, pp. 100–111.
5. Graubard, Stephen R., ed. *The Artificial Intelligence Debate: False Starts, Real Foundations, Science of Computer Programming*, 1990.
6. Arbib, M: “Brains, Machines and Mathematics”, *Science of Computer Programming*, 1989

7. Friedman, D. and M. Felleisen: *The Little LISPer, Science of Computer Programming*, 1989

Departmental working papers (not refereed): 15 in total, not listed here.